Dying to Eat: Terror Management and Attitudes Toward Eating Plants

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Abstract

Terror management theory posits that the drive for self-preservation and the knowledge of our inevitable death create anxiety in people, which they manage in a variety of ways, including favoring those who are like them and distancing themselves from other animals. In studies on terror management theory, mortality salience has been shown to affect food preferences and liking of animals. Here, we test whether mortality salience and 2 other potential motivators, paragraphs about benefits of a plant-based diet on longevity and the environment, affect preferences for plant-based food and meat. We randomly assigned participants to think about their own death or to think about dental pain. Some then read a paragraph on the longevity benefits of eating primarily plants; others read about the environmental benefits; still, others did not read a paragraph. We measured the appeal of plant-based food, disguised meat (i.e., chicken tenders), and undisguised meat (i.e., meat that looks like what it is). We analyzed the data using a 2 (Gender: Male, Female) X 2 (Mortality Salience: Yes, No) Analysis of Covariance, controlling for baseline tendencies for people to eat plants as our covariate. We found that mortality salience increased men’s interest in plant-based food. There was also a marginally significant effect of both the longevity and environmental paragraphs on males. The paragraphs decreased men’s interest in disguised and undisguised meat. We propose that mortality salience increases men’s interest in plant-based food because mortality salience increases health-promoting behaviors, and the longevity and environmental paragraphs convince men to like meat less. These results add to the growing literature on terror management theory and food preferences.
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Dying to Eat: Terror Management and Attitudes Toward Eating Plants

Eating meat and animal products is valued by many, but at what cost? There is growing evidence that predominantly plant-based diets are better for the health of individuals and for the planet (Redwood & Shealy, 2005; Macdiarmid, Douglas, & Campbell, 2016). A diet high in meat and animal products is correlated with higher cholesterol and increased risk for breast cancer, for example (Redwood & Shealy, 2005). According to the Food and Agriculture Organization (the FAO; as cited by Macdiarmid et al., 2016), livestock is responsible for 14.5% of global anthropogenic (caused by people) greenhouse gas emissions. If people knew and believed this evidence, would they be willing to increase their consumption of plant-based foods and reduce their consumption of animal products? We believe the answer to this is complex and hinges on whether or not their mortality is brought to their attention. We draw from terror management theory (Greenberg et al., 1990) – a social psychological perspective on how mortality influences human thought, feeling, and behavior – to make our case.

Terror Management Theory

Terror management theory, based on the work of Ernest Becker (1973), argues that individuals face a uniquely human conflict between the natural urge for self-preservation and the knowledge that they will die. This conflict results in “paralyzing terror,” unless people take steps to minimize it. According to terror management theory, people minimize this terror with their cultural anxiety buffers—self-esteem and cultural worldviews (Greenberg et al., 1990). People are motivated to protect and maintain their self-esteem and their cultural beliefs about reality, so as to maintain these anxiety buffers (Rosenblatt, Greenberg, Solomon, Pyszczynski, &
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Lyon, 1989). The motivation to minimize death anxiety is thought to be a primary behavioral motivator (Becker, 1973).

According to terror management theory, a person’s cultural beliefs or worldviews help fight against the terror of death by promoting a belief that reality is meaningful, there is justice, and that one is figuratively or literally immortal (Rosenblatt et al., 1989). Cultural beliefs can lead to the perception of figurative immortality by believing one is part of and can make a meaningful contribution to a group that will continue after one’s own death (Rosenblatt et al., 1989). Believing one can make a meaningful contribution is a source of self-esteem (Rosenblatt et al., 1989). Cultural beliefs may also involve the belief in literal immortality through one’s religion. When an argument for the existence of an afterlife is presented, mortality salience no longer leads to self-esteem striving, which represents the pursuit of symbolic mortality (Dechesne et al., 2003). In other words, the belief in a literal afterlife serves as a buffer against death anxiety in a way that stops the main buffer of self-esteem (and presumably worldview as well) from being activated.

Because one’s cultural worldview is socially constructed, and not objective reality, it is vulnerable to contradicting information and opinions and needs frequent social validation (Rosenblatt et al., 1989). People may defend their worldviews by decreasing their support for people, events, or objects that threaten their worldviews or by increasing their support for people, events, or objects that support their worldview (Friese & Hofmann, 2008).

According to terror management theorists, believing one’s worldviews and cultural behaviors are right and good functions as a source of self-esteem and a source of protection from the fear of death. Self-esteem is based on the belief that one can live up to cultural values. This is important because culture only promises symbolic immortality to people who live up to the
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cultural values. The theory predicts and evidence has shown that people with moderate-to-low self-esteem rely more on their cultural beliefs than people with high self-esteem when death anxiety needs to be reduced (Harmon-Jones et al., 1997).

Mortality salience has been shown to affect diverse outcomes: attitudes toward outgroup members (Greenberg et al., 1990; McGregor et al., 1998; Rosenblatt et al., 1989), including non-human animals (Beatson & Halloran, 2007; Goldenberg, Pyszczynski, Greenberg, & Solomon, 2000; Lifshin, Greenberg, Zestcott, & Sullivan, 2017); health-promoting behaviors (Bozo, Tunca, & Şimşek, 2009; Hansen, Winzeler, & Topolinski, 2010); attitudes toward one’s own animal nature, that is, one’s “creatureliness” (Beatson & Halloran, 2007); and eating behavior (Friese & Hofmann, 2008; McCabe et al., 2015). I summarize some of these key findings below.

Attitudes toward outgroup members. In one of the first terror management theory studies, Greenberg, Pyszczynski, and Solomon (1990) found that Christian participants that had been reminded of their own death rated an ingroup, Christians, more favorably and an outgroup, Jews, more negatively than the control group evaluated these two groups. Another series of studies found that when mortality is salient and a person criticizes the participant’s political views, the participant will aggress more towards that person as measured by how much hot sauce the participant gives the person to consume (McGregor et al., 1998). In this case, the person is an outgroup member with respect to political beliefs. When participants were first able to express a negative view of the person, the effects of mortality salience on aggression disappeared. Derogation and aggression both appear to serve the same psychological function when mortality is salient (McGregor et al., 1998). A series of 5 studies found mortality salience to increase support for killing animals (Lifshin et al., 2017). This is consistent with findings that mortality salience increases aggression towards the outgroup (McGregor et al., 1998). Expression support
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for killing animals led to an increased feeling of power and invulnerability (Lifshin et al., 2017), providing protection against death anxiety. These outcome suggests that when mortality is salient, people cling to their cultural beliefs, assuring themselves that they and the groups they identify with are correct and good, which boosts self-esteem, and those that disagree must be wrong or bad and may even deserve punishment.

**Health-promoting behaviors.** Mortality salience has been shown to increase a variety of health-promoting behaviors (Bozo et al., 2009) as measured by the Health-Promoting Lifestyle Profile II which includes subscales of self-actualization, responsibility for one’s own health, exercise, stress management, interpersonal support, and nutrition (Walker, Sechrist, & Pender, 1987). The relationship of mortality salience to health-promoting behaviors is qualified, however: the data suggest that mortality salience increases self-promoting behaviors unless the unhealthy behavior in question is a source of self-esteem, in which case the opposite happens. For example, mortality-salient warnings on cigarette packages have been shown actually to increase positive attitudes toward smoking if smoking was a source of self-esteem (Hansen et al., 2010). In sum, mortality salience increases self-promoting behaviors unless the unhealthy behavior in question is a source of self-esteem, in which case the opposite happens.

**Creatureliness.** Terror management theory suggests that people tend to deny and disguise their creatureliness, or similarity to other animals, to minimize death anxiety. Ernest Becker wrote, reality “tells man he is a small trembling animal who will someday decay and die” (1973). The concept of human creatureliness is threatening because it reminds us of the ordinariness and fallibility of our bodies. According to Goldenberg and colleagues (2000), when mortality is salient, people tend to become preoccupied with how their bodies look and function compared to societal standards. Meeting these standards gives us a sense of superiority over non-
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human animals, elevating our bodies from their physical and impermanent natures into cultural symbols. Therefore, it is proposed that being likened to animals threaten our death anxiety buffers by reminding us of the fallibility of our own bodies (Goldenberg et al., 2000).

People do not like to be reminded of their similarity to other animals when mortality is salient. Mortality salience has been shown to increase preference for an essay describing the differences between humans and animals over an essay about the similarity between humans and animals (Goldenberg et al., 2001). Beatson and Halloran (2007) found when primed with human creatureliness (similarity to animals) and mortality salience, participants rated animals more negatively, especially if participants had reported low self-esteem. Additional evidence suggests that when mortality is salient, people are more disgusted by animals. Goldenberg and colleagues (2001) found mortality salience led to increased disgust of body products and animals. This is consistent with evidence that people prefer the ingroup and suggests animals are an outgroup that threatens people’s worldviews.

Much evidence has shown the negative effects of mortality salience on prejudice and aggression towards the outgroup (McGregor et al., 1998). Motyl and colleagues (2013) found a creatureliness prime can reduce aggression. Specifically, they found that creatureliness priming caused participants to hit a punching bag less frequently, with less force, and with less comfort. They also found when violence was framed as animalistic, participants had increased death thought accessibility and decreased support for war against Iran (Motyl et al., 2013). Creatureliness threatens individual’s death anxiety buffers in a way that can reduce violence.

People prefer to be reminded of their differences from animals when mortality is salient. This is consistent with the hypothesis that thinking of oneself as different from or better than animals is protective against death anxiety. Mortality salience also increases disgust of body
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products and animals, presumably because they remind us of our physical, temporary nature. Viewing violence as animalistic leads people to decrease their support for violence perhaps to feel superior to animals. People do not like to be reminded of their similarity to animals when mortality is salient. This has implications for eating behavior and indeed, mortality salience does influence people’s eating preferences (Friese & Hofmann, 2008; McCabe et al., 2015).

**Eating behavior.** Mortality salience has been shown to induce a preference for national food brands over foreign food brands (Friese & Hofmann, 2008). This is consistent with the idea that when mortality is salient, people assert the cultural superiority of their ingroup over foreign cultures or outgroups. Specifically, mortality salience increases liking for and amount consumed of national brands of chocolates and soft drinks over foreign brands of chocolates and soft drinks (Friese & Hofmann, 2008). One study exposed grocery shoppers to mortality salience or pain salience prior to shopping. Then, they had shoppers visualize a healthy eater or an average eater. They found that shoppers in the mortality salience and healthy eater visualization groups made healthier purchases (McCabe et al., 2015). This demonstrates that the evidence that mortality salience can increase health-promoting behaviors includes food purchasing decisions. Mortality salience leads to choosing more local food and healthier food under certain circumstances.

**Current Study**

According to terror management theory, when reminded of one’s own mortality, people cling to their cultural worldviews (Greenberg et al., 1990; Rosenblatt et al., 1989); derogate other animals (Beatson & Halloran, 2007); distance themselves from other animals (Beatson & Halloran, 2007); increase support for killing animals (Lifshin et al., 2017); engage in health-promoting behaviors (Bozo, Tunca, & Şılmek, 2009; Cox et al., 2009; Hansen, Winzeler, &
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Topolinski, 2010); prefer consuming national food and beverage brands (Friese & Hofmann, 2008); and make healthier food purchases (McCabe et al., 2015). This constellation of findings leads to three possibilities when it comes to the question of how mortality salience might affect interest in plant-based and animal-based foods. First, because mortality salience can sometimes lead to health-promoting behaviors (Bozo et al., 2009), one might expect mortality salience to lead to increased consumption of plant-based food, particularly when doing so is linked to longevity and/or environmental benefits, as these presumably are valued societally. Second, because there is evidence that people distance themselves from animals (Beatson & Halloran, 2007) and increase support for killing animals (Lifshin et al., 2017) as a way to protect against death anxiety, mortality salience may increase interest in consuming meat. Third, mortality salience increases disgust for animals (Goldenberg et al., 2000), so it may decrease interest in consuming meat. It seems likely then, that mortality salience should impact interest in plant-based food and animal products, but the direction of this effect is unclear.

As an added question, we asked whether paragraphs about the benefits of a plant-based diet would motivate people to have less interest in eating meat and other animal products. Specifically, participants read a paragraph on the benefits of a plant-based diet on longevity or the environment. We chose these topics because they are 2 of the most important and motivating reasons to eat more plant-based food and less meat (Redwood & Shealy, 2005; the FAO; as cited by Macdiarmid et al., 2016). As stated previously, a diet high in meat and animal products is correlated with higher cholesterol and increased risk for breast cancer, among other things (Redwood & Shealy, 2005). Raising livestock for meat or animal products is responsible for 14.5% of the greenhouse gas emissions produced by people (the FAO; as cited by Macdiarmid et al., 2016). The reduction of meat and animal product production and consumption is important
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for the health of people and the environment. We predicted both paragraphs would increase liking of plants and decrease liking for meat.

To study the effect of mortality salience on people’s eating preferences and whether this effect depends on whether people believe that a diet of primarily plants fosters personal longevity or environmental benefits, we randomly assigned people to a mortality salience or control condition. We also randomly assigned people to read a paragraph about the benefits of a plant-based diet on the length of one’s life, the benefits of a plant-based diet on the environment, or no paragraph. We measured how appetizing participants found pictures of plant-based food, food containing disguised meat (does not look like an animal) and undisguised meat (looks like an animal). We also measured their current consumption of meat-containing, vegetarian, and vegan foods. We predicted that mortality salience would affect how appetizing participants found the different types of food shown, although we left the directionality of the effect open.

Method

Participants and Design

Participants were 340 students at the University of Vermont. Out of our 340 participants, 74 failed our manipulation checks (described below) and we thus did not include their data in the analyses. We also did not include the data of 2 people who did not specify their gender and 4 people who did not complete the baseline plant-based eating measures (described below). This left us with 260 participants who were 18 or older (M = 18.862, SD = 1.767) in the final analysis. Two hundred and three (78.1%) identified as female. Two hundred and twenty-five (86.5%) identified as European American, 15 (5.8%) as Asian American, and 11 (4.2%) as Multiracial; 9 (3.5%) identified as Hispanic. Participants were randomly assigned to a condition in a 2
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(Mortality Salience: Yes, No) X 3 (Plant-Eating Benefits: Longevity, Environmental, Control)
design.

Procedure

First, all participants read and signed a consent form stating that this study was about
food preferences. Participants then received a packet that contained the materials for our
mortality salience manipulation.

Mortality salience manipulation. Following standard procedure (Greenberg et al.,
1990), participants answered 2 writing prompts designed to make them think about their own
death or their own dental pain. The 2 prompts for the mortality salience condition were “Please
describe the emotions that the thought of your own death arouses in you” and “Write down as
specifically as you can, what you think will happen to you physically when you die.” The two
prompts for the dental pain condition were phrased similarly: “Please describe the emotions that
the thought of being in intense dental pain arouses in you” and “Write down as specifically as
you can, what you think will happen to you physically as you are in intense dental pain.”

Next, participants completed 2 distractor questionnaires: the Other Compassion Scale
(Pommier, 2010) and the Existential Isolation Scale (Pinel, Long, Murdoch, & Helm, 2017).
Evidence suggests the terror management effects studied here emerge only after participants
undergo a delay that immediately follows the writing prompt (Greenberg, Arndt, Simon,
Pyszczynski, & Solomon, 2000). These surveys thus were meant to give mortality salience time
to “settle in.”

Manipulation of benefits of plant-based eating. When all participants had completed
the mortality salience manipulation, they received a second packet that contained the
manipulation of the benefits of plant-based eating. Participants read a “longevity” paragraph, an
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“environmental” paragraph, or they were in the control condition. Participants in the longevity condition read a paragraph stating that a plant-based diet may lengthen the span of one’s life. Specifically, they read a paragraph about how John Robbin’s (2007) book, Healthy at 100, demonstrates that cultures with the longest living people tend to eat a predominantly plant-based diet. Participants in the environmental condition read a paragraph stating that a plant-based diet is good for the environment. Specifically, they read a paragraph about how Anna Lappé’s (2011) book, Diet for a Hot Planet, demonstrates that a plant-based diet is better for the environment than a meat-based diet. (see Appendix A for the full paragraphs).

All participants then completed the Humanitarianism-Egalitarianism Scale as a distractor questionnaire (Katz & Hass, 1988). Next, all groups completed the main dependent measures.

**Dependent measures.** All participants completed a measure of how appetizing they considered different kinds of foods. The experimenter displayed the pictures one at a time on a projector. There were 6 pictures of a vegetable-based, vegan food—veggie sub, pasta with tomato sauce, french fries, veggie kabobs, vegan salad, and a veggie burger. We removed french fries from the analysis because Cronbach’s alpha was higher (α = .685) if french fries were deleted compared to (α = .638) when french fries were included. There were 6 pictures of disguised meat—hamburger, chicken fingers, pasta with meat sauce, shrimp salad (peeled shrimp), turkey sub, and meat kabobs. We removed shrimp salad from the analysis because Cronbach’s alpha was higher (α = .853) if shrimp salad was deleted compared to (α = .806) when shrimp salad was included. There were 6 pictures of undisguised meat—lobster, rotisserie chicken, roast pig, whole fish, boiled crab, and shrimp (unpeeled, with the legs still on). We removed shrimp from the analysis because Cronbach’s alpha was higher (α = .789) if shrimp was deleted compared to (α = .766) when shrimp was included. Each picture was presented for 15
seconds. During that time, participants indicated how appetizing they found each picture on a 7-point scale, with 1 being not at all appetizing and 7 being extremely appetizing. After viewing and rating the images of food, participants indicated what percentage of vegetarian, vegan, or meat-containing food they would like to eat in the future.¹

**Demographics and control variables.** After they completed our primary dependent measures, participants completed a series of demographic questions. Specifically, participants also indicated their age, racial identification, ethnicity, and gender identification.

The next question asked participants (except the control group) to recall which of three given topics described the paragraph they had read earlier in the study. This was to verify participants had read the paragraph, and people who answered incorrectly or not at all were excluded from analysis as stated above.

Finally, participants indicated the average number of vegan, vegetarian, and meat-containing meals they eat per week. Baseline plant-based eating was calculated as number of vegetarian meals minus the number of meat meals. We reasoned that people’s baseline tendencies to eat plant-based meals would influence our results, so we used this index of baseline plant-based eating as a covariate in our analyses.²

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¹ Participants then answered a question about what food they were currently in the mood to eat. Finally, they indicated how interested they were in learning more about a plant-based diet or meat-based diet or about how to emphasize plants in their diet with a 7-point scale, with 1 being not at all and 7 being extremely. This data is not discussed in the current paper.

² Then participants rated how much they believed a plant-based diet improved longevity or the environment on a 6-point scale with 1 being strongly disagree and 6 being strongly agree. This data is not discussed in the current paper.
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Once all participants completed the questionnaires, they were debriefed and thanked for their time. The experimenter then granted them credit via our online platform (i.e., SONA).

Results

We predicted that mortality salience and paragraphs about the benefits of a plant-based diet would influence how appetizing participants would find pictures of plant-based food, undisguised meat, and disguised meat. We tested for gender effects, because men in many cultures, particularly Western culture, receive messages that meat is a symbol of status and masculinity (Schösler, de Boer, Boersema, & Aiking, 2015; Sobal, 2005); this may lead to men’s meat-eating behaviors particularly affected by the threat to their worldview via mortality salience. In addition, thinness is currently a widespread ideal of beautiful women in much of the world (Goldenberg, Arndt, Hart, & Brown, 2005), conventional wisdom tells us many vegetables are low calorie, and plant-based diets are perceived as feminine (Sobal, 2005); this may lead to women liking plant-based food more and meat less than men like them.

For each of these dependent variables, we ran a 2 (Gender: Male, Female) X 2 (Mortality Salience: Yes, No) X 3 (Plant-Eating Benefits: Longevity, Environmental, Control) ANCOVA, controlling for baseline differences in degree of plant-based eating. We will review the results for each dependent variable in what follows.

**The appeal of plants-based food.** The analysis conducted on how appetizing participants viewed plant-based food revealed the following statistically significant effects: (1) a main effect of the baseline level of plant-based eating, $F(1, 247) = 10.207, p = .002, \eta^2_p = .040$; (2) a significant effect of mortality salience, $F(1, 247) = 7.288, p = .007, \eta^2_p = .029$; (3) a main effect of gender, $F(1, 247) = 13.333, p < .001, \eta^2_p = .051$; and (4) an interaction between
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mortality salience and gender, $F (1, 247) = 4.377, p = .037, \eta^2_p = .017$. No other effects emerged as statistically significant; all remaining $p$’s > .288.

With respect to our main effect of mortality salience, we observed that people in the mortality salience condition in general found plant-based food to be more appetizing ($M = 4.361, S.E. = .122, 95\% \ CI = [4.121, 4.601]$) than people in the dental pain condition ($M = 3.903, S.E. = .117, 95\% \ CI = [3.673, 4.134]$). With respect to our main effect of gender $F (1, 247) = 13.333, p < .001, \eta^2_p = .051$, we observed that females found plant-based food to be more appetizing ($M = 4.446, S.E. = .080, 95\% \ CI = [4.289, 4.603]$) than males did ($M = 3.818, S.E. = .151, 95\% \ CI = [3.521, 4.114]$).

With respect to the interaction between mortality salience and gender, we found an effect of mortality salience for the males only. Males in the mortality salience condition liked plant-based food more ($M = 4.222, S.E. = .216, 95\% \ CI = [3.796, 4.648]$) than males in the dental pain condition ($M = 3.414, S.E. = .206, 95\% \ CI = [3.008, 3.820]$). Consult Figures 1 and 2 for graphs on females’ and males’ interest in plant-based food as a function of mortality salience and paragraph.

The appeal of disguised meat. The analysis conducted on how appetizing participants viewed disguised meat revealed the following statistically significant effects: (1) a main effect of the baseline level of plant-based eating, $F (1, 247) = 64.115, p < .001, \eta^2_p = .206$ (2) a marginally significant main effect of gender, $F (1, 247) = 3.705, p = .055, \eta^2_p = .015$, and a marginally significant interaction between paragraph and gender, $F (2, 247) = 2.653, p = .072, \eta^2_p = .021$. Because our effects for the appeal of disguised meat are marginal, and because we have limited power to test gender effects, we interpret these effects with caution. Also, no other effects emerged as statistically significant; all remaining $p$’s > .125.
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**The appeal of undisguised meat.** The analysis conducted on how appetizing participants viewed undisguised meat revealed the following statistically significant effects: (1) a main effect of the baseline level of plant-based eating, \( F(1, 247) = 27.486, p < .001, \eta_p^2 = .100; \) (2) a marginally significant main effect on paragraph, \( F(2, 247) = 2.367, p = .096, \eta_p^2 = .019; \) (3) a main effect of gender, \( F(1, 247) = 17.165, p < .001, \eta_p^2 = .065; \) and (4) a marginally significant interaction between paragraph and gender, \( F(2, 247) = 2.531, p = .082, \eta_p^2 = .020. \)

Because our effects for the appeal of disguised meat are marginal, and because we have limited power to test gender effects, we interpret these effects with caution. Also, no other effects emerged as statistically significant; all remaining \( p \)'s > .197.

**Discussion**

We predicted that mortality salience and paragraphs about the benefits of a plant-based diet would influence participants’ liking of plant-based food, disguised meat, and undisguised meat. Our hypothesis was partially supported when it came to liking for plant-based food. With respect to plant-based food, we found a main effect of baseline plant-based eating, mortality salience, gender, and an interaction between mortality salience and gender. With respect to disguised meat, we found a main effect of baseline plant-based eating, a marginally significant main effect of gender, and a marginally significant interaction between paragraph and gender. With respect to undisguised meat, we found a main effect of baseline plant-based eating, gender, a marginally significant main effect on paragraph, and a marginally significant interaction between paragraph and gender. These marginal effects should be interpreted with caution, given our limited sample of males and thus limited power. We will, therefore, focus on the results as they pertain to plant-based food.
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Mortality salience increased liking for plant-based food among males. Females already liked the plant-based food more than males and their liking did not change as a function of mortality salience. The effect among males could be explained by the tendency for mortality salience to increase health-promoting behaviors (Bozo et al., 2009). One study linking health-promoting behaviors to mortality salience, discussed above, measured health-promoting behavior with the Health-Promoting Lifestyle Profile II, a questionnaire which includes subscales of self-actualization, responsibility for one’s own health, exercise, stress management, interpersonal support, and—most relevant to the current paper—nutrition (Walker, Sechrist, & Pender, 1987). In that study, mortality salience improved people’s intentions to follow a nutritious diet (Bozo et al., 2009). All in all, the results of these studies seem compatible with the results of the research reported here insofar as we found that mortality salience increases interest in plant-based food, which many would agree is a health promoting.

Limitations of Study

As we already noted, many of our results depended on a comparison of gender. These results should be interpreted with caution because only 57 participants were male in a 6 condition design. Also, participants were all University of Vermont college students of limited diversity. Data may be different with a different population sample. Different cultures have different food practices and beliefs, which may result in a different reaction to mortality salience or the paragraphs.

For this study, we had participants rate how appetizing 6 pictures of plant-based food, 6 pictures of disguised meat, and 6 pictures of undisguised meat looked. We analyzed the data from 5 pictures from each group because this made the alpha levels higher. We attempted to standardize the pictures as much as possible. For example, we had a veggie burger and a
hamburger, a veggie sub and a turkey sub, veggie kabobs and meat kabobs. This standardization was not as simple for the undisguised meat. There is no vegetarian equivalent of a whole lobster or a whole chicken for example. We also attempted to use images of food common to U.S. culture. The whole roast pig was not particularly culturally relevant, at least here in the northeast. Future research may want to use a different assortment of pictures to confirm our findings.

Future studies may also want to examine how self-esteem influence food preferences when mortality is salient. Previous evidence has shown self-esteem moderates the effect of mortality salience, with high self-esteem eliminating behaviors thought to protect against death anxiety (Rosenblatt et al., 1989). Perhaps people with high self-esteem do not show an increased preference for plant-based food when mortality is salient.

Future studies may want to examine how cultural beliefs influence food preferences when mortality is salient. Mortality salience has been shown to increase support for people, objects, or ideas that confirm a person’s cultural worldviews (Friese & Hofmann, 2008). Examining people’s food-related and health-related cultural worldviews could give us insight into why people modify their food preferences when mortality is salient. Examining gender-related cultural worldviews could give us insight into why the effect of mortality salience on preference for plant-based food was stronger for men.

Why did we not see an effect of mortality salience on the appeal of undisguised or disguised meat? Part of the answer could have to do with the control condition we chose. Recall that participants wrote about dental pain; this may have lowered appetite in general. In the dental pain condition, several participants wrote that their appetite would be affected by intense dental pain. Future studies may want to use a different control.
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Why did we not see an effect of our paragraphs? Part of the answer could have to do with the vagueness of the paragraphs. As shown in Appendix A, the longevity paragraph states that many of the world’s cultures with the longest living people have a plant-based diet with little to no animal products. Perhaps if we were more specific about evidence of the specific life-shortening illnesses correlated with the consumption of animal products, this paragraph would be more convincing. For the environmental paragraph, we state that livestock emits more greenhouse gases than all transportation does. Perhaps if we explained the damaging effects of greenhouse gases and other ways raising livestock damages the environment, such as through deforestation for grazing, the environmental paragraph would have been more convincing. Future studies may want to use more thorough descriptions of the benefits of a plant-based diet on longevity and the environment. Another paragraph topic future studies may want to use are the ethical benefits of a plant-based diet.

**Concluding Remarks**

Despite the limitations to our study, we did see an effect of mortality salience on males’ interest in plant-based foods. This has practical implications for efforts to improve the health of people and the environment. As society struggles with healthcare costs and climate change, it is important to consider the implications of diet.

This also expands the work on terror management theory. Work to date on terror management theory has primarily focused on cultural worldview defense and self-esteem (Greenberg et al., 1990). Although food is an expression of culture, not many studies have looked at how mortality salience affects food choice. One study found that participants prefer a native beverage to a foreign beverage when mortality is salient (Friese & Hofmann, 2008). Another study found women eat less of a nutritious but fattening food when mortality is salient
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(Goldenberg et al., 2005). A third study found that mortality salience plus imagining a prototype of a healthy eater led grocery shoppers to make healthier purchases (McCabe et al., 2015). These studies of terror management are the most similar to the current study as is available. No other study the authors are aware of has examined the effect of mortality salience on the consumption of plant-based food and meat. Future studies may want to use a different control for mortality salience, more specific and convincing paragraphs, and examine the effects of self-esteem, food-related cultural worldviews, and gender-related cultural worldviews to arrive at a more complete picture of the influence of mortality salience and arguments encouraging a plant-based diet.

Given the inextricable link between what we eat and how long we live (Redwood & Shealy, 2005), we hope others will continue to explore the meals people select, when they are dying to eat.
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Appendix A

Longevity Paragraph

More and more research identifies diet as a critical component in determining how long people live and the quality of their life. In John Robbin’s convincing and scientifically-based book, *Healthy at 100: The Scientifically Proven Secrets of the World’s Healthiest and Longest-Lived Peoples* (2007), readers learn about cultures across the globe that have the highest percentage of people who live healthy lives well past 100 years of age. Importantly, regardless of where in the world these cultures originate, they have their eating styles in common. Specifically, cultures characterized by people who live long and healthy lives emphasize eating a plant-based diet high in fruit, vegetables, and whole grains that includes only a small amount of animal products, if any.

Environmental Paragraph

More and more research identifies diet as a critical component in environmental issues and particularly in the long-term health of the earth. In Anna Lappé’s convincing and scientifically-based book, *Diet for a Hot Planet: The Climate Crisis at the End of Your Fork and What You Can Do about It* (2011), readers learn about the environmental impacts of the food that people choose to plant, raise, and eat. For example, livestock emits more greenhouse gasses than all transportation does. Importantly, regardless of where in the world people live, their eating habits affect the planet in a positive or negative way. Specifically, there is evidence that a plant-based diet that includes only a small amount of animal products will have a positive impact on the environment and reduce the rate of climate change.