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## Effects of Mortality Salience on Anti- Atheist Prejudice: A Terror Management Perspective

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*Effects of Mortality Salience on Anti- Atheist Prejudice: A Terror Management  
Perspective*

An Honors Thesis submitted in partial fulfillment of the requirements for Honors in  
Psychology.

By  
Cassidy Keim

Under the mentorship of Dr. Michael Nielsen

ABSTRACT

Terror Management Theory argues that mortality salience is an important motivator in how people behave throughout their lives, and can influence how prejudiced individuals become. In this study we triggered participants' mortality salience to test this claim, as well as measured the attitudes of prejudice have for atheists compared to homosexuals to see if they differ. Mortality salience did not have an effect on prejudice in this experiment, but anti-atheist prejudice was significantly higher than anti-homosexual prejudice. Although these findings are small, they confirm a need for continued research on prejudice against religious minorities, such as atheists, and how to reduce it.

*Keywords:* mortality salience, anti-atheist, prejudice, Terror Management Theory

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## LITERATURE REVIEW

In a time where civil rights and social injustice have been a relevant topic in our culture, atheists are an extremely marginalized group and are frequently overlooked when discussing religious and social prejudice in the United States. In fact, with religious affiliation declining since the 1970s, atheism has become an increasingly large minority, representing 31% of millennials today (Twenge et al., 2016). Atheists were also rated as the group that least agrees with the “American Dream,” and is also the group Americans would most disapprove their child marrying (Gervais et al., 2011).

With our attention as a nation recently becoming more focused on issues like political disagreement, civil rights advocacy, police brutality, mass shootings, gun control, and homeland security, it is no surprise that many Americans are concerned about the future. Although these issues may not pose an immediate threat to all people, civil strife nevertheless reminds individuals of their own lives and the inevitability of their own death. Awareness of one’s own mortality is called mortality salience, and can result in severe anxiety when thought about too often. Studies concerning mortality salience have concluded that just like other animals, humans have a natural desire for self-preservation. This innate desire can be seen not only by an individual’s physical behaviors, but also their social behaviors and thoughts concerning their life’s purpose and meaning. Anxiety caused by one’s own awareness of death has been deemed a critical motivator for people’s behaviors, cognition, choice of religious participation, self-esteem, and even the relationships they make and maintain. This includes relations with atheists; studies have documented that induction of mortality salience has led to an increase in distrust of atheists (Cook et al., 2015).

Research investigating attitudes towards atheists indicates that when individuals reflect on their own mortality, they become more negative, more distant, and more distrustful of atheists as well (Cook et al., 2015). After researching the effects Terror Management Theory has on religion and prejudice, I argue that Terror Management Theory can be used as an explanation for how common anti-atheist prejudice is in the United States, and how we are yet to see a decrease in prejudicial behavior in the past 40 years (Edgell et al., 2016).

### **Terror Management Theory**

The hypothesis concerning mortality salience itself states that “reminders of mortality increase the need for faith in the worldview, and thus increase favorable responses to anyone or anything that supports the worldview and unfavorable responses to anyone or anything that threatens it” (Simon et al., 1998, p. 362). Terror Management Theory suggests that when people become exposed to higher levels of mortality salience (or a more subconscious awareness of their own mortality), they are more likely to subconsciously gravitate towards ingroups and become more prejudiced towards outgroups in order to maintain self-esteem and give purpose to their own lives (Pyszczynski, T., Solomon, S., & Greenberg, J, 2013).

Psychologists have used several methods to operationalize mortality salience. This includes the creation of scales, the use of open ended questions concerning mortality and death, and videos of fatalities to provoke participants to think about their own mortality. New methods are continuing to be tested to find the best suited way to measure one’s mortality salience as mortality salience and Terror Management Theory continues to be researched. Terror Management Theory has now been applied across disciplines and can be related to several

aspects of individuals' lives such as people's own self-image, their religiosity, their morality, and their own levels of prejudice towards others.

From the Terror Management Theory's perspective, this deep-rooted anxiety that mortality salience creates can be buffered by the use of one's cultural worldview and building and confirming one's self-esteem. This combination both of an individual's cultural worldview and self-esteem is crucial when analyzing the role Terror Management Theory has on prejudice. People's cultural worldviews not only provide meaning to individuals' own lives and existences, but also allow a stable conception of reality and gives individuals set of standards which to uphold (Schimel et al., 1999). Self-esteem on the other hand, is acquired by people believing that their own individual cultural worldviews are valid and that the standards people believe they must uphold are being met (Schimel et al., 1999). To maintain a buffer from the anxiety that mortality salience brings, individuals must not only protect their cultural worldviews, but also must protect their own self-esteem and maintain the social structures they believe in.

By meeting the standards of one's worldview, an individual then obtains the self-esteem needed to buffer the anxiety brought about by the idea of one's eventual death. Both cultural worldviews and one's self-esteem go hand in hand when buffering the anxiety that comes with mortality salience, and one cannot function without the other. According to Terror Management Theory specifically, cultural worldviews and the endorsement of stereotypes may also result from failure to engage in covariance reasoning as well (Schimel et al., 1999).

Though cultural worldviews are subjective by nature, people must not only invest themselves in believing their own worldviews, but must also convince themselves that the differing worldviews of others are flawed (Bradley et al., 2012). By exploring other worldviews, individuals become more susceptible to questioning their own beliefs about their lives and their

mortality. This creates the possibility of experiencing the anxiety and uncertainty that comes when thinking about one's eventual death.

Because people act to protect their own view of reality, they also go out of their way to protect the ideology of the ingroups to which they belong. Research has shown in over 50 instances that as mortality salience increases, positive evaluations of people who support the participants' worldview and negative evaluations of people who threaten the participants' worldview both increase (Schimel et al., 1995). Studies have also shown positive correlations between mortality salience and conformity as well. As conformity increases, it can become more difficult to violate one's own cultural norms (Schimel et al., 1995). In one study, after the manipulation of mortality salience, white participants were more likely to sympathize with white racists, and also hypothetically gave a shorter prison sentence to a white employer that discriminated against a black employee compared to other racists and employers of other races (Bradley et al., 2012).

The belief that people protect their own beliefs is, of course, not a new concept. Some of the earliest research exploring group polarization and prejudice towards outgroups shows that when people become divided in the minimal group paradigm, individuals will seek out which groups they belong to the most (Schimel et al., 1999). Social psychologists argue that these cultural conceptions and beliefs that we hold true about the world have evolved to protect us from paralyzing anxiety and allow cooperation to occur within societies, rather than being created to start conflict between groups. In a way, this desire to affirm one's own beliefs can bring communities together when they are likeminded, and even create feelings of trust and reliability within a community. By not only finding belonging within a group, but also looking down on opposing groups, one not only validates their own worldview and belonging, but also

boosts their own self esteem as they confirm their group's beliefs and worldview as being the "correct" choice.

Terror Management Theory suggests that because cultural worldviews are fragile and socially constructed, the existence of differing and conflicting worldviews creates the need to consistently validate and confirm one's own beliefs and values. TMT argues that individuals consistently must validate their own beliefs to themselves and others, which often leads to an individual becoming prejudiced against any idea or group that challenges the individual's own reality. Those who do hold prejudice against outgroups are not always aware they their beliefs or actions are prejudiced or even argue in extreme cases, that their prejudice is validated by their own morals and beliefs. Rather than consider themselves as being prejudiced, their beliefs are just "the right way" to think.

For atheists specifically, the presence of atheism challenges many culturally constructed worldviews as well as common theistic beliefs, and creates an existential threat (Cook et al., 2015). In a way, one can argue atheists face substantial prejudice globally because of the idea that they threaten the comfort of a higher being that many individuals use to ease the anxiety that death can cause.

### **Atheism and the Nature of Anti-Atheist Prejudice**

"Prejudice" is defined by Gervais et al. as "a generalized feeling of unpleasantness and dislike towards outgroups" (2011). Prejudice is not necessarily limited towards acts of bigotry or hate speech, but is also characterized by negative opinions someone holds based on a single aspect of themselves such as race, gender, religion, sexuality, etc. When analyzing the nature of prejudice, each type of prejudice is multidimensional, and is characterized by different traits. For



example, both anti-homosexual and anti-atheist prejudice exists, but people are prejudiced against these outgroups for several reasons.

In modern America, atheists make up a growing percentage of the surveyed population of United States citizens, though this is often overlooked or minimized as atheists have been identified as one of the most discriminated groups in the United States (Edgell, P., Gerteis, J., Hartmann, D., 2006). Not only do atheists make up a large population of millennials, but American adults have recently been identified to be less religious as those of past generations like Generation X or Baby Boomers when they were young as well (Twenge et al., 2016). With a marginalized population being as large as atheists are, there is still only minimal research on why atheists are discriminated against and how to stop the acceptance of anti-atheist prejudice in American culture.

A decrease in religious affiliation in general could be attributed to many factors, including both cultural changes and differences within church communities. When studying some reasons behind why individuals today chose not to be religiously affiliated, Twenge and colleagues proposed that the rise of individualism, declines in a focus on institutionalism, empathy for others, and an increase in tension due to different religious beliefs all may play a role in how people now identify without religion (Twenge et al., 2016). Not only is there little research explaining the reasons why the presence of anti-atheism prejudice in American culture has been constant, it is also one of the more socially accepted prejudices for Americans to have. With a continuous increase in atheists within the United States and an unceasing acceptance of anti-atheist prejudice, the United States population is becoming much more polarized as a result (Twenge et al. 2016).

Though many people are prejudiced against both the LGBT community and atheists based on moral and often religious reasoning, both types of prejudice are not the same in nature. When discussing the reasons behind anti-atheist prejudice, Gervais et al. (2011) used two approaches to explain potential causes. Using the Socio-Functional approach, Gervais and colleagues proposed that each type of prejudice is different in nature due to how prejudices are created by the different types of threats that people perceive other groups pose (2011). The second approach that identifies religious prosociality recognizes that religion as a institution is responsible for being a main source of social cohesion and coordination (2011).

### **Distrust Vs. Disgust**

Compared to that of racial or sexuality prejudice, prejudice against atheism is different because it is rooted in distrust rather than fear or disgust (Gervais et al., 2011). In fact, Gervais et al. (2011) note that Atheists are rated less favorably than either gay men or people in general, distrusted more than gay men, and are rated as less trustworthy than Muslims as well. This distrust people have against atheism is theorized with the association people have with religion and morality, as well as how religion has been used to socialize people through time. Not only has religion provided a road map for human behavior, but it has also allowed opportunity for religious prosociality, or the opportunity for societies to report to religion rather than man (Gervais et al., 2011).

Gervais elaborates on how religion has been used to maintain cooperation within societies by explaining that religion is “one in several things that allow people to cooperate in large groups by in effect outsourcing social monitoring to supernatural agents not bound to its costs” (2011, p. 1190). By allowing prosocial behavior to be rewarded by the supernatural, it

allowed societies to reward and punish behaviors through supernatural belief rather than putting that job on one group or member of society. By moralizing gods, more people often modified their behaviors to be more productive in society, and as a result contributed to not only bettering themselves, but also the community. With god “always watching,” people often have more pro social behaviors when seeking god’s or gods’ approval.

Consequently, those who have anti-atheist behavior themselves may also justify their viewpoint because it is often discussed without opposition. With most modern societies now having a religion that has a god or gods that promote morality, distrust of those that do not believe in god would also be widespread (Gervais et al, 2011). Trustworthiness in modern society has been rated as one of the most valued traits in other people, and can often be used as a proxy for religiousness. In anonymous “trust game” studies, participants who were religious transferred more money to seemingly religious partners compared to seemingly non-religious partners. (Gervais et al., 2011). As a result of this cultural association between morality and religion, many people believe without the belief in god or set of moral codes to follow, people are necessarily immoral as atheists, though this assertion is made in scant evidence.

### **The Importance of Southern Culture, Religiosity, & Intergroup Bias**

When discussing the South in particular, studies concerning prejudice and intolerance show that southerners consistently have been recorded to be more reluctant to extend civil liberties to unpopular groups than residents in other regions (Ellison et al., 1993). The stereotype of “southern intolerance” holds some truth in society today as southern culture specifically has allowed for prejudice to be more abundant and socially accepted within communities. This

phenomenon could be explained by localism, or the “marked preference for an identity with the location of one’s birth” (Ellison et al., 1993)

With loyalty to a culture characterized by open intolerance and an unwillingness to change, this ideology can also be carried even if individuals from this culture move outside the region. Southern culture explicitly has also been shown to place heavy emphasis on church membership (Ellison et al., 1993). Because religiosity and morality are often thought to go hand in hand, church involvement is often seen as an emblem of one’s character, confirmation of one’s morality, and evidence that someone is a good member to society.

Because religion has long been a distinct feature in the southern region (ex. fundamentalism), anti-atheist prejudice is often thought as a common ideology by those who themselves are prejudiced. Similarly, atheists in the southern region are frequently the “invisible” minority. Those who are religious habitually assume those around them are religious as well. Likewise, those who are prejudiced against atheists also assume those around them are as well, making anti-atheist prejudice a socially accepted phenomenon. With a community based around religion, holiness, and conformity, atheists usually choose not to out themselves and instead let those around them have the impression they are religious to avoid being discriminated against or shunned by the community.

People often argue when defending the religious from the stereotype of being overly judgmental, that those who are religious follow religious texts that promote tolerance and service to all people, however this is not the case for many religious people. Though many religious scriptures from many religions promote service and tolerance, this is often discouraged through socialization within religious communities. This paradoxical relationship between religion and selective prosociality can be explained by intergroup bias within religion. Religious intergroup

bias as explained by Johnson et al. as the “tendency of individuals to evaluate the group and its members more positively than the outgroup and its members” (2012).

Religion naturally promotes itself (the in-group), and as a result allows for prejudice against outgroups to occur. For example, religious individuals have reported more positive attitudes towards individuals belonging to a religious group and negative stereotypes about the non-religious (Johnson et al., 2012).

With both intergroup bias and mortality salience as contributing factors to anti-atheist prejudice, one can hypothesize that someone’s level of religiosity and involvement within their religious community correlates with how prejudice someone may be against atheists. Religion as a social institution not only promotes cooperation within communities, but also promotes the goals of religion as a social group. As seen by Johnson et al., “higher levels of general religiosity and spirituality are related to higher levels of intergroup bias” (2012). If someone has high mortality salience, they often may seek out religion to give them purpose and a cultural worldview’s set of standards to hold to ease the anxiety that their own mortality brings them (Pyszczynski, T., Solomon, S., & Greenberg, J, 2013).

With what psychologists know about mortality salience and the effects of inter group bias in religion, the presence of religiosity and mortality salience within an individual may result in more prejudiced beliefs or behaviors. Unlike other minority groups often discussed, atheists have yet to see an increase in acceptance over the last 40 years (Edgell et al., 2016). With the number of atheists rising each year, atheists are now one of the largest marginalized groups there is and still face open persecution from most of society. In order to bring awareness concerning anti-atheist prejudice, researchers must continue to investigate the multidimensionality of anti-atheist prejudice and identify not only what can make someone prejudiced, but how people can prevent

this prejudice continuing. Understanding both the implications of mortality salience and the nature of anti-atheist prejudice not only will increase people's understanding of the brain, but also help aid the fight to reduce prejudice in American society.

The purpose of this study was to investigate the anti-atheist prejudice within my own peer group at Georgia Southern University, and compare that to my peer's opinions of the LGBT outgroup, as well as see if there is a correlation between individuals' mortality salience and how open they are to atheists. Based on my review of the literature, I hypothesize participants with induced mortality salience will display more prejudice against homosexuals and atheists than those who did not have mortality salience induced. I also hypothesize that participants will display more prejudice towards atheists than homosexuals based on the complex nature of anti-atheist prejudice and the higher rates of anti-atheist prejudice in the United States today.

## **METHOD**

### **Participants and Recruitment**

Participants for this study were 109 (22 men and 87 women) undergraduate students enrolled at Georgia Southern University with access to the university's online research participation pool called "SONA". Participants' median age was 19, and they described themselves as White (71.96%), Black (14.95%), Asian (3.74%) Hispanic (7.48%) or Other (1.87%). When asked if they are religious, participants answered yes (63.72%) or no (36.28%). When asked to identify their religion, participants identified themselves as Christian (69.91%), Muslim (.88%), Buddhist (.88%), Other (6.19%) or did not identify with any religion (22.12%).

Participation for this study was on a voluntary basis, though some participants had the incentive of receiving extra credit provided by their instructors if they participated, or were

required to participate in online studies as a part of their academic coursework. Participants who failed to complete the survey in its entirety (N=46) were excluded from the analysis.

### **Measures and Procedure**

This study was conducted using an online survey created through Qualtrics. Participants viewed a prompt giving them information about the study and asked for their consent. If consent was given, participants were prompted to give information on their demographics and given pretests using the BSDS Scale (Bogardus, E. S., 1933) and a Feeling Thermometer Scale Wojcieszak (2011, 2012) to measure their levels of prejudice against both homosexuals and atheists before put into their conditions. This allowed examination to occur under the contention that that prejudice toward both groups is morally based, but that people report discriminating against homosexuals and atheists for different core reasons (Edgell, P., Gerteis, J., Hartmann, D., 2006).

#### **The Bogardus Social Distance Scale**

- As close relatives by marriage (*i.e.*, as the legal spouse of a close relative) (score 1.00)
- As my close personal friends (2.00)
- As neighbors on the same street (3.00)
- As co-workers in the same occupation (4.00)
- As citizens in my country (5.00)
- As non-citizen visitors in my country (6.00)
- Would exclude from entry into my country (7.00)





	Experimental Group	Control Group
Step 1: Pretests	BSDS Pretests Feeling Thermometer Tests	BSDS Pretests Feeling Thermometer Tests
Step 2: Mortality Salience Manipulation	Mortality Salience Manipulation Activity	Substitute Activity
Step 3: Distractor Task	Short Story and Questions	Short Story and Questions
Step 4: Posttests	BSDS Posttests Feeling Thermometer Posttests	BSDS Posttests Feeling Thermometer Posttests

The control group’s survey had both a substitute activity and distractor task rather than just the distractor task present so both the control and the experimental survey required the same amount of time to complete. The both the control and experimental group had a 5 minute minimum to complete either the Mortality Salience Manipulation or the Substitute Activity. This ensured that those participating in the experimental condition did not rush through answering the two questions concerning their feelings about death and allowed them to thoughtfully respond, allowing their mortality salience to be triggered.

A distractor task was present in this survey so participants were not actively thinking about death as they were asked any questions after the activity. Rather, it was wanted that the participant is distracted from their mortality salience so it remains in their subconscious for the remainder of the survey. For this survey, the prompt for the mortality salience activity as well as the two distractor tasks were provided by <http://www.tmt.missouri.edu>.

After participants have completed the distractor task, they were asked about their feelings towards homosexuals and atheists again using the BSDS Scale (Bogardus, 1933) and feeling thermometer scale, then the survey ended.

**EXAMPLE OF SURVEY ACTIVITIES**

**Mortality Salience Manipulation Activity**

Next are two open-ended question; please respond to them with your first, natural response. We are looking for peoples’ gut-level reactions to these questions.

The Projective Life Attitudes Assessment

This assessment is a recently developed, innovative personality assessment. Recent research suggests that feelings and attitudes about significant aspects of life tell us a considerable amount about the individual’s personality. Your responses to this survey will be content-analyzed in order to assess certain dimensions of your personality. Your honest responses to the following questions will be appreciated.

- 1. PLEASE BRIEFLY DESCRIBE THE EMOTIONS THAT THE THOUGHT OF YOUR OWN DEATH AROUSES IN YOU.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

- 2. JOT DOWN, AS SPECIFICALLY AS YOU CAN, WHAT YOU THINK WILL HAPPEN TO YOU AS YOU PHYSICALLY DIE AND ONCE YOU ARE PHYSICALLY DEAD.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

### Substitute Activity for Control Group

Please take time to find as many words as you can in the puzzle below. Please then write the words you find in the space provided below.

S	R	E	T	U	P	M	O	C	O
W	P	H	O	N	E	R	E	E	B
A	M	U	S	I	C	P	Z	S	N
B	T	N	R	O	T	C	A	S	K
B	M	R	K	S	E	D	E	A	O
R	F	O	A	G	O	L	B	R	O
E	L	G	V	I	Z	B	O	G	B
P	A	N	U	I	N	E	L	W	Q
A	G	T	A	B	E	T	G	D	O
P	S	C	H	O	O	L	N	I	T

---

### Distractor Task: Short Story and Questions

“Please read the following short passage from a novel and answer the questions below it.

The automobile swung clumsily around the curve in the red sandstone trail, now a mass of mud.

The headlights suddenly picked out in the night—first on one side of the road, then on the

other—two wooden huts with sheet metal roofs. On the right near the second one, a tower of

coarse beams could be made out in the light fog. From the top of the tower a metal cable,

invisible at its starting-point, shone as it sloped down into the light from the car before

disappearing behind the embankment that blocked the road. The car slowed down and stopped a

few yards from the huts. The man who emerged from the seat to the right of the driver labored to extricate himself from the car. As he stood up, his huge, broad frame lurched a little. In the shadow beside the car, solidly planted on the ground and weighed down by fatigue, he seemed to be listening to the idling motor. Then he walked in the direction of the embankment and entered the cone of light from the headlights. He stopped at the top of the slope, his broad back outlined against the darkness. After a moment he turned around. In the light from the dashboard he could see the chauffeur's black face, smiling. The man signaled and the chauffeur turned off the motor. At once a vast cool silence fell over the trail and the forest. Then the sound of the water could be heard. The man looked at the river below him, visible solely as a broad dark motion flecked with occasional shimmers. A denser motionless darkness, far beyond, must be the other bank. By looking fixedly, however, one could see on that still bank a yellowish light like an oil lamp in the distance. The big man turned back toward the car and nodded. The chauffeur switched off the lights, turned them on again, then blinked them regularly. On the embankment the man appeared and disappeared, taller and more massive each time he came back to life. Suddenly, on the other bank of the river, a lantern up by an invisible arm back and forth several times. At a final signal from the lookout, the man disappeared into the night. With the lights out, the river was shining intermittently. On each side of the road, the dark masses of forest foliage stood out against the sky and seemed very near. The fine rain that had soaked the trail an hour earlier was still hovering in the warm air, intensifying the silence and immobility of this broad clearing in the virgin forest. In the black sky misty stars flickered."

### Questions

1. How do you feel about the overall descriptive qualities of the story?
  - a. (not at all descriptive) (1)

- b. (2)
  - c. (3)
  - d. (4)
  - e. (somewhat descriptive) (5)
  - f. (6)
  - g. (7)
  - h. (8)
  - i. (very descriptive) (9)
2. Do you think the author of this story is male or female?
- a. Male
  - b. Female

## **RESULTS**

A 2x2x2 Mixed Model ANOVA was conducted to analyze the BSDS Test Data. There was a main effect of outgroup type  $F(1,107)=22.16, p<0.05$ , such that participants rated Atheists ( $M=2.31, SEM=.17$ ) as an outgroup such that they are less willing to associate compared to Homosexuals ( $M=1.68, SEM=.11$ ). There was no difference among the Control ( $M=1.96, SEM=.18$ ) and the Experimental Groups ( $M=2.02, SEM=.19$ ),  $F(1,107)=.06, p<.05$ . There also was no significant difference among the pre-test ( $M=1.99, SEM=.13$ ) and the post-test ( $M=1.99, SEM=.13$ ),  $F(1,107)=.00, p<.05$ . There was no significant interaction among the condition, outgroup type, and test type factors;  $F(1,107)=.08, p<.05$ , nor any two-way interaction effect effects.

Table 1

*2 x 2 x 2 Mixed Model Analysis of Variance of Bogardus Social Distance Scale Responses*

Source	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Outgroup	1	43.61	43.61	22.16	.000
Outgroup * Condition	1	4.50	4.50	2.29	.134
Test	1	.000	.000	.004	.950
Test * Condition	1	.230	.230	1.853	.176
Outgroup * Test	1	.144	.144	1.843	.177
Outgroup * Test * Condition	1	.006	.006	.079	.780

Table 2

*Estimated Marginal Means for Outgroup in Bogardus Social Distance Scale Response*

Outgroup	<i>M</i>	<i>SEM</i>	<i>95% Confidence Interval</i>	
			<i>Lower Bound</i>	<i>Upper Bound</i>
Atheists	2.31	.172	1.97	2.65
Homosexuals	1.68	.114	1.45	1.91

A 2x2x2 Mixed Model ANOVA was conducted to analyze the Feeling Thermometer Test Data. There was a main effect of outgroup type  $F(1,107)=10.43$ ,  $p<0.05$ , such that participants rated Atheists ( $M=65.03$ ,  $SEM=.3.11$ ) as an outgroup that they are less willing to associate with, compared to Homosexuals ( $M=73.55$ ,  $SEM=2.87$ ). There was no difference among the Control ( $M=70.78$ ,  $SEM=3.64$ ) and the Experimental Groups ( $M=67.80$ ,  $SEM=3.96$ ),  $F(1,107)=.31$ ,

$p < .05$ . There also was no significant difference among the pre-test ( $M=69.28$ ,  $SEM=2.67$ ) and the post-test ( $M=69.29$ ,  $SEM=2.72$ ) conditions  $F(1,107)=.00$ ,  $p < .05$ . There was no significant interaction among the condition, outgroup type, and test type factors;  $F(1,107)=.02$ ,  $p < .05$ , nor any two-way interaction effects.

Table 3

*2 x 2 x 2 Mixed Model Analysis of Variance of Feeling Thermometer Responses*

Source	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Outgroup	1	7869.98	7869.98	10.43	.002
Outgroup * Condition	1	609.98	609.98	.809	.371
Test	1	.009	.009	.000	.984
Test * Condition	1	1.33	1.33	.059	.809
Outgroup * Test	1	27.27	27.27	.796	.374
Outgroup * Test * Condition	1	.661	.661	.019	.890

Table 4

*Estimated Marginal Means for Outgroup in the Feeling Thermometer Responses*

Outgroup	<i>M</i>	<i>SEM</i>	<i>95% Confidence Interval</i>	
			<i>Lower Bound</i>	<i>Upper Bound</i>
Atheists	65.03	3.11	58.86	71.20
Homosexuals	73.55	2.87	67.86	79.25

## DISCUSSION

When looking at the results from the BSDS Test and the Feeling Thermometer Test, it can be noted that though mortality salience did not contribute to an increase or decrease in prejudice thoughts, the participants of the study still held prejudicial attitudes towards the two outgroups. More specifically, participants' prejudice towards atheist was recorded to be much greater than that of homosexuals. Though this difference is small, its' significance speaks volumes as it supports past research on the nature of anti-atheist prejudice. These findings also shows the existence of anti-atheist prejudice within our community at Georgia Southern.

The average participant rated their feelings on the feeling thermometer as 62.26/100 for atheists and an average of 74.00/100 for homosexuals. For the BSDS Scale Responses, only 13.65% of participants felt comfortable with atheists marrying into their family, compared to 15.16% of participants responding that they would feel comfortable with someone who is homosexual marrying into the family. Though these differences are small, they still are statistically significant and support the literature claiming the difference between anti-atheist and homophobic prejudices.

When looking at the lack of noteworthy results between that of the mortality salience conditions and that of the pre- and posttests, there are several limitations that could have contributed to these findings. The lack of control using an online survey rather than conducting an in-lab study is one of these limitations, with the other limitations including the sample size, and a ceiling effect that is created when participants already have rated themselves as being the most or least unwilling to associate with atheists when answering the BSDS Test.

Prior experiments analyzing the effects of mortality salience often relied on in-lab tests to be done, though online surveys are not uncommon. Because of the nature of mortality salience



and how necessary it is to efficiently prompt its' response, an in-lab study is often more desirable. Conducting this experiment as an in lab study would give the researcher more control in ensuring the participant experiences mortality salience. Though we manipulated participants in the TMT condition to provoke their mortality salience, there is no way to guarantee the participant was actively participating in the experience and not distracted by other thoughts or things around them. Participants were told to write as much as they could about their own thoughts and feelings concerning the moment they die and though they did, there is no way to be certain participants took the full 5 minute allotted to focus on their thoughts on the topic and write them down. I believe if in a lab setting, participants would be more likely to spend the full 5 minutes given to write about their thoughts because they have more pressure to do so and have no other distractions.

When discussing other limitations of the study, the lack of a large sample size as well as the repetition of pre- and posttest answers also greatly contributed to the lack of meaningful results found in the study. Though 107 people participated in this study, the typical participation rate for statistically significant experiments ranges from 200-400 (Pyszczynski, T., Solomon, S., & Greenberg, J, 2015). For the BSDS Test, the majority of participants either rated their openness as the same for both the pre- and posttest, or as a 7 (to exclude them from their country) for both the pre- and posttest. For those who recorded their answer as 7 specifically, this created a ceiling effect as participants who recorded their answer on the BSDS pretest as 7 cannot move any lower on the scale on the posttest.

For the Feeling Thermometer test, the pre- and posts tests yielded a similar pattern. For many of the participants, the pre- and post test scores were extremely similar if not identical (For example, a participant rated atheists as a 34 for the pretest and a 32 for the posttests). Though

many of the post test scores were lower than the pretest, they were not sufficiently different to hold any statistical significance. This may be attributed to participants remembering their pretest scores and wanting to put the same answer on the post test, or could more simply be attributed to a lack of mortality salience present during the survey.

If I were to conduct this experiment again, I would add more precautions to ensure that mortality salience is triggered by those in the TMT group. As mentioned previously, I believe holding the experiment in a lab setting would allow more control over the participant's behavior during the study, and create less opportunity for distractions. Because of the similarity between pre- and posttest answers, I believe either the addition of distractor tasks, or the extension of the time it takes to complete them may be beneficial as well. Allowing the participants to have fewer opportunities to remember their pretest answers may allow for a more accurate measure of their attitudes during the post test.

Lastly, I think it would be interesting to ask participants non-biased, open-ended questions concerning the two outgroups measured and compare the language and content of their responses for the pre- and posttests. Though the results of my experiment gave me insight on the prejudicial attitudes my peers have towards homosexuals and atheists, I believe it would be beneficial to understand why participants selected their scores for the BSDS and Feeling Thermometer Tests, and use the explanations to help understand how the participant views their own rating.

Overall, though this experiment gave me only one set of statistically significant results, I believe it provides the community with more insight on anti-atheist prejudice and its existence at Georgia Southern University. Anti-atheist prejudice in particular is still not a topic of discussion for most students on campus, however I believe this can change as we continue to uncover more

data showing the presence of anti-atheist prejudice in communities, and continue to learn more about the nature of anti-atheist prejudice and how we can prevent it.

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