Masters Theses & Specialist Projects   Graduate School

Spring 2018

Effects of Self-Affirmation on Anti-Terror Related Worldview Defense Following Mortality Salience

Haley Jewel Ramsey
Western Kentucky University, haley.ramsey241@topper.wku.edu

EFFECTS OF SELF-AFFIRMATION ON ANTI-TERROR RELATED WORLDVIEW
DEFENSE FOLLOWING MORTALITY SALIENCE

A Thesis
Presented to
The Faculty of the Department of Psychological Sciences
Western Kentucky University
Bowling Green, Kentucky

In Partial Fulfillment
Of the Requirements for the Degree
Master of Science

By
Haley Ramsey

May 2018

EFFECTS OF SELF-AFFIRMATION ON ANTI-TERROR RELATED WORLDVIEW
DEFENSE FOLLOWING MORTALITY SALIENCE

Date Recommended 4/19/18

Aaron Wich

Dr. Aaron Wichman, Director of Thesis

Amy Brausch

Dr. Amy Brausch, Committee Member

Aul M

Dr. Andrew Mienaltowski, Committee Member

[signature]   4/19/18

Dean, Graduate Studies and Research   Date

ACKNOWLEDGEMENTS

I am very thankful to my advisor, Dr. Aaron Wichman, as well the other members of my

thesis committee, Dr. Andrew Mienaltowski and Dr. Amy Brausch. Without this team of

faculty members, this work would not have been possible. I greatly appreciate the time

and effort spent providing meaningful feedback and support.

CONTENTS

EFFECTS OF SELF-AFFIRMATION ON ANTI-TERROR RELATED WORLDVIEW DEFENSE FOLLOWING MORTALITY SALIENCE

Haley Ramsey   May 2018   81 Pages

Directed by: Dr. Aaron Wichman, Dr. Amy Brausch, and Dr. Andrew Mienaltowski

Department of Psychological Sciences   Western Kentucky University

Previous research has demonstrated that self-affirmation via values affirmations seem to buffer the self against perceived threats (Steele, 1988). An example of such a threat is opposing worldviews regarding civil liberties in counterterrorism policies. The present study uses the threat of worldview opposition in regards to counterterrorism policies in conjunction with an experimental induction of mortality salience to explore whether self-affirmation can attenuate increases in worldview defense following mortality salience. It was hypothesized that mortality salience would increase worldview defense, but that self-affirmation would decrease worldview defense following exposure to a worldview threat. When extremity of attitudes toward civil liberties in counterterrorism policies were considered in analyses, results indicated an interaction of self-affirmation and mortality salience, such that self-affirmation decreased worldview defense in participants in the mortality salience condition if they expressed extreme civil liberty attitudes. Results suggest that self-affirmation and mortality salience interact to predict worldview defense in those who care about civil liberties in counterterrorism policies. This study provides qualified theoretical support for self-affirmation theory (Steele, 1988). More research on the topic of self-affirmation and civil liberty attitudes is needed.

EFFECTS OF SELF-AFFIRMATION ON ANTI-TERROR RELATED WORLDVIEW

DEFENSE FOLLOWING MORTALITY SALIENCE

The goal of this project is to examine the effects of self-affirmation on responses

to worldview threat following reminders of death. In this project, worldview threat is

administered in the form of conflicting worldviews regarding civil liberties in

counterterrorism policies. Self-affirmation involves buffering oneself against perceived

threats (Steele, 1988), which might contribute to decreased defense of worldview after

being disagreed with regarding counterterrorism policies. Personality differences may

also determine worldview defense after exposure to these conflicting anti-terrorism

worldviews. Because this project concerns terror attacks, it is necessary to invoke

psychological phenomena similar to that which would be expected to occur in a terror

attack; reminders of death via a mortality salience induction may produce these

psychological phenomena. It was expected that reminders of death would increase the

level of threat and consequently the degree of worldview defense expressed, as indicated

by derogation of people with conflicting worldviews. It was also expected that self-

affirmation would buffer the threat and thereby lessen the degree of worldview defense

expressed. The following literature review outlines the theories and underlying rationale

of the study.

Introduction

Self-affirmation involves reaffirming the self and thus buffering the self against

perceived threats (Steele, 1988). According to self-affirmation theory (Sherman &

Cohen, 2006; Steele, 1988), self-affirmation, involving reminders of important values,

1

can reduce the perception of threat, even if the values are unrelated to the threat itself.

Reducing perceived threat is important in matters where actual threat is very unlikely.

For example, terror attacks are relatively infrequent compared to some other sources of

danger, yet many US citizens live in great fear of terror attacks. According to the Center

for Disease Control, heart disease causes approximately 630,000 deaths in the United

States alone (Center for Disease Control and Prevention, 2017). Terrorism, on the other

hand, was responsible for 32,727 deaths in 2014 *worldwide* (National Consortium for

the Study of Terrorism and Responses to Terrorism, 2015). One might argue that efforts

to prevent terror attacks should be redirected to prevent heart disease, because the risk of

dying from heart disease is greater than dying in a terror attack. By reducing the

perception of threat due to terror attacks, perhaps energy spent trying to prevent

terrorism could be spent on more likely threats, such as heart disease.

Fear of terrorism remains common, and there are many opinions regarding how

terrorism can be prevented. Perhaps because great fear surrounds terror attacks, opinions

regarding anti-terrorism policies can be very strongly polarized. For example, some

might believe that the government should use surveillance cameras in workplaces to stop

attacks before they happen; however, others might believe that such a policy would

compromise valuable civil rights. Reducing the perception of threat is extremely

important in the face potential terror attacks or anti-terrorism policies that may otherwise

result in chaos, caused in part by disagreements about how to respond to attacks.

Reducing reactions to threat may allow more dispassionate consideration of anti-

terrorism policies. It may be possible to moderate terror attack responses by using self-affirmation.

Self-Affirmation Theory

Claude Steele first proposed self-affirmation theory in the 1980s (Steele, 1988). The theory posits that when the perceived integrity of the self is threatened, people engage in self-affirmation processes that reestablish the perception of the self as adequate. A key component of self-affirmation theory is that people try to uphold views of themselves as globally good people, not just good in only one domain. Consider a smoker who smokes a pack per day, knowing the health risks associated with smoking. Rather than distort the truth by refuting the numerous scientific claims of the dangers of smoking, this person can address the issue by affirming the self as a generally good person. This is a different approach than, for example, self-determination theory, which posits that humans have three basic psychological needs which they strive to fulfill (competence, autonomy, and relatedness; Ryan & Deci, 2000). Self-affirmation theory asserts that people can fulfill psychological needs by non-specifically affirming the self, which helps them cope with uncomfortable realities, like problematic smoking habits (Steele, 1988).

One interesting characteristic of self-affirmation theory involves a focus on non-threat related self-aspects. In other words, the self-affirmation coping strategy may use an aspect of the self that is completely unrelated to the threat itself (Steele, 1988). For example, a smoker may self-affirm by remembering his or her status as a great family member and a leader in the local church. Remembering one's status as a well-respected

minister does nothing to protect the lungs. However, reminders of social ties and of one's importance to other people can buffer against the anxiety that stems from knowledge that lung cancer, for example, is imminent.

Self-Affirmation: A Response to Threat

Self-affirmation can be seen as a response to a threat to the self. For example, a terror attack that represents a threat to a person's safety and their ability to control important outcomes constitutes a threat to the self. In this instance, the aspect of the self that is able to protect against danger is threatened, thus representing a threat to the entire self. Research approaching self-affirmation as a response to a threat to the self (Steel & Liu, 1983) has been useful for contemporary studies. Another example concerns undesirable health news. Experimental studies have shown self-affirmation to have an effect on receipt of, and reported intentions to address, undesirable personal health news (Sweeny & Moyer, 2015). According to a meta-analysis of self-affirmation on health intentions and behaviors, a small effect ($d = .26$) was observed for the effect of self-affirmation on health intentions, meaning affirmed participants may be slightly more likely to indicate they had more intentions to change their health behaviors (Cohen, 1988; Sweeny & Moyer, 2015). For example, a study on the effects of self-affirmation on intentions to adhere to behavioral treatment showed that self-affirmation increased cognitive intentions to adhere to treatment plans in insomnia patients (Ruiter, 2011). In another study, researchers found that self-affirmation was effective in increasing acceptance of health information relating to skin damage from ultraviolet light exposure compared to people who were not affirmed (Good & Abraham, 2011). These studies

4

suggest that self-affirmation can change perceptions of threatening health information, and maybe even affect behavior.

Researchers have also studied whether effects of self-affirmation extend beyond the scope of mere message acceptance and intention to comply with drug or behavioral treatment. In a study on the effect of self-affirmation on fruit and vegetable consumption, researchers observed an increase by approximately 5.5 servings per week of fruits/vegetables in participants who were affirmed before receiving a message promoting healthy eating compared to those who received the same message but were not affirmed (Epton & Harris, 2008). This demonstrates the possibility of behavioral change, rather than just reported cognitive changes, associated with self-affirmation.

Experimental Manipulations of Self-Affirmation

Self-affirmation can be experimentally induced by asking people to explain past instances where they acted kindly, as well as by asking participants to choose a value that is personally important to them and elaborate on why it is important to them (for meta-analysis, see Sweeny & Moyer, 2015). According to self-affirmation theory, thinking about past acts of kindness or important values can affect the self-concept, resulting in a view of the self as good and wholesome overall (Steele, 1988). Values affirmations, where participants are asked to elaborate on personally important values, are quite common in self-affirmation research (see McQueen & Klein, 2006 for meta-analysis). In the values affirmation paradigm, self-affirmation has been experimentally induced by asking participants to choose values that are important to them and write for a few minutes about why they are important to them (Sherman, & Cohen, 2006).

One might ask whether thoughts about values are simply forms of distraction that take attention away from a threat, thereby reducing perception of danger. However, research suggests otherwise. Steele & Liu (1983) have established discriminant validity for values affirmations, where results showed that the effects of self-affirmation were not mediated by distraction, suggesting that self-affirmation is not simply a form of diversion. Manipulation checks of the values affirmation manipulation have also been implemented in studies (Creswell, Dutcher, Klein, Harris, & Levine, 2013), wherein participants were asked to indicate the importance of their chosen values on a 6-point Likert scale. Results indicated that participants in the self-affirmation condition did in fact undergo self-affirmation, as indicated by increased reported importance of values chosen in the self-affirmation condition compared to controls. These results (Creswell et al., 2013) demonstrate the validity of the values affirmation manipulation.

Effects of Self-Affirmation

Self-affirmation may buffer against perceived threats to the self by re-establishing the sense that one is a good, wholesome person of integrity (Steele, 1988). As mentioned earlier, a small effect ($d = .26$) was observed for the effect of self-affirmation on intentions to change health behaviors (Cohen, 1988; Sweeny & Moyer, 2015). However, effects of self-affirmation extend beyond health-related cognitions and behaviors. Larger effect sizes ($d \geq .30$) of self-affirmation on various dependent variables, including self-esteem and affect, have also been observed (see McQueen & Klein, 2006 for meta-analysis).

Researchers have explored the idea that a broadened perspective is responsible for the effects of self-affirmation. Specifically, researchers have investigated the impact of self-affirmation on broadening perspectives in order to affect consumer behavior (Critcher & Dunning, 2015; Kim, 2012). One study showed that self-affirmed participants were less likely to spread word about a negative consumer experience compared to the control condition (Critcher & Dunning, 2015). This study provides empirical support for self-affirmation theory by showing affirmed people to be less likely to respond negatively after an adverse experience due to boosted feelings of self-adequacy (Critcher & Dunning, 2015; Kim, 2012; Steele, 1988). This effect was presumably due to consumers' ability to see from the perspective of the store worker involved in the negative experience. Moreover, consumers were able to expand their perceptions of themselves through self-affirmation, causing them to perceive the negative experience as proportionately less negative (Critcher & Dunning, 2015; Kim, 2012).

Research has also shown effects of self-affirmation on feelings toward others on self-image. One study (Crocker, Nijya, & Mischkowski, 2008) showed that writing about important values compared to unimportant values increased positive feelings, like love and connectedness, directed toward others and reduced defensiveness in the face of threatening information about the hazards of smoking. Interestingly, the study also showed that neither positive nor negative self-directed feelings were predictive of reduced defensiveness and increased positive feelings toward others (Crocker et al., 2008). This finding suggests that the effect of self-directed feelings is not necessarily

responsible for the decreased defensiveness in the face of a threat; rather, as research on self-affirmation (e.g. Critcher & Dunning, 2015; Kim, 2012) suggests, self-transcendence may be at work rather than self-image maintenance (Crocker et al., 2008). It seems that broadening perspective or transcending the self plays a role in reducing defense when threatened (Critcher & Dunning, 2015; Crocker et al., 2008; Kim, 2012).

Self-Affirmation in Anti-Terrorism Policies

Perhaps broadening perspectives can have an impact on perceptions of terror attacks. Since the September 11th attack on the twin towers, terror attacks have become a major concern for the United States. With more recent attacks like the 2012 Aurora shooting (Frosch & Johnson, 2012), the 2013 Boston Marathon bombing (Eligon & Cooper, 2013), and the 2016 Orlando shooting (Barry, 2016), terror attacks seem to be an issue that demands attention. Many people find acts of terror extremely threatening. Research shows that terror attacks can evoke many strong attitudes and emotions like anger and fear (Skitka, Bauman, Aramovich, & Morgan, 2006; Skitka, Bauman, & Mullen, 2004). Perhaps more importantly, because of its implication for the future, research shows that these emotions may fuel attitudes toward political action and intolerance. Anger has been shown to predict support for expanding the war beyond Afghanistan, while fear predicts support for deporting U.S. Arab, Muslim, and first-generation American immigrants (Skitka et al., 2006). Studies have also shown anger to interact with moral outrage and outgroup derogation, such that their interaction predicted higher levels of political intolerance (Skitka et al., 2004).

There are many opinions about how to deal with terror attacks, ranging from restrictions on U.S. immigration and the use of severe interrogations to widespread screening of personal telephone calls (Barnes, Brown, & Osterman, 2012; Skitka et al., 2006). In the face of a terror attack, people sometimes react in negative and anti-social ways in the form of hostile written responses and support for severe interrogation methods (Barnes et al., 2012). The pattern seems to be that when people perceive that safety is at stake, they are more willing to sacrifice civil liberties. Fearful people might support interrogations using torture, but might also waive protections against unreasonable searches and seizures. Safety may become a priority over other rights like privacy. However, some people highly value privacy and oppose the use of practices such as wiretapping and internet surveillance (Davis & Silver, 2004). Some people will likely understand, and even encourage, the taking of civil liberties, but others will become irate at the idea of giving up such basic freedoms (Davis & Silver, 2004).

Perhaps due to the varying strong opinions about policy issues, policy change may cause social chaos if policies conflict with firmly grounded principles regarding civil liberties. Consider a group of people whose values include privacy and freedom. This group might become angry at the notion of using constant surveillance and detention of suspects without due process, even if the purpose is to ensure security. Others might only see these practices as protection for the greater good. This contemporary issue is of particular interest due to the post-9/11 legislative action designed to prevent other attacks, such as the Patriot Act (U.S.A. Patriot Act, 2001) and the Aviation and Transportation Security Act (Aviation and Transportation Security Act,

2001). A recent example of perceived civil liberty violations following post-9/11 legislative action is the long list of complaints from air travelers after T.S.A. searches. Air travelers submitted over a thousand complaints of humiliating and invasive searches at airports by T.S.A. officials (American Civil Liberties Union, 2017). Although riots have yet to break out over T.S.A. pat-downs and searches, it is clear that some people are unhappy with such violations of privacy, an important civil liberty. Empirical research on the topic of attitudes toward civil liberties in counterterrorism policies is needed to explore the determinants of attitudes toward counterterrorism, as well as whether perceptions of danger can be made more realistic. More realistic and objective views might affect the way people think about their civil liberties in counterterrorism policies, which might inspire redirected energy to prevent more likely threats, such as heart disease (Center for Disease Control and Prevention, 2017; National Consortium for the Study of Terrorism and Responses to Terrorism, 2015).

Although research on the topic of reactions to civil liberty violations in the context of counterterrorism policies is relatively sparse, existing research on general attitudes toward policy change suggests that one value subject to change following a disaster is security, such that people want more security following a threat (Frink, Rose, & Canty, 2004). Studies further suggest that the greater the sense of threat from a terror attack, the more willing people are to sacrifice civil liberties in exchange for safety (Davis & Silver, 2004). Political leanings may also play a part in determining attitudes toward counterterrorism polices. In a study conducted shortly after September 11th, researchers found that liberals were less willing to sacrifice civil liberties for safety

10

compared to their moderate and conservative counterparts (Davis & Silver, 2004).

Notably however, liberals were more likely to accept the restrictions of civil liberties

when they perceived that terrorist threat was high. Adding to the complexity of attitudes

toward counterterrorism policies, willingness to sacrifice civil rights interacted with trust

in the government, such that people with low trust in the government were less willing

to sacrifice civil liberties. Research also demonstrates ethnic differences in attitudes

toward civil liberties, such that African Americans are generally less willing to sacrifice

rights compared to Whites and Hispanics (Davis, 1995).

Currently, however, moderators to reactions to anti-terrorism policies that

sacrifice civil liberties have been relatively unstudied. The goal of this research project

is to explore influences on attitudes toward civil liberties following exposure to threat.

This information is valuable not only to the psychological sciences, but to the media and

political sphere as well. A better understanding of reactions to counterterrorism policies

may have implications for how to elicit a more peaceful receipt of new public policies.

Of course, this project is not an attempt to disguise unjust policies as fair ones. Rather,

this project aims to understand methods of reduction in anti-social reactions to anti-

terrorism policies that people might perceive as a threat to civil liberties.

Factors that Influence Attitudes toward Policy Change

Research shows that a number of existing factors influence attitudes toward

policy changes, including individual differences, emotions, and existing ideologies

(Lerner, Gonzales, Small, & Fischhoff, 2016; Skitka et al., 2006). Individual difference

variables that researchers have studied in this context include right-wing

11

authoritarianism and social dominance orientation (Barnes et al., 2012; Cohrs,

Kielmann, Maes, & Moschner, 2005). Other factors that have been shown to influence

attitudes toward counterterrorism policies are masculine honor ideology and

benevolence values (Barnes et al., 2012; Goodwin, Willson, & Stanley, 2005).

Individual Difference Variables

  Right-wing authoritarianism. Right-wing authoritarianism is characterized by a

willingness to submit to authorities, relatively strict adherence to societal norms, and

some degree of disdain for those who do not adhere to those norms (Altemeyer, 2006).

People who score highly on right-wing authoritarianism generally display a high degree

of conventionalism (Altemeyer, 2006). Note that right-wing authoritarianism is not a

measure of a person's political stance. For example, a politically conservative or liberal

person in the United States may display high levels of right-wing authoritarianism in

that he or she believes everyone should follow the rules set by the authorities and

displays support for capitalism. Similarly, a person in a communist community may also

display high levels of right-wing authoritarianism as shown by excessive willingness to

submit to his or her leader and shows support for communist ideals. In this case, both

people display right-wing authoritarian attitudes, but each person holds a different

political stance (Altemeyer, 2006).

  To measure right-wing authoritarianism, researchers ask participants to indicate

the extent to which they agree with statements that reflect right-wing authoritarianism.

The full 30-item scale has been reported with high reliability (α=.92; Altemeyer, 1998).

An abbreviated 6-item measure of right-wing authoritarianism also has high reliability (α=.82; Dunwoody & McFarland, 2017).

Right-wing authoritarianism has been studied in the context of threat and reactions to threats such as terror attacks. Higher levels of right-wing authoritarianism have been shown to predict support for surveillance measures after threat (Cohrs et al., 2005). In a study (Cohrs et al., 2005), right-wing authoritarianism interacted with perception of the September 11th terror attack such that higher levels of perceived threat increased the effect of right-wing authoritarianism on support for surveillance measures (i.e. civil-liberty threatening policies). People who score highly on right-wing authoritarianism are also more likely to support military action and severe interrogations of suspects when confronted with a worldview threat (Barnes et al., 2012). Recall that people who express low trust in the government report less willingness to surrender civil liberties (Davis & Silver, 2004). Although researchers (Davis & Silver, 2004) did not measure right-wing authoritarianism, one might guess that people who expressed low trust in the government would show low levels of right-wing authoritarianism (Altemeyer, 2006).

Social dominance orientation. Social dominance orientation is another individual difference variable that may affect how people respond to threat. Social dominance orientation is a measure of personality traits that predicts personality variables, ideologies, and political attitudes. This personality variable reflects the belief that groups are unequal or that one group rightly should dominate another (Pratto, Sidanius, Stallworth & Malle, 1994). For example, someone high on social dominance

orientation likely prefers a system where one group dominates another; someone low on social dominance orientation likely prefers a more egalitarian system (Pratto et al., 1994). Research has shown that there are two components to social dominance orientation: group-based dominance and anti-egalitarianism (Ho et al., 2015; Pratto et al., 1994). Group-based dominance is characterized by a preference for systems in which higher order groups forcefully oppress lower order groups, as well as a preference for messages that forcefully, rather than subtly, enhance the current social hierarchy (Ho et al., 2015). Anti-egalitarianism is characterized by a preference for subtle social policies and ideologies that support the hierarchical system (Ho et al., 2015). Research on social dominance orientation shows that men are generally more social dominance-oriented than women (Pratto et al., 1994). Research has also demonstrated that social dominance orientation can be used to predict concern for others, nationalism, attitudes toward social programs, and various other variables (Pratto et al., 1994).

To measure social dominance orientation, researchers ask participants to indicate the extent to which they agree with statements that reflect social dominance orientation. The full 16-item social dominance orientation scale has high reliability (α=.84; Altemeyer, 1998). An 8-item abbreviated version of the social dominance orientation scale has also been used and has demonstrated high correlations across samples (r =.88-.95 across four samples; Ho et al., 2015). The shortened version of the scale contains both the group-based dominance and anti-egalitarianism subdimensions of social dominance orientation. Social dominance orientation has also been studied in the context of reactions to terrorism. Studies have found higher levels of social dominance

orientation to be associated with hostility toward a terrorist (i.e. a threat to existing social hierarchy) as well as increased support for increased militant action and severe interrogations (Barnes et al., 2012).

Existing Values and Ideologies

Studies have also explored the role of existing values and ideologies on defensive reactions to terror attacks; findings include benevolence values being positively correlated with threat perception and masculine honor ideology predicting support for extreme counterterrorism measures (Barnes et al., 2012; Goodwin et al., 2005). Benevolence values are characterized by the desire for the "preservation and enhancement of the welfare of people with whom one is in frequent personal contact" (Goodwin et al., 2005). People who scored highly on benevolence values were more likely to perceive a terror attack as more threatening, likely because they saw it as threatening to both themselves and their loved ones (Goodwin et al., 2005). Other studies (Davis & Silver, 2004; Frink et al., 2004) suggest that perceived threat predicts security values and willingness to sacrifice civil liberties in exchange for safety. It is possible that the value of benevolence may be related to attitudes toward counterterrorism policies that involve civil liberties. Masculine honor ideology in both men and women has been shown to predict increased support for extreme counterterrorism measures, such as severe interrogations, presumably because masculine honor values concern toughness and aggression when provoked (Barnes et al., 2012). A focus on values is of great interest, in part because existing research shows that values moderate responses to threats (e.g., Barnes et al., 2012; Goodwin at al., 2005). Values

are likely an important component in determining attitudes toward counterterrorism policies. However, due to the dangerous nature of a terror attack, the fear of dying in an attack may also fuel strong attitudes toward counterterrorism policies.

Terror Management Theory

Knowledge that one is going to die may affect the perception of threat. Terror management theory postulates that humans are programmed for self-preservation, like other animals, but that unlike other animals, they hold the ability to contemplate their inevitable death (Greenberg, Solomon, & Pyszczynski, 1997). According to the theory, there are two ways that people manage their existential terror: 1) by maintaining faith in a meaningful perception of reality through a cultural worldview and 2) by meeting standards of value derived from that cultural worldview (Greenberg et al., 1997). By maintaining faith in a cultural worldview, like one that guarantees life after death by supernatural or spiritual means, and meeting the standards that reflect that worldview, like playing a valued role in the community, people protect themselves against the anxiety that stems from the awareness that one day they will die (Greenberg et al., 1997).

Worldviews

Studies in line with terror management theory demonstrate the tendency to cling more tightly to cultural worldviews after reminders of their own death. A concrete example of this phenomenon is the increase in flag-display after the September 11th terror attacks (Skitka, 2005). Presumably, people's love of the U.S. and display of ingroup solidarity (i.e. patriotism) increased following the reminder of death triggered

by September 11th (Skitka, 2005). Worldviews might be linked to thoughts of death because cultural worldviews act as a defense against death (Greenberg et al., 1997). Moreover, it is thought that worldviews allow people to transcend death by identifying with ideologies that promise death-transcendence. Examples include religion with the promise of an afterlife, offspring to carry on one's legacy after death, and identifying with organizations that will "live on" after one's death (Greenberg et al., 1997). Researchers observed evidence of the relationship between worldview and thoughts of death in a study of death-thought accessibility after exposure to worldview threat (Schimel, Hayes, Williams, & Jahrig, 2007). Participants were exposed to a worldview threat that belittled national values, after which participants completed word-fragment completion tasks that included fragments of death-related words. Threats to cultural worldview increased death thought accessibility as reflected by participants' increase in number of death-related words completed (Schimel et al., 2007). This finding (Schimel et al., 2007) supports terror management theory by suggesting a link between death-thoughts and worldview.

According to terror management theory, it seems that regardless of the worldview, people cling more tightly to their ideology when reminded of their own mortality. The theory holds, for example, that after reminders of death, people who believe strongly in God would cling more tightly to their religion, and staunch atheists would cling more tightly to the belief that there is no God (Greenberg et al., 1997). In a study on reactions to a dissimilar other in politically conservative vs. liberal participants, conservatives were found to be less tolerant of dissimilar others, and liberal participants

17

were found to be more tolerant, after reminders of death (Greenberg, Simon, Pyszczynski, Solomon, & Chatel, 1992). This finding is in line with terror management theory because, assuming liberals value tolerance more than conservatives, members of each group were found to adhere more tightly to their respective worldviews after reminders of death (Greenberg et al., 1992).

Worldview defense following threat. Terror management theory further posits that people should respond in ways to defend their worldviews in the face of other worldviews, such as might be evidenced by those committing a terror attack (Greenberg et al., 1997). There are different types of reactions that have been observed after exposure to a different worldview, one being derogation of people who hold the different worldview (Bassett & Connelly, 2011; Rosenblatt, Greenberg, Solomon, Pyszczynski, & Lyon, 1989). By derogating the "other", the threat to one's own worldview is diminished, perhaps by dismissing the foreign worldview as inaccurate or by dismissing the people who hold it as foolish (Greenberg et al., 1997). People also sometimes react to threats by accommodating different worldviews into their own (Dechesne, Greenberg, Arndt, & Schimel, 2000; Hayes et al., 2015). By derogating others or accommodating others' worldviews into their own, people seem to be able to effectively defend against worldview threats and adequately buffer their existential terror.

Other research on terror management theory has shown that responses to worldview threat (i.e. a moral transgressor) were observed only when participants felt strongly about the moral issue (Rosenblatt et al., 1989). In a study on the effects of death

18

thoughts on students' judgments toward an alleged prostitute, researchers found that the

alleged prostitute only received harsher judgments if the students were morally opposed

to prostitution (Rosenblatt et al., 1989). It is assumed that certain students did not

express harsh judgment toward the alleged prostitute because prostitution was not

viewed as a severe moral offense and thus anti-prostitution was not an important part of

their cultural worldview. This finding supports terror management theory by showing

that people only react to worldviews that conflict with their own after being reminded of

their death, presumably because they want to defend their worldview (Greenberg et al.,

1997).

In order to explore worldview defensiveness in the context of terror attacks and

counterterrorism policies, it is necessary to consider why the aversion to threatening

events like terror attacks is so strong. The reminder of death associated with terror

attacks is one possibility as to why the aversion to acts of terror is so strong. Terror

management theory provides a framework for understanding the roots of this aversion,

and researchers have empirically tested it using mortality salience inductions.

Experimental Inductions of Death Thoughts

Terror management researchers use mortality salience inductions to bring about

thoughts of death ethically and practically (see Burke, Martens, & Faucher, 2010, for

meta-analysis). Researchers have experimentally induced mortality salience by asking

participants to reflect on how they feel emotionally and physically when considering

their mortality (Greenberg et al., 1997). A common method of inducing death thoughts

is by using the Mortality Attitudes Personality Survey (Rosenblatt et al., 1989), wherein

participants are asked to write brief essays in response to questions about how they think death might feel physically and emotionally. Although some mortality salience studies do not use a control condition (e.g. Rosenblatt et al., 1989, study 1), other studies use exam-taking, eating, and dental pain for control conditions (Burke et al., 2010).

Distal and proximal death defenses. A question worth considering is whether proximal or distal death defenses activate existential terror. In other words, does worldview defense following mortality salience occur immediately after reminders of death, or do defenses arise after death thoughts have faded from immediate consciousness? Researchers have addressed this question by studying the effects of mortality salience immediately after a mortality salience induction compared to after a delay. In line with the theory that distal death defensiveness only appears after thoughts of death fade from immediate consciousness (Pyszczynski, Greenberg, & Solomon, 1999), research has shown that mortality salience effects only manifest after a delay or a distraction task when the awareness of death has become more implicit (for meta-analysis, see Steinman & Updegraff, 2015). Common delays include filler tasks such as completing puzzles, reading passages as well as answering single item questions, and completing versions of the Positive and Negative Affect Schedule PANAS (Steinman & Updegraff, 2015). Manipulation checks researchers have used to measure this death thought awareness include asking participants to complete word fragments such as COFF_ _, wherein participants are expected to answer with "coffin" if death thoughts are at the forefront of consciousness, but "coffee" if it is not (Greenberg, Pyszczynski, Solomon, Simon, & Breus, 1994).

Effects of Mortality Salience

It has been observed across many terror management studies that mortality salience inductions produce a correlation of approximately $r=.36$ with a range of dependent variables, including worldview defense (for meta-analysis, see Burke et al., 2010). Researchers who have used a morality salience manipulation with control conditions have observed differences in affect following mortality salience inductions compared to controls (Goldenberg et al., 2001).

<center>**Rationale and Hypotheses**</center>

The goal of the present study was to assess whether self-affirmation affects reactions to notification of security policies that directly oppose personally-held views about counterterrorism policies. Specifically, the question was whether self-affirmation can attenuate defensiveness against anti-terrorism policies that contradict one's own strongly held values like upholding civil liberties or safety. In order to mimic some of the psychological responses thought to be triggered by a terror attack, this study used a mortality salience induction. Mortality salience inductions have been widely used by researchers who study terror management theory, described above.

This project reflects principles of terror management theory in that anti-terrorism policies that conflict with values, like safety or civil liberties, are considered worldview threats. This hypothesis was predicated on the assumption that most people value their attitudes toward civil liberties and consider them an important part of their worldview. Thus, others who hold different attitudes about civil liberties in the context of counterterrorism policies constitute a worldview threat. Because terror-related death

<center>21</center>

thoughts should be associated with the idea of a terror attack, an assumption of this study is that worldviews would be threatened by disagreements regarding counterterrorism policies. In line with terror management theory, it was expected that after reminders of death, people would be more likely to cling to their respective beliefs about counterterrorism policies as they relate to civil liberties.

Hypotheses

It was hypothesized that participants who were reminded of their own death would display higher levels of worldview defense compared to those who are not reminded of their own death, regardless of views expressed. Specifically, no matter what people initially believed to be the best policies for defeating terrorism with respect to the promotion or diminution of civil liberties, it was expected that reminders of mortality would increase defense of these important beliefs.

However, it was also hypothesized that self-affirmed participants would display less worldview defense compared to their non-affirmed counterparts, regardless of views expressed. Self-affirmation was expected to attenuate the worldview defensiveness expressed by participants in the mortality salience condition. Moreover, affirmed participants who expressed support for safety policies that infringe on civil liberties were expected to less harshly evaluate others who disagreed with them compared to non-affirmed people who shared those same views regarding the safety policies. Likewise, affirmed participants that expressed support for policies that uphold civil liberties in exchange for safety were expected to less harshly evaluate others who hold different attitudes compared with non-affirmed participants who share the same views. In short, it

was hypothesized that self-affirmation would lessen defensiveness in the face of a different worldview, which constitutes a worldview threat.

Individual differences. Individual differences were also taken into account. Although right-wing authoritarianism was included in analyses as a control variable, it was expected in this study that that those who scored highly on right-wing authoritarianism would be more willing to sacrifice civil liberties after threat compared to those who did not score highly on right-wing authoritarianism. This could occur in part because of their relatively higher trust in authorities (c.f. Davis & Silver, 2004), but also because of their general willingness to submit to authorities (Altemeyer, 2006; Cohrs et al., 2005). Participants also responded to questions to gauge their level of social dominance orientation (Barnes et al., 2012; Pratto et al., 1994). While social dominance orientation was included in the study for exploratory reasons and there were no firm hypotheses for it, it was generally expected that social dominance orientation would predict more extreme derogation of those who hold other worldviews and less support for civil liberties, as those who support civil liberties generally do so to protect the rights of relatively disadvantaged groups. Further, it was anticipated that this finding would hold true especially for participants who scored highly on the group-based dominance subdimension of the social dominance orientation measure. Recall that the group-based dominance subdimension reflects a preference for force to subtle messages that reinforce a hierarchical social system. The expectation that group-based dominance orientation would predict greater worldview defense was based on the idea that terror attacks are very threatening and people might prefer force to subtle hierarchy-enhancing

messages, as group-based dominance orientation predicts, in order to prevent future attacks (Ho et al., 2015). A complete description of proposed measures follows below, in the method section.

Gender differences in social dominance orientation. For this study, it was expected that men would display higher levels of social dominance orientation compared with women (Pratto et al., 1994). If social dominance orientation did in fact predict worldview defense and men were higher on social dominance orientation, it was expected that men would display higher levels of worldview defense. However, there were no firm hypotheses regarding gender aside from gender predicting social dominance orientation. Gender was explored regarding its effect on worldview defense and its interaction with self-affirmation and mortality salience, separately.

Method

Participants

340 students at Western Kentucky University were recruited to participate in the study in exchange for fulfilling a partial course requirement. Demographic information was collected on age, gender, race/ethnicity, military status, and U.S. citizen status, because this study concerned U.S. citizens only. Although U.S. citizen status was listed as a prerequisite for study eligibility, a question was included about whether participants hold citizenship to ensure data was collected from a representative sample, and all non-U.S. citizens were to be excluded from analyses.

Design and Procedure

The study was a 2 (self-affirmed or not) x 2 (mortality salience or not) between-subjects design, wherein participants were randomly assigned to one of four conditions. Participants were assigned to no affirmation and no mortality salience, affirmation and mortality salience, no affirmation and mortality salience, or affirmation and no mortality salience. The study was conducted online.

First, participants entered demographic information (age, gender, race/ethnicity, military status, and U.S. citizen status). Next, half of participants were randomly assigned to write about their *most* important values in order to invoke self-affirmation, and the other half participated in the control condition, wherein participants were asked to answer questions about their *least* important values (Steele & Liu, 1983; see Appendix A). Next, a randomly selected half of participants underwent the mortality salience induction, wherein participants were asked to reflect on how their own death would feel (Rosenblatt et al., 1989), and other half were asked to think about how dental pain feels (see Appendix B). All participants then completed an attitudes questionnaire regarding civil liberties in counterterrorism policies (see Appendix C). Participants then experienced the worldview threat (see Appendix D). The dependent variables, displeasure with feedback and worldview defense, were then measured (see Appendices E and F). Finally, participants responded to abbreviated versions of the right-wing authoritarianism and social dominance orientation scales (Dunwoody & McFarland, 2017; Ho et al., 2015; see Appendices G and H). Participants were then debriefed (see Appendix I). A narrative description of the materials used follows.

Materials

      Self-affirmation manipulation. The present study used a values affirmation, wherein participants were asked to choose their two most important values from a list, then write for two minutes about those values and tell why they are important to them. In the control condition, participants were asked to choose their two *least* important values from a list, then write for two minutes about why those values are not important to them, but why they might be important to someone else (Steele & Liu, 1983; see Appendix A). For example, a response from the experimental condition was "Social life and relationships are important to me because my friends make me feel like I belong to a part of a group, which makes me happy." An example of a response from the control condition was "Social life and relationships are not important to me but might be important to someone else because they make them feel good about having friends and it boosts their self-esteem. But for me, relationships are unnecessary."

      In this study, rather than ask participants to report the personal importance of their chosen values as a manipulation check (Creswell et al., 2013), responses were scanned for the value words, their synonyms, and sufficient length. Responses lacking the use of the value words or their synonyms were examined for content and excluded from analyses if it was clear that the participant did not follow directions. Although response complexity was not examined, responses that were too short (e.g., "I'm not sure") were also excluded. After excluding all participants who did not follow directions, an effect of self-affirmation on worldview defense was determined by lower levels of defensiveness in self-affirmed participants.

Mortality salience induction. The present study used the Mortality Attitudes Personality Survey (Rosenblatt et al., 1989), wherein participants were asked to write for one minute about how their death would feel physically and one minute about how it would feel emotionally (See Appendix B). For example, instructions for the responses regarding physical feelings were: "Jot down, as specifically as you can, what you think will happen to you physically as you die and once you are physically dead." Asking participants to think about how their death would feel induces thoughts of their own death, hence mortality salience. An example response for how death would feel physically was "Its [sic] scary to know that one day we all have to die but i [sic] try not to think about it and just be happy with life." In the control condition, participants answered the same questions regarding dental pain instead of death. An example response of the control condition is "I hate whenever they scrape the plaque off of your teeth because when they accidentally scrape your gums, it hurts so bad. I am always very tense and dread that part of the appointment". This study used an unpleasant experience, dental pain, for control purposes to ensure that the effect of mortality salience is due to thoughts of death and not unpleasantness.

This project included the attitudes toward counterterrorism questionnaire that acted as both a measure of attitudes as well as a distraction task from the thoughts of death induced. Similar tests run on the self-affirmation responses to assess whether participants followed directions were run on the mortality salience induction responses. Complexity was not assessed; however, length of response and content was examined and participants who provided responses that were too short (e.g., "rot") or did not

address the topic were removed from analyses. Responses from participants who clearly did not follow instructions were excluded from analyses.

Attitudes toward counterterrorism questionnaire. Data collected using this measure was used solely for informing the worldview threat induction; each worldview threat varied by participant, because each consisted of exactly the opposite of each attitude expressed by the participant. For the attitudes toward counterterrorism questionnaire, participants answered seven items assessing their opinions about civil liberty restrictions in exchange for safety (adapted from Engle & Wichman, 2017; see Appendix C). Participants selected a number from 1 to 7 to correspond with their position on the issue. For example, one question asked participants to select a number ranging from 1 to 7, where 1 represented agreement with "In order to curb terrorism in this country, it will be necessary to give up some civil liberties" and 7 represented agreement with the opposite statement: "We should preserve our freedoms above all, even if there is some risk of terrorism" (Engle & Wichman, 2017). If a participant did not have an especially strong opinion on the matter, but their view was closest to the "it will be necessary to give up some civil liberties" option, they might have chosen a 2 or 3, depending on the strength of their opinion. Although this questionnaire appears to have strong face validity, content validity has not been measured.

Worldview threat induction. The purpose of the worldview threat induction was to evoke a response that would be triggered to a greater or lesser degree, depending on the previous conditions in the experiment (i.e. self-affirmed or not, mortality salience or dental pain). For the induction of worldview threat, participants were asked to read a

policy recommendation said to be sent to policymakers upon completion of the research

project (see Appendix D). Participants were told that the majority of the people who

have taken the survey held beliefs that directly oppose theirs. For example, if a

participant endorsed the item "The government should be allowed to record telephone

calls and monitor email in order to prevent people from planning terrorist attacks", they

were told that the majority of people believe: "People's conversations and email must be

accessible only with a warrant, even if the government is concerned about terrorist

attacks". In other words, each participant was informed that the majority of people

disagree with them on all views they expressed; this type of disagreement should

constitute a worldview threat.

As this induction is relatively new, its validity is as yet unproven. However, if

attitudes toward civil rights in counterterrorism policies are considered a worldview and

disagreement with that worldview is generally threatening, worldview defense and

negative feelings are to be expected, as described below.

Measure of displeasure. Displeasure with feedback regarding attitudes toward

counterterrorism was measured using responses to the question "How pleased of

displeased are you with these potential recommendations?" on a scale of 1-9,

1=*Extremely displeased*, 9= *Extremely pleased* (see Appendix E).

Measurement of worldview defense. Worldview defense represents the degree

to which people defend their own worldview when presented with worldviews that are

inconsistent with their own. To measure worldview defense, participants were asked to

express their attitudes toward the majority of survey-takers who supposedly hold

opposing worldviews (see Appendix F). Participants used a 9-point scale (1= *Strongly Disagree*, 9= *Strongly Agree*) to answer four questions about the likability, knowledgeability, and intelligence of previous participants who supposedly hold those opposing views; they were also asked to report how valid the views expressed seemed (adapted from Gailliot, Schmeichel, & Maner, 2007). This scale has been used by other mortality salience studies (Gailliot et al., 2007; Greenberg et al., 1994). The summed evaluation of those who hold the conflicting worldview represents level of worldview defense (Gailliot et al., 2007). Although the present study only presented participants with worldview-inconsistent views, other research (Gailliot et al., 2007; Engle & Wichman, 2017) has examined the worldview defense in the face of worldview-consistent and worldview-inconsistent information. Findings suggest differences in worldview defense expressed in response to worldview-inconsistent compared to worldview-consistent information (α=.79, Gailliot et al., 2007). The assumption was that the more harshly respondents evaluated others who hold different worldviews, the more worldview defense experienced in the face of the worldview threat.

Right-wing authoritarianism measure. This study measured right-wing authoritarianism using the abbreviated 6-item scale (see Appendix G). An example item is "What our country really needs, instead of more 'civil rights', is a good stiff dose of law and order" (Dunwoody & McFarland, 2017). Participants responded using a 7-point Likert scale, where 7 = *Strongly Agree* and 1 = *Strongly Disagree*. This shortened measure includes two reverse scored items. The abbreviated measure was chosen instead of the full measure to reduce the risk of participant fatigue.

Social dominance orientation measure. Social dominance orientation was measured in this study using the abbreviated 8-item scale (Ho et al., 2015; see Appendix H). The scale contains two subscales, the anti-egalitarianism subscale and the group-based dominance subscale. An example item from the anti-egalitarian subdimension of the scale is "Group equality should not be our primary goal" (Ho et al., 2015). An example item from the group-based dominance subdimension is "An ideal society requires some groups to be on top and others to be on the bottom" (Ho et al., 2015). Participants responded using a 7-point Likert scale, where 7= *Strongly Agree* and 1= *Strongly Disagree*. The shortened version of the full measure, like the right-wing authoritarianism measure, was chosen to reduce the risk of participant fatigue.

Debriefing. It was important that participants knew that the "majority views" presented were entirely fictional. The participants were thanked for their time and attention, then they were informed that the opinions about civil liberties they saw were fictional (see Appendix I).

<div align="center">

Results

</div>

Data Exclusions

First, data were examined to identify any participants that did not did not follow directions and/or displayed inattentiveness to the study. 27 participants who did not pass the attention check (i.e. 1 = *Strongly Disagree*, 7 = *Strongly Agree* with "I am taking a psychology course this semester") were removed. 33 were removed for not completing the study. Two were deleted for not following directions on the writing task for the self-affirmation manipulation (i.e. write about an important value). 11 were removed for not

following directions on the writing task for self-affirmation control (i.e. write about an unimportant value). One was deleted for not following directions on the writing task for mortality salience control (i.e. write about dental pain). Three were deleted for not following directions on the writing task for mortality salience manipulation (i.e. write about how death might feel).

Participant response time contains valuable data because it can be used to identify participants who spent too little or too much time on tasks. Spending unusual amounts of time suggests that the participants may have neglected to devote sufficient attention to the task or that they got distracted by external stimuli, thus introducing confounds. Responses that indicate the participant spent an inordinate amount of time or less than five minutes on the entire study, as indicated by a scatterplot of duration (see appendix J), were excluded. Four participants that appeared to be outliers in the duration scatterplot were removed for taking too long to complete the study. Because the study should have taken more than five minutes, 10 participants were removed for taking under five minutes to complete it. The final sample size was 249.

Variable Computation

Support for civil liberties was computed by averaging scores of the seven items evaluating attitudes toward civil liberties in counterterrorism policies (see Appendix C). Participants indicated level of agreement with statements ranging from 1 to 7, where 1 indicated extreme willingness to sacrifice civil liberties and 7 indicated extreme support for civil liberties.

Displeasure was calculated by standardizing participants' responses to the single item: "How pleased or displeased are you with these potential recommendations?" on a scale of 1= *Extremely displeased* to 9 = *Extremely pleased* (see Appendix E). Worldview defense was computed by taking the sum of four questions measuring attitudes toward the majority (see Appendix F), then standardizing this sum. Displeasure and worldview defense were reverse scored, such that higher scores indicated more worldview defense (i.e. more negative evaluations of the "majority") and more displeasure with the disconfirming feedback. Worldview defense and displeasure correlated, $r = 0.76$, $p <$ .001. Worldview defense demonstrated high internal reliability, $\alpha = 0.92$ (see Table 1).

Right-wing authoritarianism was computed using the 6-item right-wing authoritarianism scale (see Appendix G) by first recoding the appropriate items, namely items 4 and 6. An average score was then computed using the appropriate reverse scored variables and standardized. Cronbach's alpha can be found in Table 1.

Social dominance orientation was computed similarly using the social dominance orientation scale (see Appendix H) by first reverse coding the appropriate items, namely items 3,4,7, and 8. An average score was then computed using the appropriate reverse scored variables and standardized. Cronbach's alpha can be found in Table 1. The group-based dominance subscale for social dominance orientation was computed by using the appropriately reverse coded variables, namely 3 and 4, of items 1-4 then standardized. The anti-egalitarianism subdimension was computed using the appropriately reverse coded variables, namely 7 and 8 of items 5-8, then standardized.

Descriptive Statistics

Participants comprised of college students ($n = 249$, male = 54, including one transgender female-to-male individual). Participant age ranged from 18 to 40 (median age = 19), 81% of which identified as White/Caucasian. A pie chart depicting racial/ethnic differences can be found in Figure 1.

Figure 1. Pie Chart of Participant Race/Ethnicity
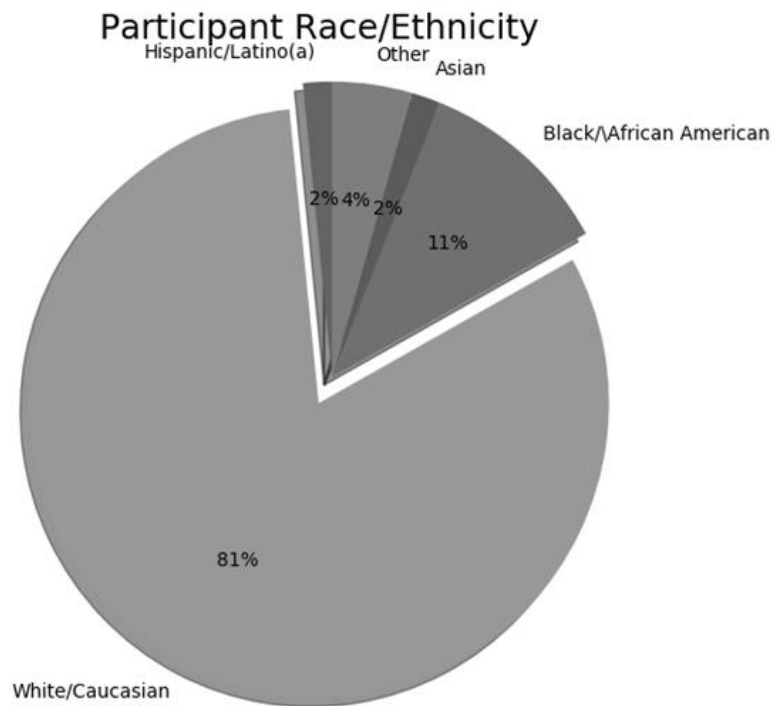
Means, standard deviations, and alphas for right-wing authoritarianism, social dominance orientation, support for civil liberties in counterterrorism policies, worldview defense, and displeasure, collapsed across self-affirmation condition and mortality salience condition, are shown in Table 1. Note that Table 1 displays reverse coded average worldview defense scores, wherein higher scores indicate higher worldview defense. Likewise, displeasure scores displayed in the table are reversed, such that

higher scores indicate more displeasure. Table 2 displays correlations among civil

liberty support variables, all of which correlated $r \geq .50$ with the mean support for civil

liberties.

Table 1. Means and standard deviations for dependent and independent variables and

individual differences across all conditions

	n = 249		
	Mean	Standard Deviation	Standardized Cronbach's Alpha
Right-Wing Authoritarianism	3.02	1.11	0.78
Social Dominance Orientation	2.98	1.00	0.81
Support for Civil Liberties	4.50	1.20	0.75
Worldview Defense	5.11	1.57	0.92
Displeasure	4.24	1.95	--

Table 2. Support for Civil Liberties Item Correlation Matrix

	Civil Liberties	Detain Race	Detain Suspect	National ID	Search	Speech	Surveillance	Mean
Civil Liberties	--	.205	.321	.203	.221	.166	.221	.504
Detain Race	.205	--	.397	.307	.511	.210	.296	.650
Detain Suspect	.321	.397	--	.273	.470	.359	.261	.701
National ID	.203	.307	.273	--	.424	.267	.249	.617
Search	.221	.511	.470	.424	--	.300	.399	.763

Note: Civil Liberties indicates question 1 from the questionnaire, Detain Race indicates question 2, Detain Suspect indicates question 3, National ID indicates question 4, Search indicates question 5, Speech indicates question 6, and Surveillance indicates question 7. See Appendix C for full question items. Mean indicates the mean of all item responses for civil liberty attitudes.

Hypothesis Testing

First, the hypothesis that self-affirmation would decrease worldview defense, but that mortality salience would increase worldview defense was tested using regression

analysis. In accord with the preregistration of this project in the Open Science Framework, found at https://osf.io/tu3m2/, this was accomplished by first regressing worldview defense on self-affirmation and mortality salience (both dummy-coded), with right-wing authoritarianism as a control variable, with all interactions. Second, worldview defense was regressed on self-affirmation and mortality salience, with social dominance orientation included as a control variable, with all interactions. Note that all continuous data in regression analyses were standardized (z-scored) and all figures displaying their relationships used variables in their standardized (z-scored) form. In the following, please also note that any outliers that were removed were detected using Cook's distance influence plots and studentized residual plots.

Results of the regression of worldview defense on self-affirmation, mortality salience, and right-wing authoritarianism with all interactions indicated that right-wing authoritarianism predicted lower levels of worldview defense, t (7, 240) = -2.25, b = -0.26, p = .025, full model adjusted R^2 = 0.07, F (7, 240) = 3.79, $p < .001$. A marginally significant interaction of self-affirmation and mortality salience was also observed, such that individuals who underwent both the mortality salience induction and self-affirmation manipulation showed lower worldview defense compared to those in the dental pain and no affirmation condition, t (7, 240) = -1.69, b = -0.41, p = .092. See Figure 2. When social dominance orientation was included as a control variable instead of right-wing authoritarianism in this model, no main effects or interactions of condition were observed, full model adjusted R^2 = 0.03, F (7, 240) = 2.15, p = 0.038.

Figure 2.

Interaction of Self-Affirmation and Mortality Salience on Worldview Defense
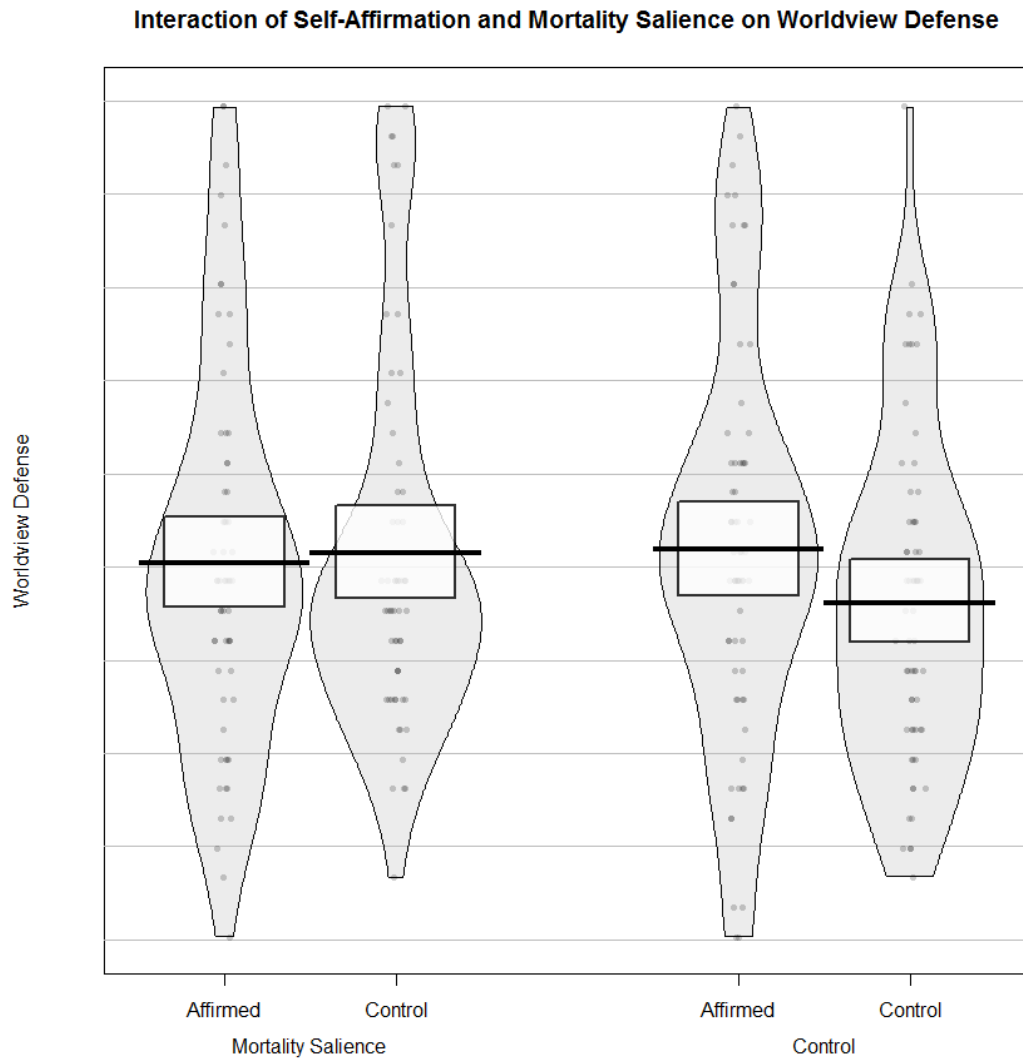
These same two models then were applied to analyze displeasure with the nature of the proposed recommendations to policy makers. Displeasure was taken as an affective indicator of the degree to which participants might have felt defensive of their civil liberties worldviews. When displeasure was regressed on self-affirmation and mortality salience (both dummy-coded) and their interaction, with right-wing authoritarianism as a control variable, right-wing authoritarianism predicted lower levels

of displeasure, $t\ (7, 237) = -2.33$, $b = -0.27$, $p = 0.02$, full model adjusted $R^2 = 0.10$, $F\ (7,$

$240) = 5.00$, p < .000. A marginally significant interaction of self-affirmation and

mortality salience also appeared, $t\ (7, 240) = -1.70$, $b = -0.41$, $p = 0.088$. The nature of

this interaction is consistent with the hypothesis that mortality salience increases, but

self-affirmation decreases worldview defense and displeasure; see the violin plot in

Figure 3. This effect however, only appears if participants were exposed to both

affirmation and mortality salience. Note that displeasure was slightly higher in those

affirmed in the dental pain condition (p > .10).

Figure 3.

Interaction of Self-Affirmation and Mortality Salience on Displeasure
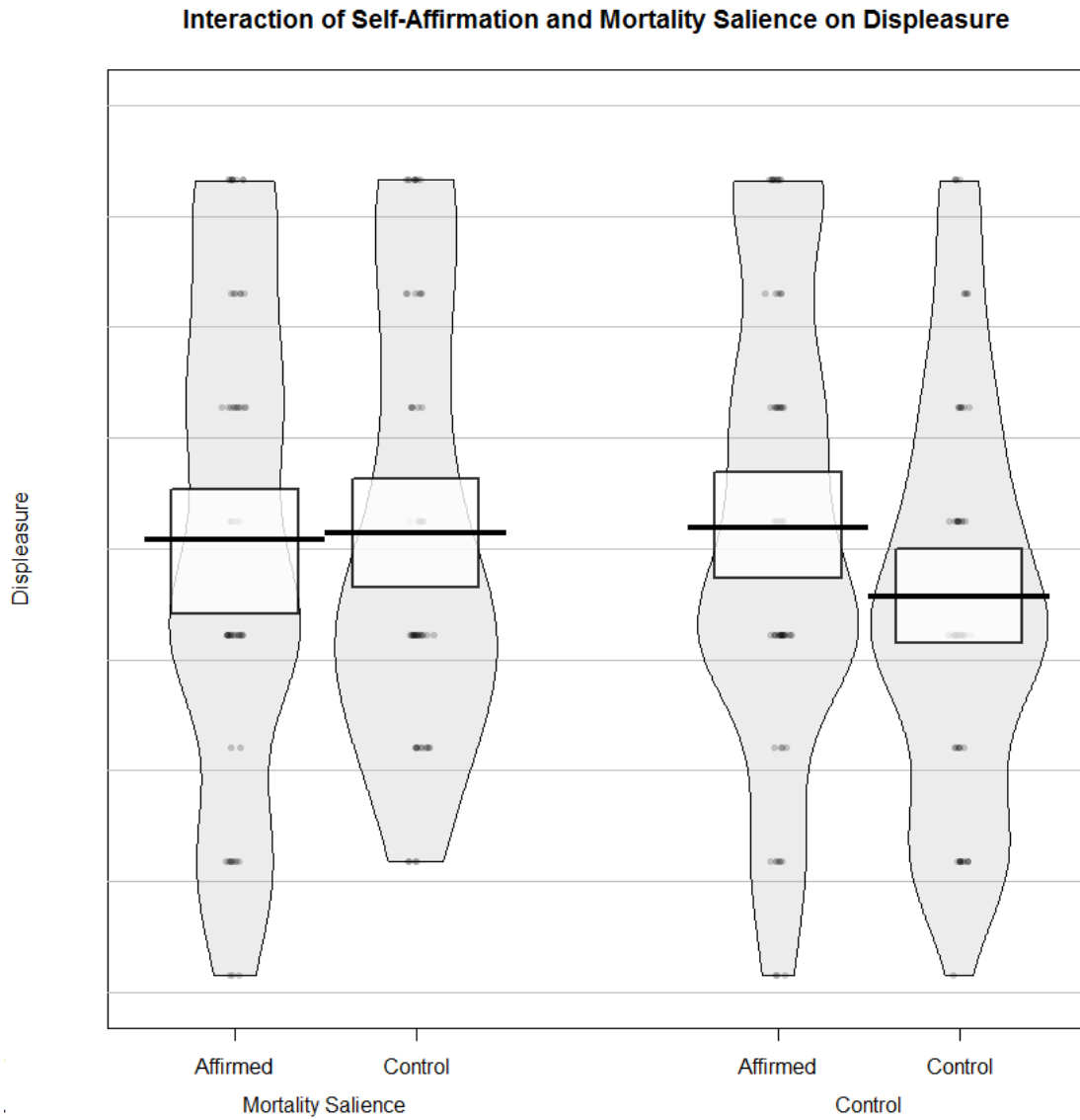
When displeasure was regressed on this model using social dominance orientation instead of right-wing authoritarianism as a control variable, no such interaction of mortality salience and self-affirmation was observed, $t(7, 240) = -1.34$, $b = -0.33$, $p = 0.178$, full model adjusted $R^2 = 0.06$, $F(7, 240) = 3.33$, $p = .002$. However, the pattern of predicted means was identical to the pattern shown in Figure 2, where

these same predictors were used to predict worldview defense. This model showed that like right wing authoritarianism, social dominance orientation predicted lower levels of displeasure, $t(7, 240) = -2.71$, $b = -0.33$, $p = .007$. In sum, considering the results of the initial hypothesis tests, marginal support for the hypotheses was found when the pre-registered analyses were conducted.

Exploratory Analyses: Extreme Civil Liberty Attitudes

Although not pre-registered for hypothesis testing, after consideration, it was postulated that extremity of civil liberty attitudes might play a role in degree of worldview defense expressed. This is for two reasons. First, extreme attitudes indicate more strongly held worldviews, which may be more susceptible to worldview defense. Second, the feedback participants received was only as extreme as opinions participants expressed in the initial civil liberties questionnaire, but in the opposite direction. For participants whose civil liberties attitudes were moderate, presenting them with feedback indicating others have only moderately different attitudes, albeit in the opposite direction on the issue, may not have been very threatening. A civil liberties attitudes extremity score was created to account for differences in attitude extremity by computing the absolute value of each participant's previously standardized civil liberty attitude, so that higher values indicated more extreme attitudes. This score was again standardized, to reduce non-essential collinearity in analysis (Simon & Lesage, 1988).

To explore the effect of civil liberty attitude extremity in conjunction with other independent variables, worldview defense was regressed on mortality salience, self-affirmation, and civil liberty attitude extremity, with right-wing authoritarianism

41

included as a control variable, with all interactions, full model adjusted $R^2 = 0.16$, F (15, 230) = 4.28, $p < .001$. Two outliers were removed (see Appendix K for diagnostic influence plots). This model showed the same interaction as in the pre-registered analyses, albeit significant, of mortality salience and self-affirmation predicting less worldview defense, t (15, 230) = -2.13, b = -0.51, p = 0.033. However, this was qualified by a three-way interaction of civil liberties attitudes extremity, self-affirmation, and mortality salience, t (15, 230) = -1.92, b = -.48, p = 0.055. The nature of this interaction was such that as extremity of civil liberty attitudes increased, mortality salience and self-affirmation interacted in a manner consistent with hypotheses.

This three-way interaction, decomposed by levels of mortality salience induction, are shown in Figures 4 and 5. Figure 4 shows the effect of self-affirmation on worldview defense in the dental pain condition. Figure 5 shows the effect for self-affirmation on worldview defense for people in the mortality salience condition. A simple slopes test of the effect of self-affirmation in the dental pain condition indicated that those participants in the self-affirmation condition (shown in Figure 4) evidenced marginally greater worldview defense, compared to the no affirmation condition, t (1,229) = -1.78, b = -.29, p = .080. Civil liberty attitude extremity did not interact with self-affirmation for those in the dental pain condition p = .760. For participants in the mortality salience condition, civil liberty attitude extremity interacted with self-affirmation, t (1,229) = 2.91, b = .54, p = .003, as shown in Figure 5. More specifically, simple slopes tests for civil liberty attitudes extremity one standard deviation above the mean showed that the effect of self-affirmation was significant, such that self-affirmed

participants showed less worldview defense than non-affirmed participants, $t(1,229) =$ 2.83, b = .70, p = .005. The corresponding effect of self-affirmation for those lower in civil liberty attitude extremity (i.e. one standard deviation below the mean) was non-significant, $p = .140$. These findings indicate that although self-affirmation did not lower worldview defense in the dental pain condition, it marginally increased worldview defense (see Figure 2). However, self-affirmation had the expected effect in the mortality salience condition, where for those higher in civil liberties attitude extremity, self-affirmation significantly reduced worldview defense.
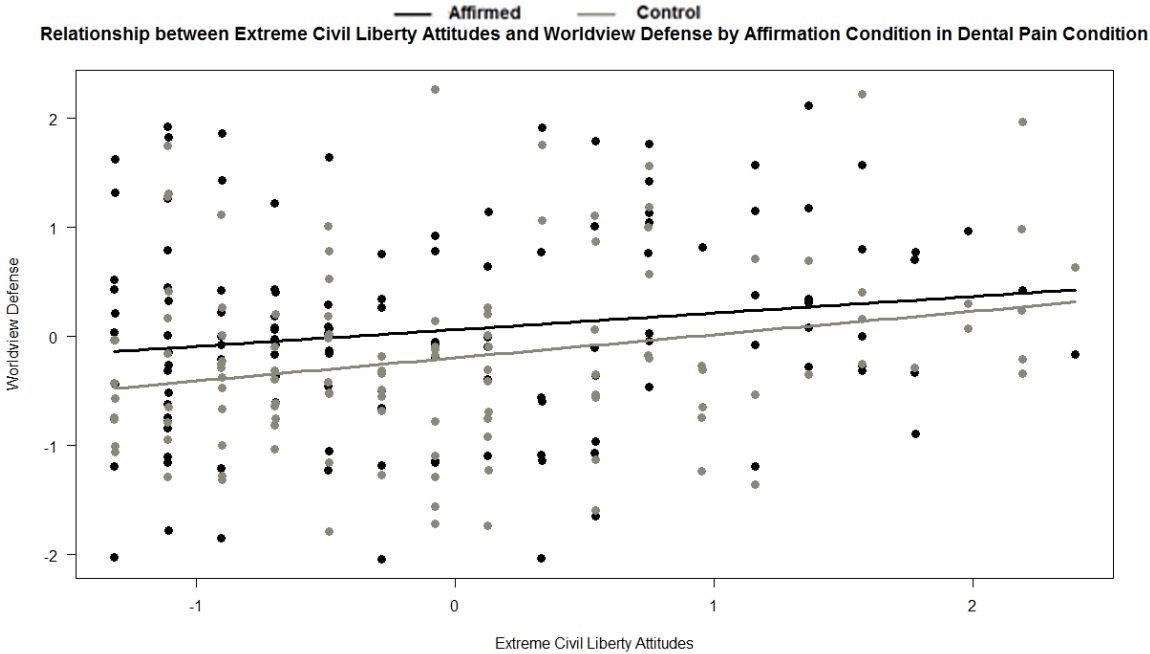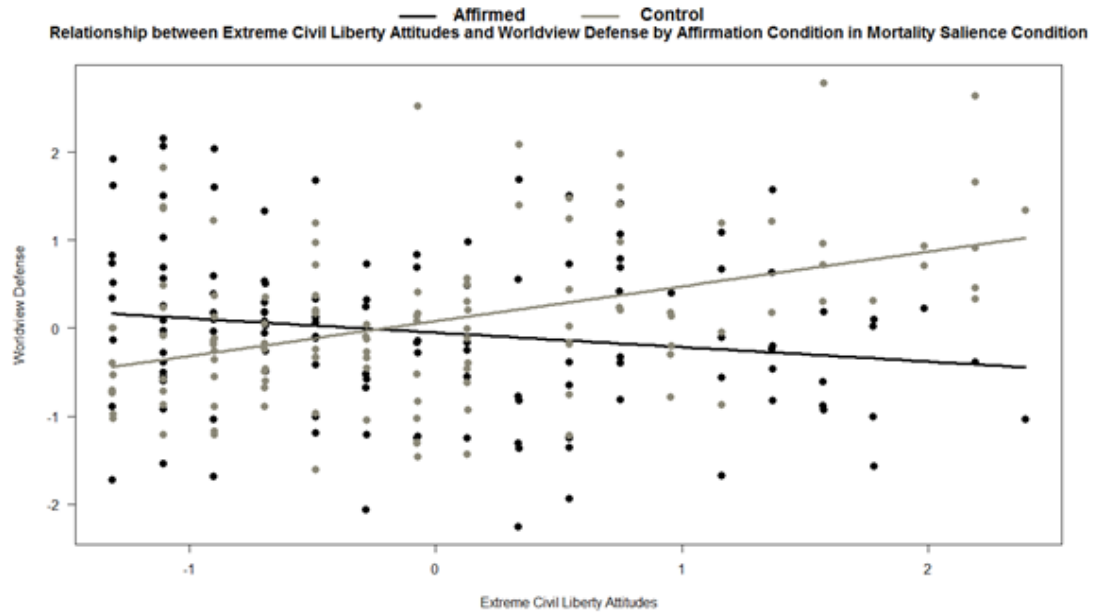
Figure 4.

Relationship between Extreme Civil Liberty Attitudes and Worldview Defense by Affirmation Condition in Dental Pain Condition

Figure 5.

Affirmed —— **Control** ——
Relationship between Extreme Civil Liberty Attitudes and Worldview Defense by Affirmation Condition in Mortality Salience Condition

When displeasure was regressed on mortality salience, self-affirmation, and extreme civil liberty attitudes with all interactions with right-wing authoritarianism included as a control variable, as in the initial hypothesis test without using civil liberties attitude extremity, the interaction of mortality salience and self-affirmation was found to marginally predict lower levels of displeasure, t (15, 232) = -1.67, b = -0.41, p = .095, similar to the pattern seen above in models displaying the regression of worldview defense on independent variables. The full model had an adjusted R^2 = .11, F (15, 232) = 3.06, p <.001.

Secondary Analyses

In addition to the hypothesis tests conducted, there were some other relationships that were tested. Because right-wing authoritarianism and social dominance orientation predict social attitudes and political leanings (Altemeyer, 2006; Pratto et al., 1994), it

44

was expected that these personality variables would affect attitudes toward civil liberties in counterterrorism policies. Moreover, Davis & Silver (2004) found that higher levels of conservatism, which is associated with right-wing authoritarianism (Altemeyer, 2006), predicted lower levels of support for civil liberties. Pratto et al. (1994) found that social dominance orientation predicted support for military programs, and because military programs may be used to fight terrorism, it was hypothesized that social dominance orientation would be related to support for civil liberties in counterterrorism policies.

When support for civil liberties was regressed on social dominance orientation, as expected, results indicated that higher social dominance orientation predicted lower support for civil liberties, t (1, 247) = -6.17, b = -.36, $p < .000$. Figure 6 displays this effect, full model adjusted R^2 = 0.13, F (1, 247) = 38.09, $p < .000$. A regression analysis of right-wing authoritarianism on support for civil liberties also revealed a main effect, such that high right-wing authoritarianism predicted lower support for civil liberties, t (1, 244) = -11.35, b = -0.59, $p < .000$. Figure 7 displays this effect, full model adjusted R^2 = .34, F (1, 244) = 128.9, $p < .000$.

Figure 6.

Effect of Social Dominance Orientation on Civil Liberty Attitudes

Figure 7.

Effect of Right-Wing Authoritarianism on Civil Liberty Attitudes
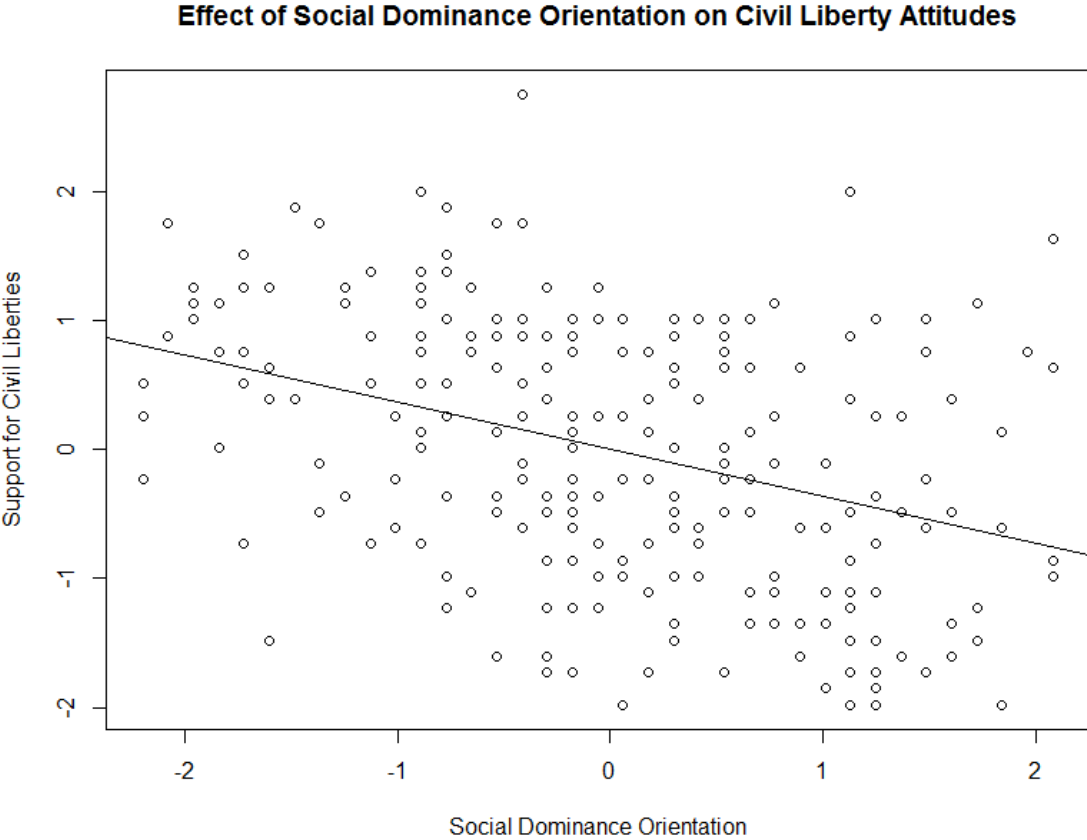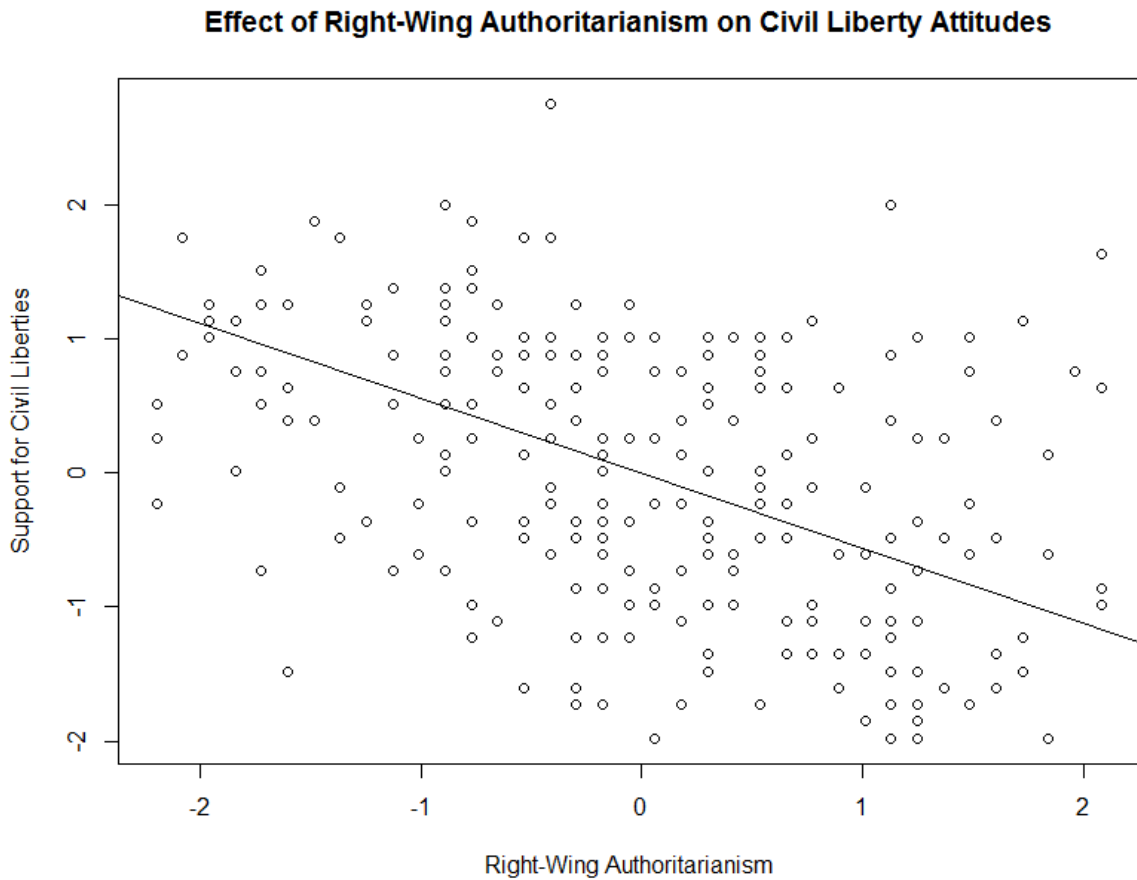

It was further expected that men would score higher on social dominance orientation than women, as suggested by Pratto et al., (1994). To test the effect of gender of social dominance orientation, a regression of social dominance orientation on dummy-coded gender was conducted, which revealed a marginally significant relationship, such that men tended to score higher than women, $t\,(1, 242) = 1.68$, $b = .26$, $p = 0.093$.

Recall the prediction that the group-based dominance orientation subdimension of social dominance orientation would predict worldview defense. A regression of

worldview defense on both the social dominance orientation subscales (i.e. group-based dominance and anti-egalitarianism), with all interactions showed a main effect of group-based dominance on worldview defense, $t(3, 244) = -2.56$, $b = -0.19$, $p = 0.011$, but no main effect for anti-egalitarianism, $t(3, 244) = -.37$, $b = -.02$, $p = .706$. This supports the theoretically expected role of group based dominance predicting social attitudes (Pratto et al., 1994).

Discussion

The results of this study provide a qualified confirmation of the hypothesis that self-affirmation can reduce mortality salience-induced worldview defense related to civil liberties. Among participants relatively higher in their civil liberties attitudes extremity, mortality salience and self-affirmation took on the expected roles. Moreover, worldview defense was lessened by self-affirmation in those who experienced mortality salience for those who had extreme attitudes toward civil liberties in counterterrorism policies. It is worthwhile to consider why attitude extremity matters in determining worldview defense.

Social judgment theory may provide a framework for understanding the role of attitude extremity in determining worldview defense. Social judgment theory holds that the way in which persuasive messages are received depends on how people evaluate the position of the message (Sherif, 1937; Sherif, Sherif, & Nebergall, 1965). Social judgment theory considers latitude of acceptance, noncommitment, and rejection, which affect message acceptance. For example, if a message falls in the latitude of acceptance, the message is more likely to be received/accepted. However, if the message is outside

48

of the latitude of acceptance, and into the latitude of rejection, the message is not likely to be accepted. It may be the case that for the participants of this study, participants only felt threatened if the supposed attitudes of the majority fell outside their latitude of acceptance; however, if the supposed attitudes of the majority fell inside the latitude of noncommitment, no real threat may have been perceived, and thus no worldview defense was observed.

Findings in social judgment theory parallel the findings of this study. Research has shown that consumers who are more loyal to particular brands (i.e. hold more extreme attitudes) have wider latitudes of acceptance regarding price (greater acceptance of price fluctuations; Kalyanaram & Little, 1994). Greater acceptance of price fluctuations (i.e. willingness to pay more money) may be interpreted as greater loyalty to the particular brand. This finding is similar to the present finding, where more extreme civil liberty attitudes can be interpreted as greater loyalty to security or civil liberties, which predicted greater loyalty to previously expressed beliefs. The finding of the present study is also similar to that of Rosenblatt et al. (1989), wherein it was hypothesized that participants would respond negatively to a person who violated their worldview after exposure to mortality salience. Experiment 2 by Rosenblatt et al., (1989) found that the effect of mortality salience appeared only if participants held especially negative attitudes toward the worldview violator (i.e. an alleged prostitute). Both Rosenblatt et al. (1989) and these current findings show that negative attitude extremity predicts worldview defense after mortality salience.

In the present study, participants with extreme attitudes presumably interpreted the countervailing civil liberties feedback they received as being in their latitude of rejection. People whose attitudes less extreme may have perceived the feedback to lie within their latitude of noncommitment, thus not perceiving the feedback as a threat. In other words, a main effect of self-affirmation was not observed because the feedback was threatening only to some participants.

Perhaps one reason for the effect of extreme attitudes on self-affirmation efficacy is because the threat (i.e. civil liberties in counterterrorism policies) was not relevant for the participant sample, or was simply not threatening enough. A study (Smith, Atkin, Martell, Allen, & Hembroff, 2006) that examined latitude of acceptance (i.e. attitude extremity) in college students used alcohol use as the attitude topic, which seems to be quite relevant to college students. It is possible that civil liberties are not as relevant to college students as alcohol use, and that a main effect of self-affirmation would have been observed on worldview defense had the threat been more relevant, and thus greater to all participants, rather than only participants who held strong attitudes regarding civil liberties in counterterrorism. Another possibility is that the threat of taking away some civil liberties is not severe enough to evoke attitudes strong enough to be affected by self-affirmation. If this is the case, it may be that more extreme stances need to be suggested. For example, it may have been more threatening to tell people that most people want to adopt some of North Korea's civil liberty policies. However, many people might not believe that people actually want to adopt North Korean civil liberty policies. Believability is important, because whatever the threatening message is needs

to be believable. Research (Smith et al., 2006) has shown believability to be associated with latitude ranges. Although believability may not have been important in the present study, it may be important if the study is replicated using a more extreme threat, such as the possibility of adopting North Korean civil liberty policies.

Although the present study found only qualified (by civil liberty attitude extremity) support for the effect of self-affirmation or mortality salience on reactions to worldview threat, this study replicated some findings regarding individual difference variables, right-wing authoritarianism and social dominance orientation. For example, the present study confirmed that men score higher on social dominance orientation compared with women (Pratto et al., 1994). Results from the present study also provide more information about right-wing authoritarianism and social dominance orientation by showing some new attitudes and social policies that they predict (Altemeyer, 2006; Pratto et al., 1994).

Limitations

A limitation of this study is that there was very little diversity in the sample in terms of race/ethnicity, age, and gender. The unequal gender split of our participant sample might reflect the unequal gender split in the psychology department at the university, where 79% of psychology majors identified as female in 2016 (Helbig et al., 2017). Younger ages may have also affected results of the study, especially in regards to the mortality salience manipulation. Moreover, it may be the case that younger adults do not think of death as often as older adults, thus the mortality salience induction may be more effective in older adults if older adults were more likely to adopt a worldview

51

defense in response to the induction. The limited demographics in this study may therefore prevent the generalization of findings beyond this sample of primarily young white females at Western Kentucky University.

A second limitation of the present study may be the focus on worldview defense to the exclusion of other possible effects of mortality salience. Research has shown that people do not always derogate others when they feel their worldview is threatened; for instance, they sometimes accommodate the opposing worldview (Dechesne et al., 2000; Hayes, 2015). Because the current study was designed to only detect worldview defense via derogation, there is no way to know whether people accommodated the worldviews of others to lessen the threat of mortality salience.

A third limitation is the decrease in sample size due to attrition or inattentive participants who were excluded from analyses. The current study excluded 26.8% of participants for failure to complete the study or evident carelessness. Literature on identifying careless responses in survey data suggests that approximately 10-12% of participants provide careless data (Meade & Craig, 2012). If approximately 10% of the present participant sample provided careless data, it would seem that around 18% were excluded needlessly. Recall however, a full 9% of participants who failed to complete the survey at all. It is likely that participants who completed the survey also provided careless responses, some of which were evidenced by their written responses to essay questions (e.g., values affirmation, mortality salience induction, and controls). Nevertheless, it is possible that some participants were needlessly excluded.

Future Directions

An interesting approach to exploring mortality salience may be to include older adults in the study of effects of mortality salience. The case may be that older adults are more familiar with death and perhaps understand the threat of death better than younger participants. For example, older adults may have seen more deaths in their lifetime or may have been exposed to illnesses that threaten to shorten their lives. Older adults are on-average also closer to death than younger participants. Closer psychological proximity to death may increase the effect of a mortality salience induction. It would be interesting to explore the effects of a mortality salience induction in both older and younger adults. However, attitudes toward others in older adults may also be more impacted by extremity of beliefs (Blanchard-Fields, Hertzog, & Horhota, 2012).

Another potentially worthwhile adaptation to this study is to include a test of implicit associations in addition to explicit questions regarding attitudes about civil liberties in counterterrorism policies. For example, an implicit association test pitting good vs. bad and support for civil liberties vs. sacrificing civil liberties may better inform researchers about participants' true attitudes (Greenwald, McGhee, & Schwartz, 1998). A study with this type of design may aid in understanding how right-wing authoritarianism and social dominance orientation relate to true civil liberty attitudes in counterterrorism policies.

Implications

Applying concepts from social psychology to daily life can be difficult. Nevertheless, the findings from this study provide valuable information to those

interested in politics. For example, this study demonstrates the effect of death thoughts on attitudes toward others. Because the media can evoke death thoughts via portrayals of events such as terror attacks, the media may influence attitudes in a way that promotes worldview defense. Furthermore, this study has implications for understanding personality in politics. For example, the idea that a political candidate may be high on right-wing authoritarianism might be a deciding factor for voters for a number of reasons. For example, this candidate is likely to be more conventional and more likely to express disdain for those who do not adhere to societal norms. Given the present study's finding that right-wing authoritarianism predicts less displeasure with worldview disconfirming feedback, this candidate may also be less likely to care if the majority disagrees with his or her views regarding civil liberties in counterterrorism policies. Moreover, given the finding that high on scores on right-wing authoritarianism and social dominance orientation predict lower levels of support for civil liberties, this candidate may not favor civil liberties like privacy protections. Armed with the results and implications of the present study, voters may be more or less likely to appoint this candidate to office. Research studies such as this are valuable to people as citizens of a democracy. Although there are limitations that hinder the generalization of this study's findings, the current study can provide thought-provoking information to audiences regarding the effects media can have on attitudes, as well as to voters regarding the effect of personality in political representatives.

References

Altemeyer, B. (1998). The other "authoritarian personality". *Advances in Experimental Social Psychology, 30*, 47-92. doi: 10.1016/S0065-2601(08)60382-2

Altemeyer, B. (2006). *Right-Wing Authoritarianism*. Winnipeg, Canada: University of Manitoba Press.

American Civil Liberties Union (2017). The audacity of group: T.S.A.'s new pat-down. Retrieved from https://www.aclu.org/other/audacity-grope-tsas-new-pat-down

Aviation and Transportation Security Act, 49 USC § 40101 (2001). Retrieved from Department of Homeland Security Website.

Barnes, C. D., Brown, R. P., & Osterman, L. L. (2012). Masculine honor ideology in the U.S. and militant responses to terrorism. *Personality and Social Psychology Bulletin, 38*, 1018-1029. doi: 10.1177/0146167212443383

Barry, D. (2016, June 20). Realizing it's a small, terrifying world after all. *New York Times.* Retrieved from https://www.nytimes.com/news-event/2016-orlando-shooting?mcubz=0

Bassett, J. F., & Connelly, J. N., (2011). Terror management and reactions to undocumented immigrants: Mortality salience increases aversion to culturally dissimilar others. *Journal of Social Psychology, 151*, 117-120. doi: 10.1080/002245903365562

Blanchard-Fields, F., Hertzog, C., & Horhota, M. (2012). Violate my beliefs? Then you're to blame! Belief content as an explanation for causal attribution biases. *Psychology and Aging, 27*, 324 –337. doi: 10.1037/a0024423

Burke, B. L., Martens, A., & Faucher, E. H. (2010). Two decades of terror management theory: A meta-analysis of mortality salience research. *Personality and Social Psychology Review, 14*, 155-195. doi: 10.1177/1088868309352321

Center for Disease Control and Prevention (2017). Heart disease fact sheet. *National Center for Chronic Disease Prevention and Health Promotion.* Retrieved from https://www.cdc.gov/dhdsp/data_statistics/fact_sheets/fs_heart_disease.htm

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Cohrs, J. C., Kielmann, S., Maes, J., & Moschner, B. (2005). Effects of right-wing authoritarianism and threat from terrorism on restriction of civil liberties. *Analyses of Social Issues and Public Policy*, *5*, 263–276. doi: 10.1111/j.1530-2415.2005.00071.x

Creswell, J. D., Dutcher, J. M., Klein, W. M., Harris, P. R., & Levine, J. M. (2013). Self-affirmation improves problem-solving under stress. *PLoS One*, *8*, e62593. doi: 10.1371/journal.pone.0062593

Critcher, C. R., & Dunning, D. (2015). Self-affirmation provides a broader perspective on the self-threat. *Personality and Social Psychology Bulletin, 41*, 3-18. doi: 10.1177/0146167214554956

Crocker, J., Niiya, Y., & Mischkowski, D. (2008). Why does writing about important values reduce defensiveness? Self-affirmation and the role of positive other-directed feelings. *Psychological Science*, *19*, 740-747. doi: 10.1111/j.1467-9280.2008.02150.x

Davis, D. W. (1995). Exploring black political intolerance. *Political Behavior, 17*, 1-22. doi: 10.1007/BF01498782

Davis, D., & Silver, B. (2004). Civil liberties vs. security: Public opinion in the context of the terrorist attacks on America. *American Journal of Political Science, 48*, 28–46. doi:10.2307/1519895

Dechesne, M., Greenberg, J., Arndt, J. & Schimel, J. (2000). Terror management and the vicissitudes of sports fan affiliation: Effects of mortality salience on optimism and fan identification. *European Journal of Social Psychology, 30*, 745–888. doi:10.1002/1099-0992(200011/12)30:6<813::AID-EJSP17>3.0.CO;2-M

Dunwoody, P. T., & McFarland, S. G. (2017). Support for anti-Muslim policies: The role of political traits and threat perception. *Political Psychology*. doi: 10.1111/pops.12405

Eligon, J. & Cooper, M. (2013, April 15). Blasts as Boston Marathon kill 3 and injure 100. *New York Times.* Retrieved from http://www.nytimes.com/2013/04/16/us/explosions-reported-at-site-of-boston-marathon.html?pagewanted=all&mcubz=0

Engle M. A., & Wichman, A. L. (2017). *If authoritarians wanted to protect civil liberties, would they displeased if they succeeded?* Unpublished manuscript.

Epton, T., & Harris, P.R. (2008). Self-affirmation promotes health behavior change. *Health Psychology, 27*, 746-752. doi: 10.1037/0278-6133.27.6.746.

Frink, D. D., Rose, G. M., & Canty, A. L. (2004). The effects of values on worries associated with acute disaster: A naturally occurring quasi-experiment. *Journal of Applied Social Psychology, 34*, 1–221. doi: 10.1111/j.1559-1816.2004.tb02538.x

Frosch, D., & Johnson, K. (2012, July 20). Gunman kills 12 in Colorado, reviving gun debate. *New York Times*. Retrieved from http://www.nytimes.com/2012/07/21/us/shooting-at-colorado-theater-showing-batman-movie.html?mcubz=0

Gailliot, M. T., Schmeichel, B. J., & Maner, J. K. (2007). Differentiating the effects of self-control and self-esteem on reactions to mortality salience. *Journal of Experimental Social Psychology, 43*, 894-901. doi: 10.1016/j.jesp.2006.10.011

Goldenberg, J. L., Pyszczynski, T., Greenberg, J., Solomon, S., Kluck, B., & Cornwell, R. (2001). I am not an animal: Mortality salience, disgust, and the denial of human creatureliness. *Journal of Experimental Psychology: General, 130*, 427-435. doi: 10.1037/0096-3445.130.3.427

Good, A., & Abraham, C. (2011). Can the effectiveness of health promotion campaigns be improved using self-efficacy and self-affirmation interventions? An analysis of sun protection messages. *Psychology and Health, 26*, 799-818. doi: 10.1080/08870446.2010.495157

Goodwin, R., Willson, M., & Stanley, G. (2005). Terror threat perception and its consequences in contemporary Britain. *British Journal of Psychology 96,* 389–406. doi: 10.1348/000712605X62786

Greenberg, J., Pyszczynski, T., Solomon, S., Simon, L., & Breus, M. (1994). Role of consciousness and accessibility of death-related thoughts in mortality salience effects. *Journal of Personality and Social Psychology, 67*, 627-37. doi: 10.1037/0022-3514.67.4.627

Greenberg, J., Simon, L., Pyszczynski, T., Solomon, S., & Chatel, D. (1992). Terror management and tolerance: Does mortality salience always intensify negative reactions to others who threaten one's worldview? *Journal of Personality and Social Psychology*, *63*, 212-220. doi: 10.1037/0022-3514.63.2.212

Greenberg, J., Solomon, S., & Pyszczynski, T. (1997). Terror management theory of self-esteem and cultural worldviews: Empirical assessments and conceptual refinements. *Advances in Experimental and Social Psychology, 29*, 61-139. doi: 10.1016/S0065-2601(08)60016-7

Greenwald, A. G., McGhee, D. E., & Schwartz, J. L. (1998). Measuring individual differences in implicit cognition: the implicit association test. Journal of personality and social psychology, 74, 1464. doi: 10.1.1.489.4611

Hayes, J., Schimel, J., Williams, T. J., Howard, A. L., Webber, D., & Faucher, E.H. (2015). Worldview accommodation: Selectively modifying committed beliefs provides defense against worldview threat. *Self and Identity, 14*, 521-548. doi: 10.1080/15298868.2015.1036919

Helbig, T., Blaetz, T., Davis, L., Estes, S., Foraker, M., Hamlet, S., … Mansur, I. (2017). *2017 Western Kentucky University Fact Book.* Retrieved from https://www.wku.edu/instres/documents/2017_fact_book.pdf

Ho, A. K., Sidanius, J., Kteily, N., Sheehy-Skeffington, J., Pratto, F., Henkel, K. E., & Stewart, A. L. (2015). The nature of social dominance orientation: Theorizing and measuring preferences for intergroup inequality using the new SDO7 scale. *Journal of Personality and Social Psychology, 109*, 1003–1028. doi: 10.1037/pspi0000033

Kim, S. (2012). Breadth perspective hypothesis: The effect of self-affirmation on consumer interactions (Order No. 3517162). Available from ProQuest Central. (1030961279). Retrieved from https://search.proquest.com.proxy.jewell.edu/docview/1030961279?accountid=15047

Lerner, J. S., Gonzales, R. M., Small, D. A., & Fischhoff, B. (2016). Effects of fear and anger on perceived risks of terrorism. *Psychological Science, 14*, 144-150. doi: 10.1111/1467-9280.01433

Meade, A. W., & Craig, S. B. (2012). Identifying Careless Responses in Survey Data. *Psychological Methods, 17*, 437-55. doi: 10.1037/a0028085

McQueen, A., & Klein, W. M. (2006). Experimental manipulations of self-affirmation: A systematic review. *Self and Identity, 5*, 289-354. doi: 10.1080/15298860600805325

National Consortium for the Study of Terrorism and Responses to Terrorism (2015). Annex of statistical information: Country reports on terrorism 2014. *Department of Homeland Security Science and Technology Center of Excellence.* https://www.state.gov/documents/organization/239628.pdf

Pratto, F., Sidanius, J., Stallworth, L. M., & Malle, B. F. (1994). Social dominance orientation: A personality variable predicting social and political attitudes. *Journal of Personality and Social Psychology, 67*, 741-763. doi: 10.1037/0022-3514.67.4.741

Pyszczynski, T., Greenberg, J., & Solomon, S. (1999). A dualprocess model of defense against conscious and unconscious death-related thoughts: An extension of terror management theory. *Psychological Review, 106*, 835-845. doi:10.1037/0033-295X.106.4.835

Rosenblatt, A., Greenberg, J., Solomon, S., Pyszczynski, T., & Lyon, D. (1989). Evidence for terror management theory: The effects of mortality salience on reactions to those who violate or uphold cultural values. *Journal of Personality and Social Psychology, 57*, 681-690. doi: 10.1037/0022-3514.57.4.681

Ruiter, M. (2011). *Self-affirmation and working memory capacity's influence on adherence to brief behavioral insomnia treatment* (Doctoral dissertation). Retrieved from University of Alabama Theses and Dissertation-Department of Psychology. (903975986)

Ryan, R. M., & Deci, E.L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55*, 68-78. doi: 10.1037110003-066X.55.1.68

Schimel, J., Hayes, J., Williams, T., & Jahrig, J. (2007). Is death really the worm at the core? Converging evidence that worldview threat increases death-thought accessibility. *Journal of personality and social psychology, 92*, 789-803. doi: 10.1037/0022-3514.92.5.789

Sherif, M. (1937). An Experimental Approach to the Study of Attitudes. *Sociometry, 1*, 90-98. doi:10.2307/2785261

Sherif, C. W., Sherif, M., & Nebergall, R. E. (1965). *Attitude and attitude change: The social judgment-involvement approach* (pp. 127-167). Philadelphia: Saunders.

Sherman, D. K., & Cohen, G. L. (2006). Psychology of self-defense: self-affirmation theory. *Advances in Experimental Social Psychology, 38.* doi: 10.1016/S0065-2601(06)38004-5

Simon, S. D., & Lesage, J. P. (1988). The impact of collinearity involving the intercept term on the numerical accuracy of regression. *Computer Science in Economics and Management, 1,* 137-152. doi: 10.1007/BF00427160

Skitka, L. J. (2005). Patriotism or nationalism? Understanding post-September 11, 2001, flag-display behavior. *Journal of Applied Social Psychology*, *35*, 1995–2011. doi: 10.1111/j.1559-1816.2005.tb02206.x

Skitka, L. J., Bauman, C.W., Aramovich, N.P., & Morgan, G.S. (2006). Confrontational and preventative terrorism: anger wants a fight and fear wants "them" to go away. *Basic and Applied Social Psychology 28*, 375-384. doi: 10.1207/s15324834basp2804_11

Skitka, L. J., Bauman, C. W., & Mullen, E. (2004). Political tolerance and coming to psychological closure following the September 11, 2001, terrorist attacks: An integrative approach. *Personality and Social Psychology Bulletin*, *30*, 743-756. doi: 10.1177/0146167204263968

Steele, C. M. (1988). The psychology of self-affirmation: Sustaining the integrity of the self. *Advances in Experimental Social Psychology, 21*, 261–302. doi: 10.1016/S0065-2601(08)60229-4

Steele, C. M., & Liu, T. J. (1983). Dissonance processes as self-affirmation. *Journal of Personality and Social Psychology, 45*, 5-19. doi: 10.1037/0022-3514.45.1.5

Steinman, C. T., & Updegraff, J. A. (2015). Delay and death-thought accessibility: A meta-analysis. *Personality and Social Psychology Bulletin*, *41*, 1682-1696.

Sweeney, A. M., & Moyer, A. (2015). Self-affirmation and responses to health messages: A meta-analysis on intentions and behavior. *Health Psychology, 34*, 149-159. doi: 10.1037/hea0000110

Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism (U.S.A. PATRIOT ACT) Act of 2001. (2001)

Appendix A

Self-Affirmation

All participants saw the following introduction:

This research project is interested in personality characteristics. Please tell us a little bit about yourself. In the questions to come, you will be asked to reflect on your personal values. You will also be asked to write down your thoughts and perceptions about certain experiences.

Participants in the experimental condition saw only the following item:

Personal values reflect valuable information about personality. From the list below, please pick your two **most important** values.

○ Business, economics, and money making

○ Art, music, and theater

○ Science and the pursuit of knowledge

○ Social life and relationships

○ Social action and helping others

○ Religion and spirituality

For a study on values and personality, please take 2 minutes to write about why these values are important to you. Thanks.

Participants in the control condition saw only the following prompt:

Personal values reflect valuable information about personality. From the list below, please pick your two **least important** values.

○ Business, economics, and money making

○ Art, music, and theater

○ Science and the pursuit of knowledge

○ Social life and relationships

○ Social action and helping others

○ Religion and spirituality

For a study on values and personality, please take 2 minutes to write about why these values are not important to you, but why they might be important to someone else.

Thanks.

Appendix B

Mortality Salience Induction

All participants saw the following introduction:

Thank you for your help so far.

Please give us your honest answers on the following personality assessment.

Participants in the experimental condition saw the following prompt:

Perceptions of death and the emotions that are aroused by the thought of your own death also reflect personality characteristics. Think for a moment about your mortality. Then, please take approximately 1 minute to describe the emotions that the thought of your own death arouses in you.

Please take approximately 1 minute to write down as specifically as you can what you think will happen to you physically when you die.

Participants in the control condition saw the following prompt:

Perceptions of experiences and the emotions that are aroused by the thought of painful experiences also reflect personality characteristics. Think for a moment about the experience of dental pain. Then, please take approximately 1 minute to describe the emotions that the thought of dental pain arouses in you.

Please take approximately 1 minute to write down as specifically as you can what you think about what happens to you physically when you experience dental pain.

Appendix C

Attitudes toward Civil Liberties in Counterterrorism Policies Questionnaire:

Worldview Assessment (Adapted from Engle & Wichman, 2017)

All participants saw the following introduction and items that follow:

Terror attacks are a problem that demands attention. In the U.S., policies such as the Patriot Act (2001) have been enacted to curb terrorism. Some people think that more should be done to address terror attacks. If the police had the right to detain any suspicious persons, the U.S. may be a safer place. In fact, we may be able to stop acts of terror in their tracks. For example, if we increase telephone and internet surveillance; we could stop terror attacks before they happen. However, civil liberties like privacy and freedom may be sacrificed to protect against these types of attacks. Protection against being searched without a warrant is a basic right that might be sacrificed in the name of safety. Telephone and internet privacy may be compromised in the government's attempt to combat terrorism. What are your opinions on the subject? Should we protect the U.S. at all costs, even if we have to give up civil liberties? Considering the topic of attacks, like terrorism, what do you think should be done?

CL1 Please select the response below that best matches your opinion, using the scale provided.

❍ 1.) In order to curb terrorism in this country, it will be necessary to give up some civil liberties. (1)

❍ 2.) (2)

❍ 3.) (3)

66

○ 4.) Neutral (4)

○ 5.) (5)

○ 6.) (6)

○ 7.) We should preserve our freedoms above all, even if there is some risk of terrorism. (7)

CL2 Please select the response below that best matches your opinion, using the scale provided.

○ 1.) Everyone should be required to carry a national identity card at all times to show a police officer upon request. (1)

○ 2.) (2)

○ 3.) (3)

○ 4.) Neutral (4)

○ 5.) (5)

○ 6.) (6)

○ 7.) Being required to carry an identity card would violate people's freedom. (7)

○ CL3 Please select the response below that best matches your opinion, using the scale provided.

○ 1.) It should be a crime for anyone to speak in favor of an organization that supports terrorism. (1)

○ 2.) (2)

○ 3.) (3)

○ 4.) Neutral (4)

○ 5.) (5)

○ 6.) (6)

○ 7.) People's guilt or innocence should not be determined by their speech about an organization that supports terrorism. (7)

CL4 Please select the response below that best matches your opinion, using the scale provided.

○ 1.) The government should be able to arrest and detain a person indefinitely if that person is suspected of belonging to a terrorist organization. (1)

○ 2.) (2)

○ 3.) (3)

○ 4.) Neutral (4)

○ 5.) (5)

○ 6.) (6)

○ 7.) Nobody should be held for a long period of time without being formally charged with a crime, even in the case of terrorism. (7)

CL5 Please select the response below that best matches your opinion, using the scale provided.

○ 1.) Law enforcement should be able to stop or detain people of certain racial or ethnic background if these groups are thought to be more likely to commit a terrorist attack. (1)

○ 2.) (2)

○ 3.) (3)

❍ 4.) Neutral (4)

❍ 5.) (5)

❍ 6.) (6)

❍ 7.) Racial profiling to stop terrorism should not be done because it harasses many innocent people just because of their race or ethnicity. (7)

CL6 Please select the response below that best matches your opinion, using the scale provided.

❍ 1.) Law enforcement should be free to search a property without a warrant solely on the suspicion that a terrorist act is being planned there. (1)

❍ 2.) (2)

❍ 3.) (3)

❍ 4.) Neutral (4)

❍ 5.) (5)

❍ 6.) (6)

❍ 7.) Protection against searches without a warrant is a basic right that should not be given up, even if a terrorist act is suspected. (7)

CL7 Please select the response below that best matches your opinion, using the scale provided.

❍ 1.) The government should be allowed to record telephone calls and monitor email in order to prevent people from planning terrorist attacks. (1)

❍ 2.) (2)

❍ 3.) (8)

○ 4.) Neutral (4)

○ 5.) (5)

○ 6.) (6)

○ 7.) People's conversations and email must be accessible only with a warrant, even if the government is concerned about terrorist attacks. (7)

Appendix D

Worldview Threat Manipulation (Adapted from Engle & Wichman, 2017)

If participants selected items from the attitudes questionnaire that reflect support for policies that uphold safety at the expense of civil liberty violations, participants saw the following message:

"Thank you for your help so far. As part of this study, I may be sharing recommendations for policy makers with respect to what people think could be done about terror attacks. Right now, based on what the majority of people seem to think, I would make the following recommendations to policy makers. These recommendations would be placed in a report with supporting information and guidelines for how the recommendations can be implemented. Part of the report might look as follows:

"Dear Policymaker: Based on our survey of what a large sample thinks, I would say that a majority tend to agree with the following statements:

- 'We should preserve our freedoms above all, even if there is some risk of terrorism.'

- 'Being required to carry an identity card would violate people's freedom.'

- 'People's guilt or innocence should not be determined by their speech about an organization that supports terrorism.'

- 'Nobody should be held for a long period of time without being formally charged with a crime, even in the case of terrorism.'

- 'Racial profiling to stop terrorism should not be done because it harasses many innocent people just because of their race or ethnicity.'

71

- 'Protection against searches without a warrant is a basic right that should not be given up, even if a terrorist act is suspected.'

- 'People's conversations and email use are private and should be accessible only with a warrant, even if the government is concerned about terrorist attacks.'"

Likewise, if participants selected items form the attitudes questionnaire that reflect support for civil liberties, even if safety is compromised, participants saw the following message:

"Thank you for your help so far. As part of this study, I may be sharing recommendations for policy makers with respect to what people think could be done about terror attacks. Right now, based on what the majority of people seem to think, I would make the following recommendations to policy makers. These recommendations would be placed in a report with supporting information and guidelines for how the recommendations can be implemented. Part of the report might look as follows:

"Dear Policymaker: Based on our survey of what a large sample thinks, I would say that a majority tend to agree with the following statements.

- 'In order to curb terrorism in this country, it will be necessary to give up some civil liberties.'

- 'Everyone should be required to carry a national identity card at all times to show a police officer upon request.'

- 'It should be a crime for anyone to speak in favor of an organization that supports terrorism.'

- 'The government should be able to arrest and detain a person indefinitely if that person is suspected of belonging to a terrorist organization.'

- 'Law enforcement should be able to stop or detain people of certain racial or ethnic background if these groups are thought to be more likely to commit a terrorist attack.'

- 'Law enforcement should be free to search a property without a warrant solely on the suspicion that a terrorist act is being planned there.'

- 'The government should be allowed to record telephone calls and monitor email in order to prevent people from planning terrorist attacks.'"

The responses presented to each participant are tailored to display the exact opposite view regarding each individual item. For example, if a participants endorsed a 3 for item 4: "The government should be able to arrest and detain a person indefinitely if that person is suspected of belonging to a terrorist organization", the participant would be told that most people agree with the following statement: "Nobody should be held for a long period of time without being formally charged with a crime, even in the case of terrorism." However, if the same participant endorsed a 7 for item 6: "Protection against searches without a warrant is a basic right that should not be given up, even if a terrorist act is suspected", they will be told that the majority agree with: "Law enforcement should be free to search a property without a warrant solely on the suspicion that a terrorist act is being planned there."

Appendix E

Displeasure Measure

All participants saw the following item:

How pleased or displeased are you with these potential recommendations?

○ Extremely displeased (1)

○ Very displeased (2)

○ Moderately displeased (3)

○ Slightly displeased (4)

○ Neither pleased nor displeased (5)

○ Slightly pleased (6)

○ Moderately pleased (7)

○ Very pleased (8)

○ Extremely pleased (9)

The aggregate of this item was reverse scored for analysis, so that higher values indicated more displeasure.

Appendix F

Worldview Defense Measure (adapted from Gailliot et al., 2007)

All participants saw the following prompt and scale items:

Tell us how you feel about these policy recommendations.

On a scale of *1-9*, *1* being strongly disagree, *9* being strongly agree, please respond to

the following statements:

1) After reading the policy recommendations, it seems that the majority of

   participants in this study hold valid attitudes.

2) The people who hold views expressed in the policy recommendations seem

   intelligent.

3) The people who hold views expressed in the policy recommendations seem

   likable.

4) The people who hold views expressed in the policy recommendations seem

   knowledgeable.

The aggregate of these items was reverse scored for analysis, so that higher values

indicated more worldview defense.

Right-Wing Authoritarianism Measure (Dunwoody & McFarland, 2017)

All participants saw the following prompt and scale items:

We also have some questions about other social issues. Show how much you favor or oppose each idea below by selecting a response on the scale below. You can work quickly; your first feeling is generally best.

Thank you for your help with the terrorism questions. Now, we'd like to ask you some personality questions. Please tell us what your honestly think of each of the following. *(Scoring is* 1-7, 1=*Strongly Disagree,* 7=*Strongly Agree).*

1) The only way our country can get through the crisis ahead is to get back to our traditional values, put some tough leaders in power, and silence the troublemakers spreading bad ideas.

2) It is always better to trust the judgment of the proper authorities in government and religion than to listen to the noisy rabble-rousers in our society who are trying to create doubt in people's minds.

3) Our country will be destroyed someday if we do not smash the perversions eating away at our moral fiber and traditional beliefs.

4) Our country needs free thinkers who will have the courage to defy traditional ways, even if this upsets many people. *(reverse scored)*

5) What our country really needs, instead of more "civil rights," is a good stiff dose of law and order.

6) Everyone should have their own lifestyle, religious beliefs, and sexual preferences, even if it makes them different from everyone else. *(reverse scored)*

Appendix H

Social Dominance Orientation Measure (Ho et al., 2015)

All participants saw the following prompt and scale items:

(Scoring is 1-7, 1=Strongly Disagree, 7=Strongly Agree).

> *Group-based dominance sub-scale*

1) An ideal society requires some groups to be on top and others to be on the bottom.

2) Some groups of people are simply inferior to other groups.

3) No one group should dominate in society. *(reverse scored)*

4) Groups at the bottom are just as deserving as groups at the top. *(reverse scored)*

> *Anti-egalitarianism sub-scale*

5) Group equality should not be our primary goal.

6) It is unjust to try to make groups equal.

7) We should do what we can to equalize conditions for different groups. (*reverse scored)*

8) We should work to give all groups an equal chance to succeed. *(reverse scored)*

Appendix I

Debriefing

All participants saw the following debriefing statement:

"Thank you for your participation. Your time and attention are extremely valuable and much appreciated. Please know however, that the views of the majority presented in this study are fictional. Data for this study have not yet been analyzed, so opinions regarding civil liberties in counterterrorism policies remain unknown. The purpose of this study is to access your opinions and how you respond to the opinions of those who hold directly opposite views. A greater understanding of the psychological processes involved in attitude formation and attitudes toward opposite views is of great interest to the field of psychology and provides theoretical grounds for further research. Thank you!"

Appendix J

Scatterplot of Duration by Participant

Duration in Seconds by Participant
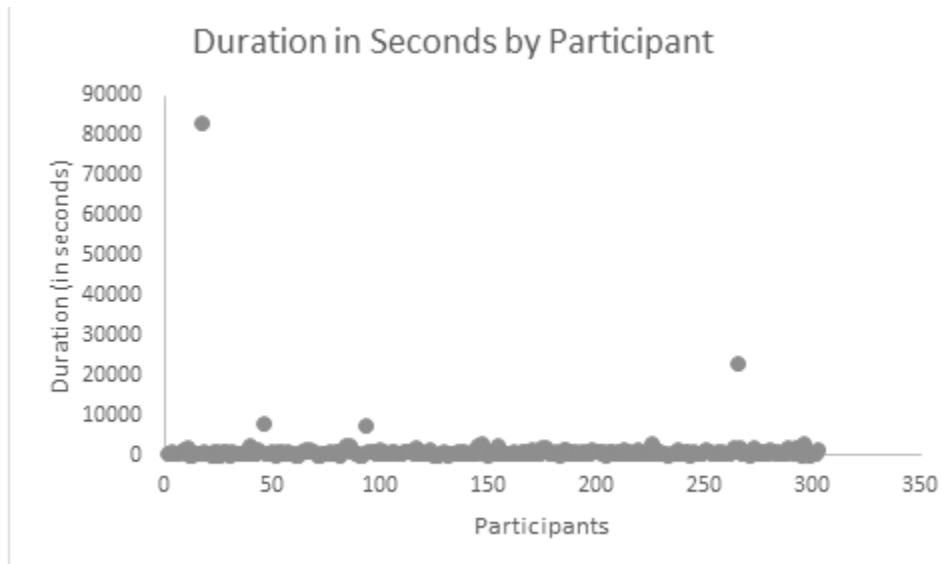
Appendix K

Diagnostic Influence Plot (for regression analysis of worldview defense on mortality salience, self-affirmation, right-wing authoritarianism, extreme civil liberty attitudes and all interactions)

Diagnostic Plots