

PRIMED AND PREJUDICED: EXAMINING THE EFFECTS OF PRIMING
RELIGIOUS EXEMPLARS ON PREJUDICE TOWARD MUSLIMS

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ABSTRACT

PRIMED AND PREJUDICED: EXAMINING THE EFFECTS OF PRIMING RELIGIOUS EXEMPLARS ON PREJUDICE TOWARD MUSLIMS

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Priming techniques have recently been used to gain insight into the causal effects of religiosity on prosocial and antisocial outcomes. Previous research has demonstrated that religious priming may increase prejudice. However, little research has examined how varying the content of the religious primes may impact prejudice. It has been suggested that activating rewards associated with religion may increase prosocial behavior, but no research has been done examining whether activating religious moral ideals associated with an exemplar of one's religion may also result in increased prosocial behaviors. The present study tested primes that varied in their religious content (religious vs. non-religious) and the presence of a moral exemplar (exemplar vs. non-exemplar). We predicted that priming a religious moral exemplar would activate prosocial ideals associated with one's religion. Consistent with previous literature, it was hypothesized that the non-exemplar religious prime would increase prejudiced attitudes toward Muslims, but that priming a religious exemplar would result in less prejudiced attitudes than the non-exemplar religious prime. Results showed that the non-exemplar religious prime did increase prejudiced attitudes toward Muslims compared to a control, but there was not evidence that religious exemplar primes reduced prejudice compared to non-exemplar religious primes. There was some evidence that priming a religious moral exemplar tempered the prejudiced attitudes activated by religious cognition. This study has implications for the spiritual modeling theory as well as the psychology of religion to further examine ways in which modifying the content of religious primes produces differential effects on prejudiced attitudes.

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CHAPTER 1

Introduction

“The role of religion is paradoxical. It makes prejudice and it unmakes prejudice.” (Allport & Ross, 1967, p. 433). Religion has been a prevalent topic of investigation among psychologists since the onset of the field in the late 19th century, with key contributors such as James (1902) and Freud (1957). This interest likely stems from the centrality of religion to everyday personal and social life of many people. Topics of interest within psychology of religion have included levels of religiosity (Johnson, Rowatt, & Labouff, 2012), prosociality (Batson, 1976; Shariff & Norenzayan, 2007), cooperation (Duhaime, 2015), and prejudice (Allport & Ross, 1967). Researchers have examined both the positive and the negative consequences of religion on these constructs, and results have demonstrated prosocial effects, such as an increase in accessibility of magnanimous thoughts (Schumann, McGregor, Nash, & Ross, 2014) as well as negative consequences, such as an increase in prejudice (Johnson, et al., 2012). In a series of studies, researchers demonstrated that religiosity was associated with a willingness to help others, high levels of empathy and altruism, and less aggressive responses to daily hassles (Saroglou, Pichon, Trompette, Verschueren, & Dernelle, 2005).

Despite this connection between religiosity and prosocial outcomes, research has also shown an association between religiosity and antisocial outcomes. For example, in a hallmark study, Darley and Batson (1973) found that religiosity was unrelated to helping behavior when individuals were in a hurry, even when they were on their way to give a talk on the Good Samaritan. Further, in a recent study, researchers found that self-reported religiosity and spirituality were strong predictors of negative attitudes towards outgroups (Johnson et al., 2012). These findings indicate that religiosity does not always conduce to prosocial attitudes and behaviors.

Priming methods are a popular experimental tool used to examine causal relationships and their mechanisms and have recently gained popularity in psychology of religion research (Willard, Shariff, & Norenzayan, 2016). For example, in a study investigating religious priming and prosociality, participants who were implicitly primed with God concepts (e.g. “spirit” “God” or “divine”) in a sentence unscrambling task were more giving to other students than those who were not primed with God concepts (Shariff & Norenzayan, 2007). These results suggest that when religious concepts are made salient, individuals will demonstrate more prosocial behaviors. However, research is rarely as clear cut as it seems. For example, Johnson and colleagues (2012), found that individuals who had been subliminally primed with religious words demonstrated more negative attitudes towards outgroups compared to those who had been primed with neutral, or non-religious words. Taken together, these studies demonstrate that religious cognitions may result in either prosocial or antisocial outcomes. Due to these inconsistencies, researchers such as Ritter and Preston (2013) have suggested that context and moderating variables must also be taken into account to obtain a complete picture of the relationships between religious primes, and prosocial and antisocial outcomes.

In an attempt to further understand these ambiguous results, researchers have begun to investigate the nuances of priming stimuli used to increase the salience of religion, such as priming the supernatural (Preston, Ritter, & Hernandez, 2010) or punishing vs. forgiving ideas about god (Johnson et al., 2012). Results from these studies have provided some insight into why such variable results have emerged through priming research; however, more research is needed in order to uncover additional mechanisms that may affect the relationship between religiosity and prosocial and antisocial outcomes. The present study will attempt to distinguish the conditions under which religious primes will lead to prosocial and antisocial outcomes.

Inter-Religious Prejudice

As Allport and others have found, a fundamental negative byproduct of religion is inter-religious prejudice; a manifestation of intergroup bias composed of in-group favoritism and out-group derogation (Jackson & Hunsberger, 1999; LaBouff, Rowatt, Johnson, & Finkle, 2012; Johnson et al., 2012). Intergroup bias, informed by Tajfel and Turner's (1967) Social Identity Theory is concerned with the idea that individuals have a motivation to preserve the reputation of their ingroup. Within intergroup bias, individuals fulfill this drive through both out-group derogation and in-group favoritism. Out-group derogation is a process in which people attempt to support their own religion by viewing other religions as erroneous. This belief promotes tension between groups and perpetuates negative outcomes such as stereotyping and prejudice. As motivations change for an individual, such as when salience of death (mortality salience) is activated, negative consequences can arise. This can occur specifically between groups with competing religious philosophies and may manifest in ways such as worldview defense. In this case, interactions may turn hostile, and even violent (Norenzayan, Dar-Nimrod, Hansen, & Proulx, 2009). Despite considerable evidence to support this association between religion and prejudice, most of the early research on religion and prejudice has been limited by correlational designs. Relatively recent developments within the literature have yielded experimental tools to overcome this limitation, such as priming.

Religious Priming

The psychological investigation of religiosity has expanded in recent years due to the innovation of useful techniques such as priming. Priming is an instrument utilized within multiple sub-disciplines of psychology and is grounded in analyzing cognitive information processes and their subsequent effects. Religious priming can be conducted using various

approaches, but generally involves the presentation of a religious stimulus, either implicitly, explicitly, subliminally, or contextually, which thereby passively and temporarily affects subsequent thought, feelings, and behaviors. These religious cognitions may persist by manifesting as behavior, providing insight into the causal relationships between the stimulus and subsequent outcomes (Shariff, Willard, Andersen, & Norenzayan, 2015).

Religious priming is advantageous within research designs due to its ability to provide insight into the causal relationships between religiosity and attitudinal and behavioral outcomes. This has been a meaningful step for the scientific investigation of religion, due to the limitations of previous research which utilized correlational and quasi-experimental approaches, incapable of making inferences about causal relationships. Although this previous research has provided valuable insight into relationships between religiosity and subsequent outcomes, understanding the causal mechanisms at work is important to provide a comprehensive understanding of these relationships. Some of the subsequent processes which have been analyzed in combination with religious priming have included cooperation (Duhaime, 2015), submissiveness (Saroglou, Corneille, & Van Cappellen, 2009), magnanimity (Schumann et al., 2014), and prejudice (Allport & Ross, 1967).

A distinction between types of primes is presented in Shariff et al.'s (2015) meta-analysis of religious priming, and four distinct classifications are identified: implicit, explicit, subliminal, and contextual. Explicit primes include conscious processing by participants, and may activate more specific concepts than other primes, but are especially prone to issues such as demand characteristics. Examples of an explicit prime can be as simple as asking the participant to identify and talk about their religion (Schumann, et al., 2014), to having participants read excerpts of religious texts (Carpenter & Marshall, 2009). Alternatively, implicit primes occur at

an unconscious level, where the participant may not demonstrate acute awareness of the fact they are being manipulated to think about religion. An example of this type of prime might include sentence unscrambling tasks which include religious words (Shariff & Norenzayan, 2007). Subliminal priming occurs completely beyond the participant's awareness and can be conducted using methods such as the Lexical Decision Task, which presents a religious word for a short period in which participants are unable to meaningfully evaluate the presented word (Johnson, Rowatt, & LaBouff, 2010). The type of prime that has the largest impact on dependent measures is contextual priming, in which the context of the study is religious, such as being in or near a religious building (Labouff et al., 2012). This type of prime provides ecological validity to studies and has been established as the most robust of religious priming methods (Darley & Batson, 1973; Shariff, et al., 2015). Each priming method provides advantages and limitations, and the type should be selected based on the design and goals of the researcher. Explicit priming stimuli offer some of the most robust effects (Shariff et al., 2015) and are easy to implement into surveys. Some common limitations of this form of manipulation (e.g. demand characteristics) can be overcome by including suspicion checks, motivation checks, and socially desirability measures within the study.

Researchers have gone back and forth as whether or not religious priming is effective with non-religious participants. Some studies suggest that even agnostics (but not atheists) can be subject to the effects of religious priming, especially when also subjected to a mortality salience prime (Vail, Arndt, & Abdollahi, 2012). However, in Shariff and colleague's (2015) meta-analysis of religious priming, they demonstrated that although the effects remained significant across religious and non-religious participants, when non-religious participants were excluded, the effect size increased from small to medium in magnitude. Additionally, when exploring

outcomes specifically regarding a certain group (e.g. prejudices toward Muslims, homosexuals, etc.) the best comparison is to look at their relative outgroup's attitudes (e.g. for prejudice toward Muslims, examine Christian attitudes).

Religious Priming and Prosociality

A leading focus of the psychology of religion research has been on how religiosity may increase prosocial attitudes and behaviors. Within previous research, priming religion has usually increased prosocial outcomes such as decreasing moral hypocrisy. Further this appeared to be moderated by factors which predict prosocial behavior such as intrinsic religious orientation (Carpenter & Marshall, 2009). Despite strong evidence for this relationship, some researchers have questioned the generalizability of these findings. For example, Sedikides & Gebauer (2010) suggested through their research on religiosity and intergroup bias that these prosocial findings may be isolated to the occurrence of prosociality solely within a participant's own religion. This suggests that these positive outcomes found within religious priming research may specifically be qualified toward one's in-group. Related to this claim, Pichon and Saroglou (2009) investigated the effect of contextual religious priming on helping behavior; they manipulated the targets in need-- either a homeless person or an immigrant, and their location: outside of a church or outside of a gymnasium. Results from this study show that individuals are more likely to help those when they are outside of a church rather than a gymnasium (religious context vs. secular context), and that these findings were significant for the homeless, but not for immigrants (whose appearances were manipulated to seem foreign). These results suggest that helping behavior is increased by salience of religion, but only for those perceived to be part of the racial/ethnic ingroup of the participant. However, a recent study conducted in the Philippines by Batara, Franco, Quiachon, and Sembrero (2016) suggests that this may not always be the case; religious

priming may promote prosocial behavior toward those of one's ingroup or one's outgroup without significant difference. Moreover, researchers have also suggested these findings may not generalize cross-culturally (Shaver, Troughton, Sibley, & Bulbulia, 2016). As such, more research is needed in this area to understand to what groups and conditions these findings are able to generalize to.

Religious Priming and Negative Outcomes

Additionally, negative outcomes of religiosity have also been explored by priming researchers, though to a smaller degree. The focal issues in this area have included the investigation of several group dynamics associated with religion such as out-group biases and prejudice (LaBouff et al., 2012; Johnson, et al., 2012). For example, in a recent contextual priming study, religious priming resulted in an increase in intergroup biases as well as heightened levels of conservative political attitudes (LaBouff et al., 2012). Furthermore, these conservative political attitudes have also been shown to also be related to other predictors of antisocial outcomes such as right-wing authoritarianism (RWA) and social dominance orientation (SDO) (Mavor, Louis, & Laythe, 2011; Rowatt et al., 2005). Similarly, Johnson and colleagues (2012) found that subliminal religious priming resulted in an increase in intergroup bias compared to a control group, and that these effects were stronger when the outgroup was a "value-violating" outgroup (a group whose ideals opposed the ideals of the participant's ingroup; i.e. Muslims as value-violating for Christians). Researchers have argued for the idea that the content, ideals, or goals of the religion drive these negative outcomes, as well as group dynamics (LaBouff et al., 2012). Moreover, extrinsic religious orientation (a religious orientation which focuses on the social benefits one receives from their religion) has been a key indicator of negative outcomes associated with religion (Allport & Ross, 1967) due to its focus on and

relation to group dynamics and social outcomes (Hall, Matz, & Wood, 2010). These claims support the idea of group dynamics driving negative social outcomes.

Religion, Priming, & Prejudice

When religion is made salient via priming techniques, researchers have been able to observe an increase in both intergroup bias (religious prejudice) as well as racial prejudice. For example, Johnson and colleagues (2012) investigated how Christian respondents reacted to value-violating out-groups (Muslims, Atheists, and homosexuals) both with and without being exposed to a religious prime. Consistent with their hypothesis, they found that Christian participants demonstrated significantly larger increases in explicit negative attitudes toward Muslims, atheists, and homosexuals after being exposed to a subliminal religious prime. These groups are suggested to be value-violating to Christians, as they possess directly opposing beliefs, which may threaten their own. The effect of religious priming on prejudice can also be seen in those who identify as non-religious as well. For example, LaBouff and colleagues (2012) found that when religion was primed contextually, all individuals, even non-religious participants, who were in the religious priming condition reported higher levels of negative out-group attitudes than those in the control group.

Negative outcomes associated with religion became an especially popular topic of interest among psychology and sociology researchers after the September 11, 2001 and the July 7, 2005 terrorist attacks perpetrated by radicalized Muslims. In the time following these events, notable negative social outcomes toward Muslims arose and/or became more prevalent (Hewstone, Clare, Newheiser, & Voci, 2011). Examples of these negative outcomes include increased anti-Muslim sentiment, heightened support for violent action, retaliation toward Muslims, and hate crimes. For this reason, research has turned its focus to examining religious

priming and psychological outcomes to look specifically at Christian and Muslim interactions (Shaver, et al., 2016). It might seem that these negative outcomes heightened by recent acts of terrorism would dissipate after a period in which these types of occurrences became less frequent or cognitively inaccessible. Contrary to expectation, this has not been the case; media has perpetuated the issue through the use of emotionally enticing language and general reporting of negative Muslim issues such as terrorist attacks (Abu-Lughod, 2013). In fact, in America, as of November 2016, hate crimes against Muslims have risen to levels which have not been seen since 2001 (Kishi, 2016). Of course, these negative outcomes such as prejudice toward Muslims are not only attributable to religion; there are other factors which moderate the relationship between religion and prosocial and antisocial outcomes. Within priming studies, these moderating variables can be activated through the religious prime itself.

Moderating Factors Within Religious Priming

A recurring question which has been posed by multiple researchers within the past few years is whether the content of the prime may affect the behavioral or attitudinal outcomes under investigation. For example, Harrell (2012) investigated the impact of reward oriented motivations on religious priming and generosity. Both secular and religious concepts were primed and combined with reward or non-reward connotations, then compared on their effects on prosocial behavior. Their results showed a significant difference in the level of generosity (the measure of prosocial behavior in this study) depending on whether both the religious and the secular primes were associated with rewards, suggesting that prosocial behavior depends on expected rewards more than accessibility of religion. Expanding on this hypothesis, Ritter & Preston (2013) investigated the types of religious words commonly used in religious priming, and found three distinct categories: agents, spiritual/abstract, and institutional/concrete. It was

suggested that priming religious agents, such as God or Allah, may result in a change in behavior and explicit attitudes on self-report measures, as participants may become cognizant of a potential supernatural agent who could be watching and judging their actions (Ritter & Preston, 2013; Shariff & Norenzayan, 2007). In such cases, religious cognitions would be less of an explanatory factor for increased prosocial behavior, and these behaviors would more attributed to a concern of judgment from an omnipresent being.

Religion & Moral Exemplars

Although religious priming has been associated with increased prejudice, priming particular religious concepts, such as humanitarianism, may result in decreased prejudice. Arguably, all religions promote prosocial ideals as their primary and most central teachings. Of course, exceptions may be present, and antisocial teachings are also prescribed within religions; however, at their core, prosocial ideals such as the “Golden Rule” emerge as a central theme of all world religions (Tsang, Rowatt, & Shariff, 2015; Carpenter & Marshall, 2009). Exemplars of these religions are often likely to embody these moral ideals, and adhere to the prescribed moral behaviors associated with their religion. For example, in Christianity, the ultimate religious exemplar is Jesus Christ. Modern day Christians have coined a slogan, “What Would Jesus Do?” to reflect on how they should act in any given situation, in line with how Jesus would have acted, suggesting a behavioral ideal. Jesus was described in the Bible as a humanitarian, who extended himself to aid others, even at his own expense (Einolf, 2011). It is these actions that Christians often view as being characteristics of a “good Christian” (Austin & Geivett, 2013). In the context of the current study, exemplary figures may also be identified as an individual’s priest, pastor, youth counselor, or even family member, so long as they exemplify the morals associated with

their religion. This definition is consistent with Bandura's (1986) spiritual modeling theory and Oman and Thoresen's (2003) conception of spiritual models.

Spiritual modeling is defined as, "the idea that people may grow spiritually by imitating the life or conduct of one or more spiritual exemplars, whether the exemplar is a member of their own family or community, or the exalted founder or mystic of a world religion." (Oman & Thoresen, 2003). This theory is an extension of Bandura's (1986) social cognitive theory of social modeling and observational learning, and proposes that individuals are able to learn spiritual and moral concepts such as compassion, forgiveness, and so forth through exemplar figures via direct observation or via diverse media outlets (e.g. textual sources, the internet, etc.) (Oman, Thoresen, Park, Shaver, Hood, & Plante, 2012). It is this flexibility in exposure that allows for the model to be a historical figure (observed through text, narrative, etc.) or a community member (observed directly or through social outlets, etc.). This theory emerged based on the presumption that spirituality is often "caught not taught," suggesting that spiritual learning and growth is largely attributable to exposure to spiritual models (Oman, Shapiro, Thoresen, Flinders, Driskill, & Plante, 2007). By definition, a spiritual model is a figure who exercises religious and/or spiritual values, from which a learner is able to glean these virtues and other high-level skills related to self-regulation (Oman, 2013). Through this definition, a spiritual model appears to also be a moral exemplar, as conceptualized by the current study.

Previous research has investigated judgment and behavior assimilation to non-religious exemplar figures. For example, a study by Dijksterhuis and colleagues (1998) investigated whether participants would assimilate or contrast their behavior to an exemplar of the category they were being tested on. In this study, participants were asked to identify traits associated with a figure before taking a trivia test. The four conditions (category x exemplar) consisted of: a

person of intelligence (a professor), an exemplar of intelligence (Einstein), an individual associated with lower intelligence (a model), or an exemplar of lower intelligence (Claudia Schiffer). Those in the category conditions assimilated their behavior to the priming stimulus (those in the professor condition scored higher on the trivia task compared to those in the model condition), but those in the Einstein and Schiffer conditions contrasted their behavior (scored lower on the trivia task in Einstein condition, but scored higher in the Schiffer condition). LeBouef and Estes (2004) suggested that a possible explanation for these results is that the exemplars were not self-relevant; participants were unable to compare themselves to a figure such as Einstein or Schiffer, and therefore displayed contrasting behavior rather than assimilation.

Previous research on religious priming does not appear to have yet investigated the impact of religious exemplars or spiritual models on attitudinal and behavioral outcomes. Few studies have incorporated religious figures as part of their priming stimuli, such as priming “Jesus” or “God” (Ritter & Preston, 2013) but have not asked participants to reflect on the morals of the exemplars themselves, and describe them such as within Dijksterhuis et al.’s (1998) study. The current study takes a similar approach to Dijksterhuis et al. (1998), only by letting the participant choose their own moral exemplar of their religion, and asking them to describe this figure in a few sentences. This leaves the opportunity for a participant to choose a self-relevant figure (a limitation from Dijksterhuis and colleagues’ 1998 study), and reflect on what attributes or traits help constitute this figure as a moral exemplar of their religion. It is hypothesized that through activating the moral characteristics associated with the religious exemplar, participants will assimilate their attitudes to be congruent with that of the exemplary figure, thus resulting in prosocial outcomes (i.e. lower levels of religious prejudice and outgroup

bias). This notion of prosocial attitudinal assimilation is consistent with Bandura's (1986) spiritual modeling theory.

Other Factors Contributing to Prejudice

Prejudice has been shown to be predicted by a multitude of personality factors, and components of religious belief (Rowatt, Franklin, & Cotton, 2005). Two particular factors shown to drive intergroup bias include levels of religiosity and religious orientation (Johnson et al., 2012). Further, socially desirable responding is also an issue when reported explicit prejudice, and has been shown to occur more frequently in religious participants (Hall et al., 2010).

Intrinsic and Extrinsic Religiosity Allport and Ross (1967) proposed a dual-model of religiosity which includes an intrinsic orientation and an extrinsic orientation. The intrinsic religious orientation can be understood in terms of 'true belief' or an internalization of one's personal religion, where the belief is an end in itself. Extrinsic religious orientation has more to do with the benefits one receives from their religion, where the social and emotional benefits one receives from being a part of a religion are more important to them than the internalization of the religion itself. These two dimensions appear to be distinct, as individuals will usually experience both dimensions at different levels. These dimensions have been repeatedly analyzed in terms of their relations to psychological and social outcomes (e.g. prejudice, prosocial behavior), and findings are abundant. Often, the psychological outcomes will be positively correlated with one dimension, and negatively correlated with the other, further supporting the notion of distinctiveness between the two orientations (Hall et al., 2010).

Intrinsic religiosity is associated with many of the prosocial outcomes observed in psychology of religion research. Examples of this include intrinsic religiosity being negatively correlated with moral hypocrisy (Carpenter & Marshall, 2009), negatively correlated with self-

reports of vengeance (Greer, Berman, Varan, Bobrycki, & Watson, 2005), and lower levels of racism (Donahue, 1985). Reasoning for these findings may be attributed to intrinsic religiosity being concerned with the focus of adhering to one's religious ideals, most of which arguably are prosocial in nature (Carpenter & Marshall, 2009), and less of a focus on the social factors of religion, which are usually associated with extrinsic religiosity (Hall et al., 2010).

Alternatively, extrinsic religiosity has been demonstrated to be correlated with a lot of the negative psychological and social outcomes observed within psychology research. Examples of this include extrinsic orientations being more strongly related to increased levels of prejudice, compared to intrinsic orientations (Allport & Ross, 1967), racism (Hall et al., 2010), and higher levels of worldview defense after exposure to mortality salience (Jonas & Fischer, 2006). Hall and colleagues (2010) in their meta-analysis of religious racism mention how extrinsic religiosity appears to serve social adjustment functions through verification and endorsement of ideas from the in-group.

Level of Religiosity It is expected that an individual's general level of religiosity will have an effect on their levels of reported prejudice, as demonstrated by previous research (Greenaway, Louis, Hornsey, & Jones, 2014; Johnson et al., 2010) such that increased religiosity will result in increased prejudice toward religious out-groups, particularly one which is value-violating. Some researchers suggest that this has to do with religion's association with conservatism, particularly for Christians (LaBouff et al., 2012). Regardless, data consistently show level of religiosity is a strong predictor of prejudiced attitudes.

Socially Desirable Responding When measuring sensitive constructs such as prejudice, participants have a tendency to underreport their socially unacceptable, or undesirable attitudes. This phenomenon is referred to as socially desirable responding. Socially desirable responding is

a fundamental issue with self-report measures with any sample, but researchers have suggested that religious persons are more prone to socially desirable responding as they have a motivation to do so; to appear to act consistently with their religious ideals (Batson, Naifeh, & Pate, 1978; Hall et al., 2010; Carpenter & Marshall, 2009).

The Present Study

The purpose of the present study is to investigate the effect of religious priming on individuals' explicit attitudes and intergroup bias toward Muslims, and whether there is a difference between using a non-exemplar religious prime (activating a location of worship associated with one's religion) and a religious exemplar prime (activating a moral exemplar of one's religion). The religious worship center prime will act as a generalized religious prime to activate general religious cognition, whereas the religious exemplar prime is intended to activate morals and ideals associated with one's religion. While previous research has yet to examine how religious or non-religious moral exemplar figures affect attitudes, considering the previous research which has modified the content of religious primes (Ritter & Preston, 2013), it is possible that priming the moral components of one's religion could reduce prejudiced attitudes which emerge from the salience of religion, in an attempt to remain consistent with one's religious moral values. In light of this rationale, it is hypothesized that priming an exemplar of one's religion will lead to less intergroup bias than the religious worship center prime. In addition to the two religious primes described above, two additional priming conditions will be included in order to isolate the effects of religious and exemplar priming and to serve as comparison groups for the religious primes. A non-religious exemplar prime (activating a non-religious moral exemplar) will be included to activate morals and ideals independent of one's religion. This group will be used as a comparison for the religious exemplar prime to determine

whether any effects on attitudes are attributable to religious-specific exemplars, or just moral exemplars generally. Lastly, a control condition will be included that is neither religious nor exemplar related (activating one's college major) and will be used as a comparison for all groups. Consistent with previous research, it is hypothesized that priming religion (with the religious worship center prime) will increase intergroup bias toward Muslims and decrease positive attitudes toward Muslims relative to the control group (Johnson et al., 2012).

As previous research has yet to examine how religious or non-religious moral exemplar figures affect attitudes, additional specific hypotheses were not made. However, an exploratory set of analyses will be conducted to determine potential main effects and interactions of the presence or absence of religious priming in association with the presence or absence of exemplar priming in relation to explicit attitudes and intergroup bias toward Muslims. Within these analyses, the potential impacts of religious priming and exemplar priming will be parsed out to determine their independent effects, as well as any potential interaction effects which may emerge. As the dependent measures of religious prejudice, Muslim attitudes will be investigated within the current study to better understand current attitudes toward this minority group and investigate potential solutions to reducing negative attitudes about this group (e.g. gently reminding individuals of prosocial values). Prejudice toward Muslims is currently a pervasive social issue around the world; as such, understanding the mechanisms behind these attitudes and development of prejudice reduction techniques is essential for positive intergroup relations. Further, investigating attitudes toward Muslims provides a good intergroup comparison for the Christian participants. Participants will be recruited online and randomly assigned to one of four conditions: religious exemplar prime, religious non-exemplar prime, non-religious exemplar prime, or a non-religious prime. Explicit prejudice toward Muslims will be analyzed using the

Attitudes Toward Muslims Scale (Altareb, 1998), and using a thermometer assessment to measure warmth and cold assessments of Muslims relative to Christians. Using this approach of investigating these religious outgroups is consistent with suggestions by other psychology researchers to gain a more accurate depiction of outgroup attitudes and in-group bias (Haddock, Zanna, & Esses, 1993; Schmid, Hewstone, Tausch, Cairns, Hughes, 2009). Additionally, in the exploratory analyses, preexisting levels of religiosity, religious orientation, and socially desirable responding will be held constant as a covariate. Covariates will be included in this second set of analyses, as the initial analyses will already demonstrate the overall effects without controlling for these other variables. This will provide the ability to partial out any variance these variables may contribute to the outcome variables and gain a more accurate picture of how the priming stimuli influence the prejudice outcomes. This approach is typical for religious priming studies (Johnson et al., 2012), though typically only level of religiosity is included as a covariate.

Hypotheses & Research Questions

H₁: Participants in the religious worship center priming condition will report more intergroup bias than those in the control group.

H₂: Those in the religious exemplar group will report less intergroup bias than those in the religious worship priming condition.

H₃: Participants in the religious worship center priming condition will report less positive attitudes toward Muslims than those in the control group.

H₄: Those in the religious exemplar group will report more positive attitudes toward Muslims than those in the religious worship priming condition.

RQ₁: After controlling for preexisting level of religiosity, are there differences in intergroup bias associated with the presence or absence of religious priming and/or exemplar priming?

RQ₂: After controlling for preexisting level of religiosity, are there differences in positive attitudes toward Muslims associated with the presence or absence of religious priming and/or exemplar priming?

CHAPTER 2

Method

Participants

Participants ($N = 362$) were recruited from introductory psychology and religious studies courses. Before running analyses, participants with missing data for the priming question or those who did not follow the instructions were excluded from subsequent analyses. 5 participants were excluded based on these criteria. Participants were not excluded on the basis of gender or racial/ethnic group; however, only responses from Christian participants were analyzed for the purposes of this study ($N = 167$). These participants ranged in age from 18 to 34 ($M = 19.15$, $SD = 2.28$), were primarily Caucasian (70.4 %) and female (87.4%). Political identification was also assessed within demographics, with 30.2% Republican, 20.8% Democrat, 15.7% Independent, 7.5% Liberal, 2.5% Libertarian, and 23.3% stating no preference.

Materials and Measures

Demographics

Demographic questions consisted of items that asked participants' their age, gender, race/ethnicity, political affiliation, religious orientation, and level of religiosity (See Appendix A). Within the demographics section, one of the four primes was administered. The purpose of presenting the primes here was to decrease potential demand characteristics that could arise by including them separately from the demographics. Such demand characteristics that would be expected if presented later would include the participants guessing the purpose of the study and altering their responses to the subsequent measures.

Levels of Religiosity Levels of religiosity were measured by asking participants to rate themselves on a scale of 1 (*not religious at all*) to 7 (*very religious*) (Appendix A).

Priming Stimuli Participants were randomly assigned to one of four priming conditions: a religious exemplar prime, a religious worship center prime, a non-religious exemplar prime, or a non-religious prime (Appendix B). Each condition was posed as a “bonus question”, so participants would believe it was unrelated to the current study. They were asked to respond to the prime in a comment box provided and write three to five sentences in response to the prompt. The purpose of the writing is to strengthen the priming conditions and make salient the concept. Responses themselves were not analyzed for the purposes of the current study but were assessed to ensure participants followed instructions.

Thermometer Assessment A thermometer assessment was used as an explicit measure of intergroup bias (Appendix C). Participants were asked to provide warmth ratings of ten different religious groups (i.e. Christians, Muslims, Hindus, Atheists) on a scale of 0 (*extremely unfavorable*) to 100 (*extremely favorable*). This measure has been commonly used within psychology research to obtain evaluative attitudes (Haddock, et al., 1993). For the purpose of the current study, only attitudes toward Muslims and Christians will be analyzed. In order to obtain a more accurate depiction of warmth toward Muslims, ratings of warmth toward Christians (the in-group of participants) was subtracted from ratings of warmth toward Muslims. A higher score will reflect a larger discrepancy in warmth ratings between the in-group and the out-group, or a higher level of intergroup bias. This is consistent with previous studies which have set out to identify ingroup bias with this measure (Schmid, et al., 2009).

Attitudes Toward Muslims Scale The Attitudes Toward Muslims Scale (Altareb, 1998) was used to analyze explicit prejudice toward Muslims (Appendix D). The inventory contains 25 items which encompass five factors: Positive Feelings about Muslims (e.g., “Muslims are friendly people”), $\alpha = 0.90$, Muslims as Separate or Other (e.g., “I would support a measure

deporting Muslims from America” (reverse-keyed)) $\alpha = 0.89$, Restriction of Personal Choice/Freedom (e.g., “Muslims are strict” (reverse-keyed)), $\alpha = 0.82$, Fear of Muslims (e.g., “Muslims should be feared” (reverse-keyed)), $\alpha = 0.85$, and Dissimilarity of Muslims (e.g., “The Muslim religion is too strange for me to understand” (reverse-keyed)), $\alpha = 0.66$. Reliability for the full scale is $\alpha = 0.95$. Participants will be instructed to respond to items on a scale of 1 = *strongly disagree*; 6 = *strongly agree*. Scores will be calculated such that a higher composite score on this measure will be interpreted as more negative attitudes toward Muslims as a religious group. Scores may be summed across subscales in order to obtain a composite prejudice score, or subscales can be scored separately. For the purpose of the present study, a composite score will be obtained. This measure was chosen to capture explicit attitudes toward Muslims because it demonstrates high internal validity and captures multiple facets of the Muslim prejudice construct (Altareb, 1998).

Religious Orientation Scale- Revised Religious orientation, both intrinsic and extrinsic, was measured using Gorsuch & McPherson’s (1989) I-E Revised Scale (Appendix E). This 14-item Likert-type scale consists of three subscales which measure intrinsic religiosity, extrinsic personal religiosity, and extrinsic social religiosity. Example questions of the intrinsic subscale include, “I enjoy reading about my religion” and “I try to live my life according to my religious beliefs.” Example questions from the extrinsic personal scale include, “It doesn’t matter much what I believe so long as I am good” and “I pray mainly to gain relief and protection.” Examples from the extrinsic social subscale include, “I go to church because it helps me make friends” and “I go to church mainly because I enjoy seeing people I know there.” For each question, participants are asked to what degree they agree with a statement on a scale of 1 (*strongly disagree*) to 5 (*strongly agree*). A higher composite score on each subscale reflects a higher level

of the corresponding orientation of religiosity. These orientations are mutually exclusive, thus separate scores for each dimension will be calculated for each participant.

Balanced Inventory of Desirable Responding Socially desirable responding will be measured by administering Paulhus' (1988) Balanced Inventory of Desirable Responding measure (Appendix F). This validated measure demonstrates internal validity of $\alpha = .83$, and correlates highly with other validated measures of socially desirable responding such as the Marlow-Crowne scale ($r = 0.71$). This 40-item scale is composed of two subscales which measure two constructs: self-deceptive positivity and impression management. Participants are instructed to rate their agreement with each statement on a seven-point scale of 1 (*not true*) to 4 (*somewhat true*) to 7 (*very true*). Sample items from the self-deceptive positivity scale include, "My first impressions of people usually turn out to be right" and "I am a completely rational person." Sample items from the impression management scale include, "When I hear people talking privately, I don't listen" and, "I never read sexy books or magazines." Items from both subscales are summed to create a composite score of socially desirable responding, such that a higher score reflects a higher level of socially desirable responding. The scale is balanced; some items within the scale are reverse coded, and one point is added to extreme scores (a 6 or 7).

Procedure

After signing up to participate in the research study, participants will be given a randomized link to the online study on Qualtrics. This link will randomly assign the participant to one of the four priming conditions. Once they begin the study, participants will be directed to read an informed consent document describing the aims of the study, what to expect, and contact information of investigators and the counseling center. After reading through the informed consent document, participants will be asked to complete the demographic questionnaire, and

will then be administered one of four primes. After completing the demographics and priming stimuli, participants will be asked to respond to complete the Thermometer Assessment (see Appendix B). Each participant will next be administered the Attitudes Toward Muslims Scale (Altareb, 1998) (see Appendix C), followed by the Religious Orientation Scale - Revised (Gorsuch & McPherson, 1989), and lastly the levels of religiosity assessment. Lastly, participants will complete the Balanced Inventory of Desirable Responding, and asked to report their religiosity and religious affiliation. Upon completion of these materials, participants will be thanked for their participation, debriefed, and dismissed.

CHAPTER 3

Results

Main Analyses

Power Analysis

A power analysis was conducted to determine the adequate sample size needed for the two one-way ANOVAs, with an alpha level set at 0.05, two-tailed analysis, power of 0.80, and an effect size of 0.25. Results indicate a total sample size needed of 154. The final sample of ($N = 167$) met these criteria.

Intergroup Bias

A one-way ANOVA was used to test the hypotheses that the religious worship center priming condition would report a higher level of intergroup bias than the control, and the hypothesis that the religious exemplar group would report less intergroup bias than the religious worship center. Prior to running the analysis, assumptions of the ANOVA test were checked to ensure all were met. Homogeneity of variance was the only violated assumption, (Levene's test $p < .05$) thus a Welch's correction was used. All other assumptions were satisfied. Results from the one-way ANOVA with Welch's correction are summarized in Table 1. To test the first hypothesis, that the religious worship center prime would result in greater intergroup bias than the control prime, a planned comparison was performed. Results from this planned comparison supported the hypothesis, there was a significant difference between the religious worship center priming condition and the control indicating that participants in the religious worship center priming condition demonstrated greater intergroup bias than participants in the control condition. $t(64.62) = -2.38, p = .02, r = .08$ (see Table 2 for means). To test the hypothesis that the religious exemplar prime would result in less intergroup bias than the religious worship center prime, a

planned comparison was also conducted. Results from this comparison did not support the hypothesis, there was no significant difference between the religious primes on intergroup bias $t(80.46) = .47, p = .639, r = .00$.

Attitudes Toward Muslims

A one-way ANOVA was used to determine if positive attitudes toward Muslims differed by priming condition. Prior to running the analysis, assumptions of the ANOVA test were checked to ensure all were met. All assumptions of the test were satisfied. Results from the one-way ANOVA are summarized in Table 3. To test the third hypothesis, that the religious worship center prime would result in less positive attitudes toward Muslims than the control prime, a planned comparison was performed. Results from this planned comparison supported the hypothesis, there was a significant difference between the religious worship center priming condition and the control priming condition $t(157) = -2.59, p = .01, r = .04$ (see Table 4 for means), such that those in the religious worship priming condition reported less positive attitudes toward Muslims than the control. To test the fourth hypothesis that the religious exemplar prime would result in more positive attitudes toward Muslims compared to the religious worship center prime, a planned comparison was also conducted. Results from this comparison did not support the hypothesis, there was no significant difference between the religious primes on positive attitudes toward Muslims $t(157) = -1.68, p = .095, r = .02$.

Exploratory Analyses

For the exploratory analyses two one-way analyses of covariance (ANCOVA) were performed to address the first and second research questions. Before analyses were conducted, correlations were performed to assess the degree to which these covariates were correlated, as multicollinearity of covariates would be problematic for the accuracy of the analysis.

Correlations were all moderate to high ($>.7$), thus only one covariate could be used in the final analyses. Previous religious priming studies have controlled for religiosity to be able to ascertain the effect of religious priming on participants regardless of their level of religiosity (Johnson et al., 2012). As such, preexisting level of religiosity was chosen as the covariate for the exploratory analyses.

Intergroup Bias

To investigate the first exploratory research question, after controlling for preexisting level of religiosity, are there differences on intergroup bias by religious priming conditions and exemplar priming condition? a 2 (exemplar) x 2 (religion) between subjects Factorial Analysis of Covariance (ANCOVA) was conducted. Previous religious priming studies have controlled for religiosity to be able to ascertain the effect of religious priming on participants regardless of their level of religiosity (Johnson et al., 2012). As such, religiosity was chosen as the covariate for the current analyses. Additionally, we aimed to explore the potential interaction, main effects, and simple main effects between the presence or absence of religious priming and presence or absence of exemplar priming in levels of intergroup bias toward Muslims (summarized in Table 5). The combined religious prime variable has two levels (religious or non-religious prime) and the combined exemplar variable has two levels (exemplar and non-exemplar prime). A post hoc power analysis was conducted with the program g*power (Faul, Erdfelder, Lang, & Buchner, 2007). Results from the power analysis showed that with a sample of 161 participants and a moderate effect size ($f = .25$), the current analysis had a power of .54. This suggests that this analysis is highly underpowered and should be interpreted with caution. Assumptions of the test were satisfied. The covariate, preexisting level of religiosity was highly significantly related to intergroup bias $F(1, 156) = 15.84, p < .001, \eta^2 = .09$, which indicates that

religiosity is a strong predictor of intergroup bias, and should be controlled for to understand effects of the priming conditions regardless of how religious an individual is. The main effect of exemplar prime on intergroup bias was also non-significant $F(1, 156) = 2.50, p = .266, \eta^2 = .01$. However, there was a significant main effect of religious prime $F(1, 156) = 4.26, p = .041, \eta^2 = .02$, such that those in the religious priming conditions showed more intergroup bias than the non-religious conditions. There was a non-significant interaction between exemplar prime and religious prime $F(1, 156) = 1.25, p > .05, \eta^2 = .01$.

Positive Attitudes Toward Muslims

To investigate the second exploratory research question, after controlling for preexisting level of religiosity, are there differences in positive attitudes toward Muslims by religious priming condition and exemplar priming condition, a 2x2 between subjects Factorial Analysis of Covariance (ANCOVA) was conducted. Additionally, we aimed to assess differences between the two independent variables on the dependent variable after controlling for the effects of religiosity. In this analysis, positive attitudes toward Muslims were compared by presence or absence of religious prime and presence or absence of exemplar prime (summarized in Table 6). Assumptions of the test were satisfied. The covariate, preexisting level of religiosity was not significantly related to intergroup bias $F(1, 156) = 2.27, p = .0134, \eta^2 = .01$, though still reduced the error term, suggesting that including it was useful to minimize error noise within the test. There was a non-significant main effect of exemplar prime on intergroup bias $F(1, 156) = .12, p = .745, \eta^2 = .00$, and a non-significant main effect of religious prime $F(1, 156) = 2.48, p = .117, \eta^2 = .02$. However, there was a significant interaction between presence or absence of exemplar prime and presence or absence of religious prime $F(1, 156) = 4.35, p = .039, \text{partial } \eta^2 = .03$. Analysis of simple main effects indicated that the non-exemplar religious group ($M = 118.32, SE$

= 3.48) demonstrated less positive attitudes toward Muslims than the non-religious non-exemplar control group ($M = 130.64$, $SE = 3.24$) ($p = .010$). All other simple main effects were non-significant. Inspection of the graph (Figure 4) suggests that religious priming significantly increases prejudice relative to the control group, however, exemplar priming appears to temper this effect. Interestingly, there doesn't appear to be any difference in the effects of religious exemplar priming relative to non-religious exemplar priming.

CHAPTER 4

Discussion

Summary

The current study aimed to determine whether, consistent with previous research (Johnson et al., 2010; Johnson et al., 2012; LaBouff et al., 2012), religious priming would increase prejudiced attitudes toward Muslims, and if priming a moral exemplar of one's religion would reduce that prejudice. The findings supported the current hypotheses that the non-exemplar religious priming condition (the religious worship center) would increase intergroup bias toward Muslims and decrease positive attitudes toward Muslims as compared to a non-religious, non-exemplar control prime. However, contrary to the hypotheses of the current study, results also revealed that priming a religious exemplar did not result in a difference in intergroup bias or positive attitudes toward Muslims compared to the religious worship center prime. These initial analyses were not able to parse out main effects or interactions between the religious and exemplar primes on prejudiced attitudes, so further analyses were conducted on an exploratory basis. These exploratory analyses revealed a main effect of religious priming on intergroup bias such that religious priming resulted in higher levels of intergroup bias than non-religious priming. For attitudes toward Muslims, a different pattern emerged such that an interaction effect was present; religious priming significantly increased prejudice relative to the control group, however, exemplar priming appeared to temper this effect. Interestingly, there did not appear to be any difference in the effects of religious exemplar priming relative to non-religious exemplar priming.

Contextualizing Findings Within the Literature

It is unclear why the religious exemplar prime did not result in a difference in intergroup bias or positive attitudes toward Muslims compared to the religious worship center prime. It is possible that both religious priming conditions tapped into the group aspect of religion rather than a value aspect. Although the religious exemplar manipulation attempted to make religious values salient, group level motivations may override value motivations (Weeden & Kurzban, 2013). Additionally, religious prosociality is often restricted toward in-group members, as evidenced by previous research (Pichon & Saroglou, 2009). Researchers have suggested that religious cognition in itself is not sufficient to improve moral attitudes and behaviors (especially to an outgroup member), as seen by the breadth of studies showing associations between religion and prejudice (Gorsuch & Aleshire, 1974; see Hall et al., 2010 for a recent review). Priming religion can activate both group aspects as well as a supernatural component, which either drive antisocial outcomes or prosocial outcomes, respectively (Preston et al., 2010). To achieve prosocial or egalitarian attitudes, especially toward an outgroup member, different motives and mechanisms may be required (Keljo & Christenson, 2003). Further, it appears that the primes in the current study didn't successfully activate these mechanisms. Implications for these findings suggest that individuals may not assimilate their attitudes to religious moral exemplar figures to be prosocial toward a value-violating outgroup.

While the findings for the religious exemplar condition are inconsistent with the hypotheses from the current study, they are consistent with other theoretical perspectives such as social identity theory (Tajfel & Turner, 1986), which suggests that individuals who are part of a group have a motivation to achieve "positive distinctiveness" in which they compare their group to another on a given dimension for which they believe their group is superior. This can be done on trivial elements such as how many members a group has, but also on more complex elements

such as moral superiority. Additionally, there exists a body of literature which examines a concept informed by social identity theory, moral licensing. Moral licensing is based on the idea that one can establish moral credentials, then feel justified to act in an inconsistent way (e.g. interview a racial minority, then choose a less-qualified racial majority candidate; Kouchaki, 2011; Monin & Miller, 2001). Work by Kouchaki (2011) suggests that individuals are able to establish these credentials vicariously through association with a moral individual. Given this existing research, it is possible that by having participants identify an individual who exemplifies their morals, they then feel licensed to express a higher level of prejudice. In the interaction detected in the exploratory analysis, we observed a trend such that both religious and non-religious exemplar priming resulted in less positive attitudes compared to a control, though this trend did not reach significance. This may suggest that for attitudes toward an outgroup member, activating a moral exemplar may provide individuals with license to express more prejudiced attitudes. However, the interaction also suggests that for both the religious exemplar and non-religious exemplar primes, there appears to be a nonsignificant reduction in prejudiced attitudes compared to the more general religious prime, suggesting a small “buffering effect” where individuals may be motivated to express attitudes more in line with an exemplar. Therefore, one potential explanation for the current results is that moral licensing may be occurring in both exemplar priming conditions, however, this licensing effect may yet result in lower levels of prejudice than more general religious priming.

The exploratory analyses also revealed a main effect for religious priming on intergroup bias, but no significant main effect for exemplar priming or interaction between the two variables. In understanding this discrepancy, considering the components and mechanisms of intergroup bias may be beneficial. Intergroup bias is composed both of in-group favoritism and outgroup

derogation, while positive attitudes toward Muslims can be interpreted as outgroup derogation (when levels are low). Given the main effect for religious primes on intergroup bias, but not for attitudes toward Muslims, it is possible that priming religion resulted in in-group favoritism but not necessarily outgroup derogation in this study. These findings are mostly consistent with other religious priming studies which have found heightened intergroup bias following religious priming stimuli (Johnson et al., 2010; Johnson et al., 2012). It is possible that priming religion activates the salience of one's group membership, which then may produce in-group favoritism and, in some contexts, outgroup derogation (Johnson et al., 2012). These phenomena occur in an attempt to protect one's ingroup, in this case Christians. When examining value-violating outgroups such as Muslims (relative to Christians) intergroup bias may even show stronger effects compared to a neutral outgroup. When another group possesses values or beliefs which are incongruent with one's own, outgroup derogation may further increase in an attempt to discredit the outgroup, especially when they pose a threat (Greenaway et al., 2014). If priming religion solely activated a group identity, which was responsible for these effects, including level of preexisting religiosity in the analyses should have made the religious priming effect non-significant. Given that in the exploratory analyses level of religiosity was controlled for, it is unlikely that a group identity alone was driving these effects (Johnson et al., 2012).

Strengths & Limitations.

This study was limited by online data collection methods, in which we were unable to control the experimental setting including factors such as where the participant took the survey, if they completed the survey in one sitting, etc. However, the online survey software utilized provides the time to completion for each participant, and the average participant took around 15 minutes (median estimate) to complete the survey, suggesting that most participants did finish

the survey in a single sitting, an essential component for a priming study. Another limitation is that it is possible that the religious exemplar figures identified by the participants would not necessarily hold egalitarian attitudes, and attitudinal assimilation would instead show an increase in prejudiced attitudes. However, as prosociality, even toward outgroup members, is an important moral virtue in Christianity (Austin & Geivett, 2013), and the current sample was restricted to Christians, it is reasonable to assume most exemplar figures would not be explicitly prejudiced and this would not have affected the present findings. Lastly, this study achieved adequate power (.80) for the first set of analyses, but not for the exploratory analyses. To fully investigate the main effects and interactions of religious priming and exemplar priming, a larger sample is needed.

Despite these limitations, the current study did demonstrate a number of methodological strengths. For example, multiple measurements of the study constructs were utilized, such as two measures of attitudes toward Muslims and both a generalized measure of religiosity as well as a more nuanced religious orientation measurement. Further, the use of calculating a difference score for intergroup bias is less prone to demand characteristics than using a single thermometer assessment (Schmid et al., 2009). Despite our priming approach being explicit and thus potentially vulnerable to demand characteristics, an attempt was made to disguise the prime as separate from the study by framing it as a “bonus question”. Further, this decision strengthened the research design by allowing for the participants to identify a self-relevant exemplar figure, which should have increased their attitudinal assimilation as compared to providing an exemplar for them to consider (Dijksterhuis et al., 1998). Finally, by including two control primes (the non-religious moral exemplar and the non-religious control) we were able to provide a baseline

comparison as well as isolate the specific effect of priming a religious moral exemplar relative to priming a moral exemplar more generally.

Implications & Future Directions.

Overall, the results from this study are consistent with the existing literature on religious priming, showing that generalized religious priming increases intergroup bias. Further, these results also make a contribution to the religious priming literature by showing that modifying the content of religious primes can produce differences in attitudes toward a value-violating outgroup. As previously stated, this study was underpowered to identify a significant effect if one were present, particularly for the interactions between religious and exemplar priming conditions. Therefore, additional research with an adequate sample size should investigate the robustness of these findings. This study represents a step toward identifying a potential mechanism by which priming religious cognition may increase or decrease prejudiced attitudes. Further, this is the first experimental exploration of priming a religious exemplar that the authors of this study are aware of and comparing this prime to a non-exemplar religious prime (religious worship center), a non-religious exemplar, as well as a control prime provides a nuanced investigation of the observed effects on intergroup bias and attitudes toward Muslims.

Future work should investigate what type of attitudes and behaviors are shaped by spiritual models. Results from this study suggest that individuals may not fully adopt the prosocial attitudes held by morally exemplary Christian figures. Additionally, further research should examine to what extent followers believe their spiritual models to hold egalitarian attitudes about religious outgroup members. This could provide additional and beneficial insight to the manifestations of religious prejudice.

To effectively reduce or eliminate prejudiced attitudes associated with religious cognition, a different and stronger mechanism may be needed. Ritter and Preston (2013) suggest that tapping into different components of religion (e.g. group level, supernatural/beliefs, or supernatural agency) have the potential to derive different effects on prosocial and antisocial outcomes. The current study attempted to tap into the supernatural/belief aspect of religion by activating values associated with one's religious exemplar, though this did not appear to be a strong enough mechanism to override inter-religious prejudice. Future studies should investigate these effects further by specifying a commitment to humanitarianism of their exemplar figure (e.g. asking whether their identified exemplar would exhibit prosocial attitudes toward the outgroup), to determine if differences in prejudiced attitudes arise. Including this check would be able to determine whether expressed prejudice would differ depending on whether an individual felt their exemplar would act prosocially or antisocially toward a given group. Also, research should work toward identifying other potentially stronger or more effective mechanisms by which priming an aspect of religion may reduce outgroup derogation, as well as other underlying mechanisms by which religious cognition may result in increases in prosocial behavior towards outgroup members. The specific mechanisms by which religious priming works to drive prosocial and antisocial outcomes such as prejudice are still largely unknown. Finally, little research has attempted to examine attitudes toward other value-violating groups (aside from Muslims and homosexuals); therefore, attitudes toward other religious outgroups should be examined to determine whether these effects generalize (e.g. Hindus).

Conclusion

In sum, the current study made progress toward identifying whether modifying the content of a religious prime would produce differential effects on a prejudice outcome. Further,

this was the first empirical investigation of priming religious and non-religious moral exemplars. Results from this study support previous findings that priming religion increases prejudice, but also suggests that priming a moral exemplar does not reduce religious prejudice toward Muslims in a Christian sample. Future research should continue to examine what mechanisms within religious priming drive antisocial effects, and whether priming separate religious moral related mechanisms could produce prosocial effects toward an outgroup.

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Table 1

Analysis of Variance of Intergroup Bias Toward Muslims

Source of Variation	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>
Between	7954.70	3	2651.57	3.85*
Within	151881.25	157	967.40	
Total	159835.95	160		

* $P < .05$ **Note. The F statistic reported in this table is for the uncorrected test. The corrected test statistic using Welch's correction for a violation of homogeneity of variance is $F(3, 80.79) = 3.85$.

Table 2

Mean Intergroup Bias Toward Muslims Scores for Priming Condition

Priming Condition	<i>M</i>	<i>SD</i>	<i>95% CI Mean</i>
Religious Exemplar	-30.00	33.34	-39.90, -20.11
Religious Worship Center	-26.66	31.54	-37.03, -16.29
Non-religious Exemplar	-23.12	37.25	-36.33, -9.91
Non-religious Control	-12.14	21.92	-18.81, -5.47

Table 3

Analysis of Variance of Positive Attitudes Toward Muslims

Source of Variation	<i>Adjusted SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>
Prime	3146.16	3	1048.72	2.28
Within	72307.73	157	460.60	
Total	75453.89	160		

Table 4

Mean Positive Attitudes Toward Muslims Scores for Priming Condition

Priming Condition	<i>M</i>	<i>SD</i>	<i>95% CI for Mean</i>
Religious Exemplar	126.22	19.69	120.37, 132.06
Religious Worship Center	118.32	24.32	110.32, 126.31
Non-religious Exemplar	125.12	23.51	116.78, 133.46
Non-religious Control	130.64	18.85	124.90, 136.37

Table 5

Factorial ANCOVA of Intergroup Bias by Religious and Exemplar Primes

Source	<i>Adjusted SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Partial eta squared</i>
Religiosity	13999.51	1	13999.51	15.84**	.09
Exemplar Prime	2213.29	1	2213.29	2.50	.02
Religious Prime	3761.49	1	3761.49	4.26*	.03
Exemplar*Religion	1101.81	1	1101.81	1.25	.01
Error	137881.74	156	883.86		

* $p < .05$ ** $p < .001$

Table 6

Factorial ANCOVA Positive Attitudes Toward Muslims by Religious and Exemplar Primes

Source	<i>Adjusted SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Partial eta squared</i>
Religiosity	1036.49	1	1036.49	2.27	.01
Exemplar Prime	48.49	1	48.49	.11	.00
Religious Prime	1132.71	1	1132.71	2.48	.02
Exemplar*Religion	1987.52	1	1987.52	4.35*	.03
Error	71271.24	156	456.87		

* $p < .05$ ** $p < .001$

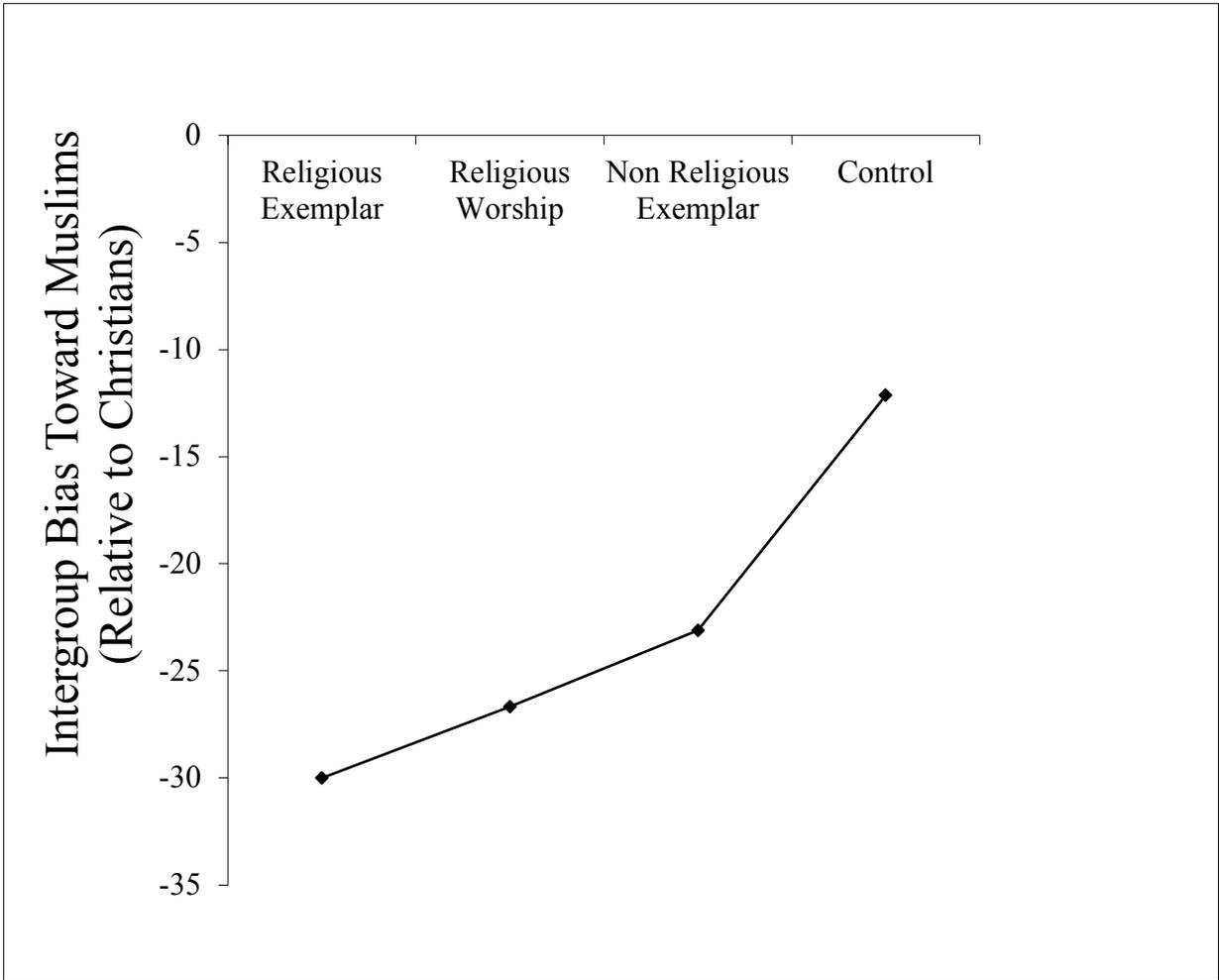


Figure 1. Intergroup bias for each priming condition. This figure illustrates mean levels of intergroup bias by priming condition.

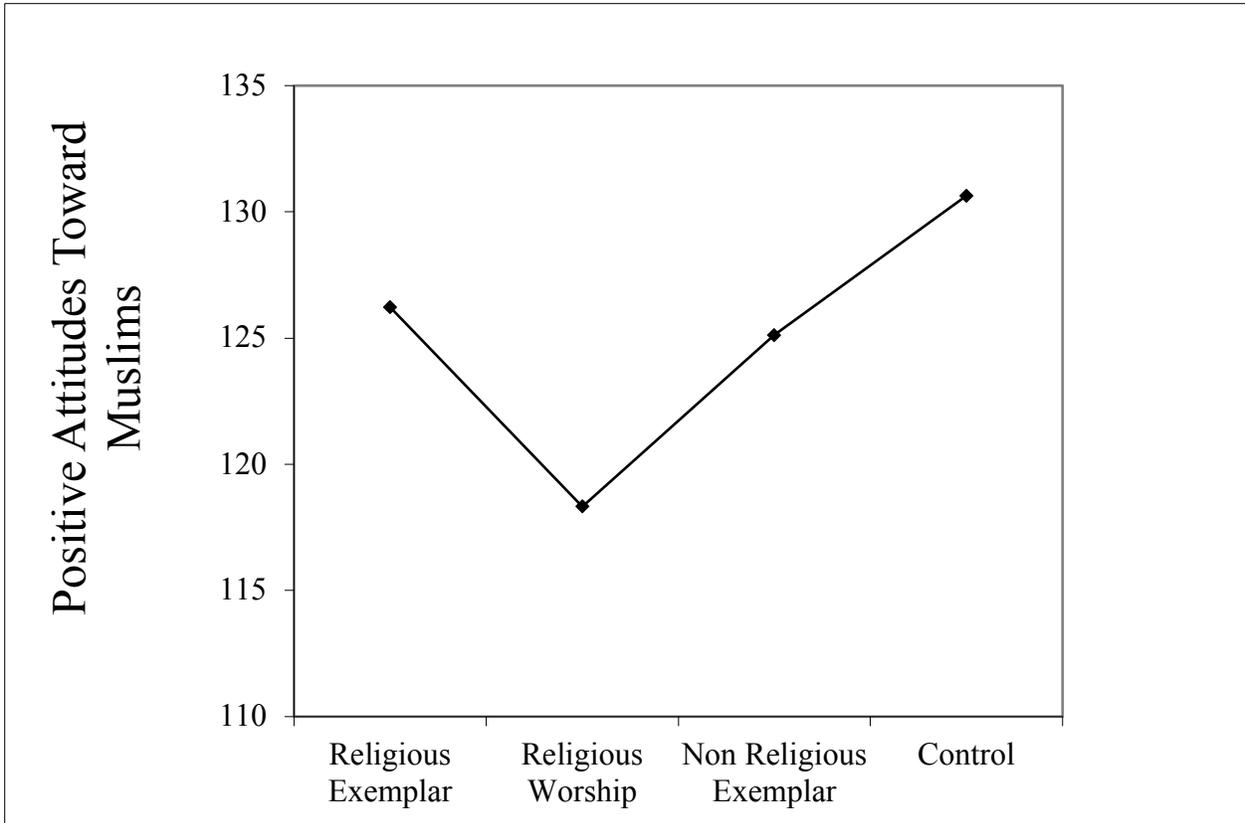


Figure 2. Positive attitudes toward Muslims by priming condition. This graph illustrates the mean levels of positive attitudes toward Muslims separated by priming condition.

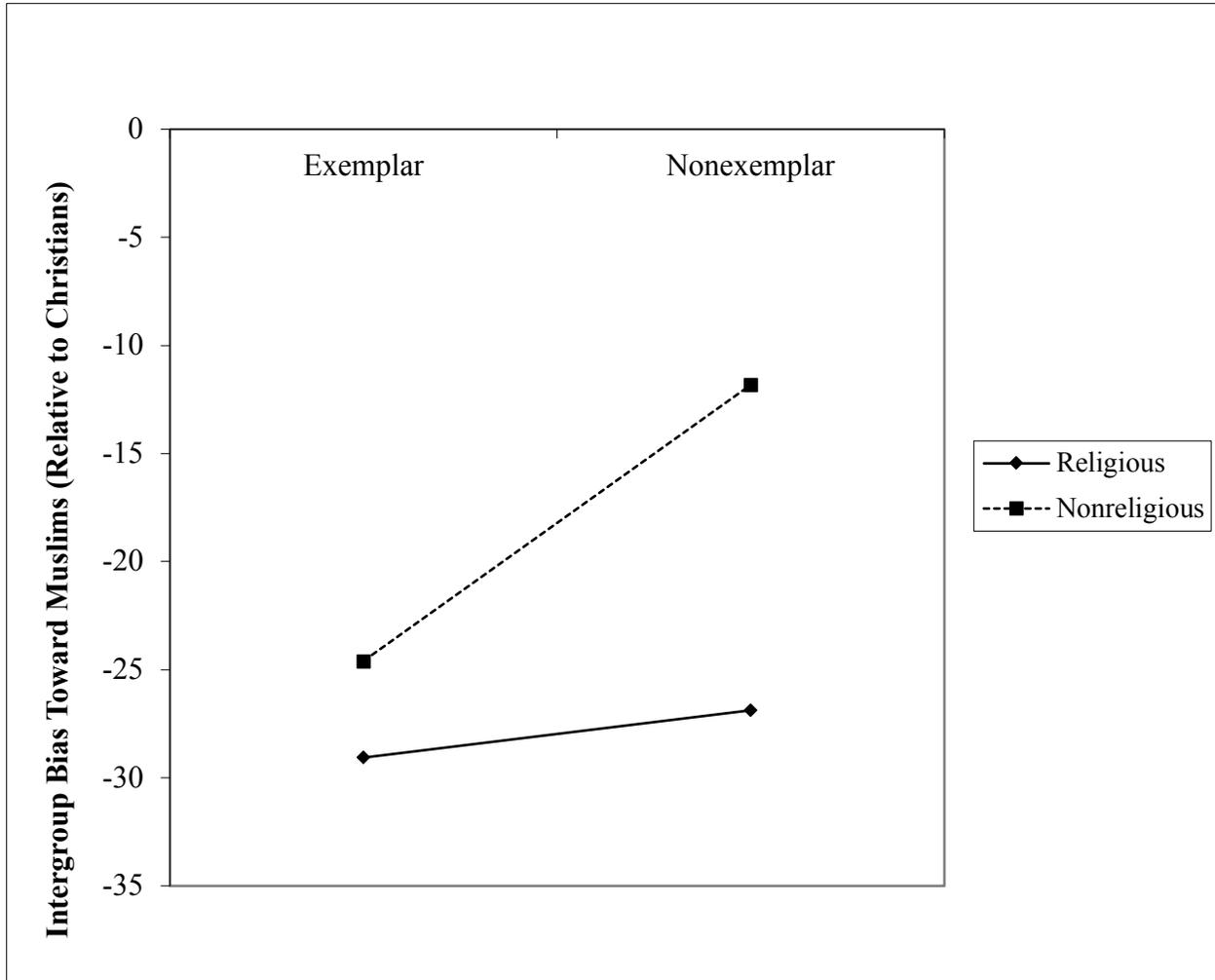


Figure 3. Interaction plot for exemplar condition and religious condition on intergroup bias toward Muslims.

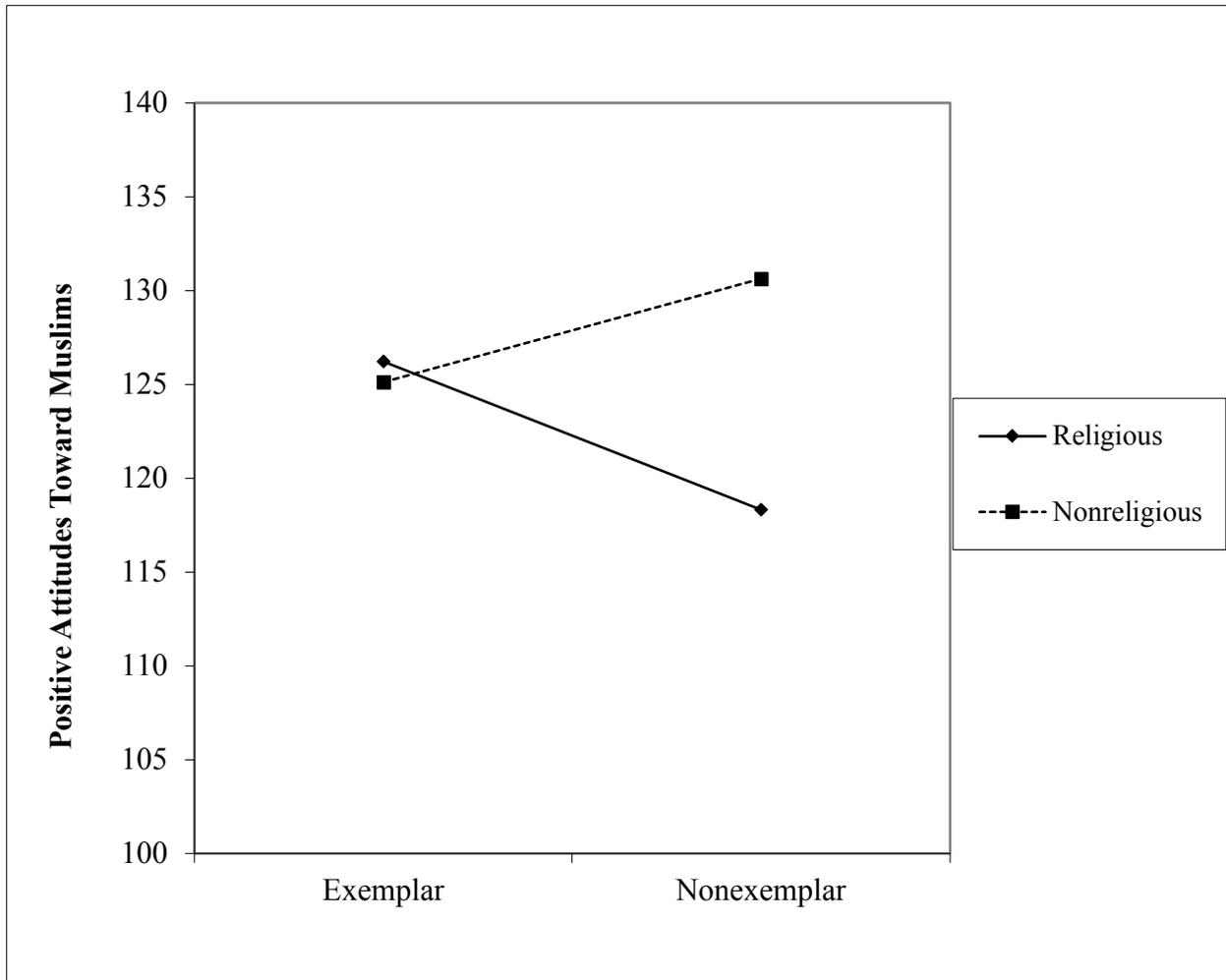


Figure 4. Interaction plot for exemplar condition and religious condition on positive attitudes toward Muslims.

Appendix A
Demographics Form

Demographics

* 1. What is your age?

* 2. What is your political affiliation?

- Republican
- Democrat
- Liberal
- Conservative
- Independent

* 3. How politically conservative or liberal would you consider yourself?

1 (very liberal) 7 (very conservative)

*** 4. What is your religious affiliation?**

- Christian
- Jewish
- Muslim
- Hindu
- Buddhist
- Catholic
- Protestant
- Native American Church
- Atheist
- Agnostic
- Spiritual
- Sikh
- Other (please specify)

*** 5. What is your gender?**

- Male
- Female

*** 6. Ethnicity/Race?**

- Caucasian
- African American
- Native American
- Asian/Pacific Islander
- Hispanic
- Bi-Racial
- Other (please specify)

Appendix B

Priming Conditions

Religious exemplar prime: “Bonus question: Please identify an individual who exemplifies your identified religion's moral code and explain how. This person could be an active person within your religion, or a historical member. For the sake of brevity, please only list one individual and write only a couple sentences explaining your answer.”

Religious control prime: “Bonus question: What is a place of worship within your religion? How is this text important to your religion? For the sake of brevity, please write only a couple sentences explaining your answer.”

Non-religious exemplar prime: “Bonus question: Please identify an individual who exemplifies your moral code and explain how. This person could be alive or deceased. For the sake of brevity, please only list one individual and write only a couple sentences explaining your answer.”

Non-religious control prime: “Bonus question: What is your major? How do you think your major is important? For the sake of brevity, please only write a couple sentences.”

Appendix C

Thermometer Assessment

Please indicate on a scale of 0 to 100, the degree to which you assess each of the following groups.

* 6.

Please indicate on a scale of 0 (extremely unfavorable) to 100 (extremely favorable) your perception of the following group: Christians

0 100

A horizontal thermometer scale with a grey background. On the left, there is a white circle representing the 0 mark. A grey bar extends from this circle to the right, ending at the 100 mark. The number '0' is positioned above the circle, and '100' is positioned above the end of the bar. To the right of the bar is a small white square box for recording the score.

* 7.

Please indicate on a scale of 0 (extremely unfavorable) to 100 (extremely favorable) your perception of the following group: Terrorists

0 100

A horizontal thermometer scale with a grey background. On the left, there is a white circle representing the 0 mark. A grey bar extends from this circle to the right, ending at the 100 mark. The number '0' is positioned above the circle, and '100' is positioned above the end of the bar. To the right of the bar is a small white square box for recording the score.

* 8.

Please indicate on a scale of 0 (extremely unfavorable) to 100 (extremely favorable) your perception of the following group: Jews

0 100

A horizontal thermometer scale with a grey background. On the left, there is a white circle representing the 0 mark. A grey bar extends from this circle to the right, ending at the 100 mark. The number '0' is positioned above the circle, and '100' is positioned above the end of the bar. To the right of the bar is a small white square box for recording the score.

* 9.

Please indicate on a scale of 0 (extremely unfavorable) to 100 (extremely favorable) your perception of the following group: Buddhists

0 100



* 10.

Please indicate on a scale of 0 (extremely unfavorable) to 100 (extremely favorable) your perception of the following group: Hindus

0 100



* 11.

Please indicate on a scale of 0 (extremely unfavorable) to 100 (extremely favorable) your perception of the following group: Muslims

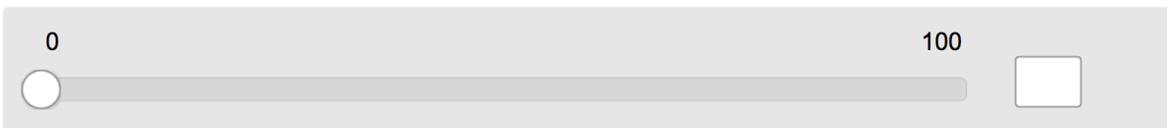
0 100



* 12.

Please indicate on a scale of 0 (extremely unfavorable) to 100 (extremely favorable) your perception of the following group: Atheists

0 100



Appendix D

Altareb's (1998) Attitudes Toward Muslims Scale

Directions: Please read each question and respond to each individually on a scale of 1 (*strongly disagree*) to 7 (*strongly agree*).

1- Muslims are friendly people.

2- Muslims are religious.

3- Muslims should be feared.

4- Muslims are peaceful.

5- Muslim women are submissive.

6- Muslims have a lot of personal freedom.

7- Muslims are too culturally different to be able to live successfully in the United States.

8- Muslim men are dominant.

9- I feel favorably toward Muslims.

10- I worry that Muslims want take over the United States.

11- I fear that Muslims are radical.

12- I respect Muslims for having close-knit families.

13- Muslim immigration should be halted.

- 14- Muslim women have many rights.
- 15- I believe Muslims are responsible for many of the United States problems.
- 16- I could interact comfortably with Muslims.
- 17- The Muslim religion is too strange for me to understand.
- 18- Americans could learn important ideas from Muslims
- 19- I would support a measure deporting Muslims from the United States.
- 20- I am strongly accepting of Muslims.
- 21- Muslims are strict.
- 22- Muslims are in close contact with God.
- 23- Muslims should be excluded from some occupations.
- 24- I would enjoy having Muslims as my friends.
- 25- I believe the Muslim religion is wrong.
- 26- Muslims are good people.
- 27- Muslims are scary.
- 28- I would not mind if a family member married a Muslim.
- 29- I have nothing in common with Muslims.

30- I don't worry about the Muslim presence in the United States.

Appendix E

Gorsuch and McPherson's Intrinsic-Extrinsic Religiosity Revised Scale

Directions: Please indicate your level of agreement to each of the following statements on a scale of 1 (strongly disagree) to 5 (strongly agree).

1. I enjoy reading about my religion
2. I go to church because it helps me to make friends
3. It doesn't matter much what I believe so long as I am good.
4. It is important to me to spend time in private thought and prayer.
5. I have often had a strong sense of God's presence.
6. I pray mainly to gain relief and protection.
7. I try hard to live all my life according to my religious beliefs.
8. What religion offers me most is comfort in times of trouble and sorrow.
9. Prayer is for peace and happiness.
10. Although I am religious, I don't let it affect my daily life.
11. I go to church mostly to spend time with my friends.
12. My whole approach to life is based on my religion.
13. I go to church mainly because I enjoy seeing people I know there.
14. Although I believe in my religion, many other things are more important in life.

Appendix F

Balanced Inventory of Desirable Responding

Using the scale below as a guide, write a number beside each statement to indicate how much you agree with it.

1-----2-----3-----4-----5-----6-----7

NOT	SOMEWHAT	VERY
TRUE	TRUE	TRUE

1. I have not always been honest with myself.*
2. I always know why I like things.
3. It's hard for me to shut off a disturbing thought.*
4. I never regret my decisions.
5. I sometimes lose out on things because I can't make up my mind soon enough.*
6. I am a completely rational person.
7. I am very confident of my judgments.
8. I have sometimes doubted my ability as a lover.*
9. I sometimes tell lies if I have to.*
10. I never cover up my mistakes.
11. There have been occasions when I have taken advantage of someone.
12. I sometimes try to get even rather than forgive and forget.*
13. I have said something bad about a friend behind his or her back.*
14. When I hear people talking privately, I avoid listening.
15. I never take things that don't belong to me.
16. I don't gossip about other people's business.