Distinct Religious Primes and Evaluations of Religious and Non-Religious Others: The Moderating Roles of Religious Quest and Fundamentalism

by

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Abstract

Research has shown that priming religiosity can have differential effects on attitudes towards religious and non-religious others. However, recent work has suggested that these differential effects may depend on aspects of religiosity that are made salient during the priming task. The present research applied construal level theory to evaluate the effects of abstract and concrete religious priming on evaluations towards religious and non-religious others. The moderating roles of religious quest and fundamentalism were evaluated in the entire sample (N = 197) and for a subsample of Christian participants (n = 125). Multiple moderated regression showed that individual differences in religious quest and fundamentalism significantly interacted with the priming manipulation to predict evaluations towards religious others in the Christian subsample. The findings of the present study suggest that the effects of abstract and concrete religious priming may depend on individual differences in religious quest and fundamentalism.

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Distinct Religious Primes and Evaluations of Religious and Non-Religious Others: The Moderating Roles of Religious Quest and Fundamentalism

As Canadians, we live in a multicultural society where we regularly interact with individuals from various religious backgrounds. According to a survey facilitated by Statistics Canada between 2017 to 2019, approximately two-thirds (63.2%) of Canadians reported being affiliated with a Christian-based religion, 8.2% reported being affiliated with Muslim, Hindu, Sikh, or Buddhist religions, 1% reported being affiliated with branches of Judaism, and 26.3% reported having no religious affiliation at all (Cornelissen, 2021). Given the diversity of the population, it is important to understand how certain aspects of religiosity can influence the attitudes and perceptions people form towards diverse religious and non-religious others. In the past, researchers have noted a seemingly paradoxical relationship between religiosity and prejudice towards dissimilar others (Allport, 1954; Allport & Ross, 1967). For instance, research has shown that activating thoughts of religiosity can lead to more tolerant attitudes towards dissimilar religious and non-religious others (Ahmed & Salas, 2011; Clobert et al., 2015) or it can evoke distrust and negative attitudes (Gervais et al., 2011; Rowatt & Al-Kire, 2021).

For decades, researchers have investigated what aspects of religiosity drive prosociality towards some and antipathy towards others. Allport and Kramer (1946) were among the first to show a relationship between religiosity and prejudice when they evaluated the attitudes of church goers and found that those who attended church tended to hold stronger prejudicial attitudes towards African Americans than did non-church goers. Since then, some research has emerged to support the link between religiosity and less tolerant attitudes towards dissimilar religious and ethnic groups (Johnson et al., 2012; Kirkpatrick, 1993; Griffin et al., 1987). However, other research has suggested that it is not religiosity *per se* that elicits less tolerant attitudes towards

dissimilar others, but that individual differences in personality (Altemeyer & Hunsberger, 1992; Johnson et al., 2012) and religiosity (Allport & Ross, 1967; Batson et al., 1986) can influence this relationship. For example, personality traits such as right-winged authoritarianism has been shown to mediate the relationship between religiosity and prejudice towards some religious and ethnic groups (Johnson, Rowatt, & Barnard-Brak, et al., 2012). Moreover, individual differences in religiosity such as religious fundamentalism has been shown to mediate the relationship between religiosity other forms of prejudice (Johnson et al., 2011).

Several theories have also been developed to explain the role of group dynamics in the relationship between religiosity and less tolerant attitudes towards dissimilar others. One theory that accounts for self-concept in intergroup relations is Social Identity Theory (SIT; Tajfel & Turner, 1979). According to SIT, people develop identities based on the social groups they affiliate with for self-enhancement or self-protective purposes (Islam, 2014). For example, a person may identify with a larger social group (e.g., religious, ethnic/cultural, political) that offers more status, protection, and resources in response to a social threat. This seems logical given that people tend to seek out the support of others during times of stress (Haslam et al., 2005). A downside of social identity is that it can reinforce cognitive differences in the evaluations of ingroup and outgroup members that may lead to intergroup biases such as ingroup favouritism or outgroup derogation (Ysseldyk et al., 2010; Hewstone et al., 2002). *Ingroup favouritism* refers to the tendency to view one's own group members with overly positive characteristics; for example, a person may show greater favourability towards another from the same religious group compared to another individual from a different religious group (Brewer, 1999; Johnson et al., 2012). Conversely, *outgroup derogation* refers to the tendency to view outgroup members with overly negative characteristics; for example, a person may show greater

hostility towards another who is perceived to be an outgroup member compared to other individuals who are perceived to be ingroup members (Brewer, 1999; Johnson et al., 2012).

Research on intergroup relations has shown that social identity can have a significant role in how one perceives dissimilar religious and non-religious others (Ben-Nun Bloom et al., 2015; Cairns et al., 2006; Dunkel & Dutton, 2016; Jackson & Hunsberger, 1999). For instance, Jackson and Hunsberger (1999) showed that both religious and non-religious individuals are vulnerable to intergroup biases when asked to evaluate various religious and non-religious groups. In their first study, a sample of religious and non-religious individuals completed a series of religiosity questionnaires and were then asked to rate their attitudes towards four target groups: "atheists," "Christians," "people who believe in God," and "people who do not believe in God." Results showed that religious individuals reported significantly more positive attitudes towards other religious individuals (Christians and "believers") and more negative attitudes towards non-religious others (atheists and "non-believers"). Non-religious individuals showed similar results in which they reported significantly more positive attitudes towards non-religious others (atheists and "non-believers") and more negative attitudes towards religious individuals (Christians and "believers"); however, the authors noted these ratings were less consistent compared to the religious individuals' in their sample. Results also showed that religious identification (i.e., those who identified strongly as "believers") significantly predicted more positive attitudes towards Christians and other religious individuals, but did not predict positive attitudes towards atheists or other "non-believers." Thus, there appears to be some evidence of intergroup bias (i.e., ingroup favouritism) when it comes to the evaluations of religious and non-religious others.

Are there conditions, then, under which religious (or non-religious) groups show less intergroup bias? Although there is a natural tendency for people to develop more favourable

views towards those with whom they share a common identity (Brewer, 1979; Efferson et al., 2008), researchers have suggested conditions that can promote more positive intergroup attitudes and relations (Burch-Brown, & Baker, 2016). One condition that has been shown to increase positive intergroup relations is the activation of religious cognitions that are associated with values of fairness and cooperation (Shariff & Norenzayan, 2007; Preston & Ritter, 2013). However, there is also research to suggest that how we construe others from different social groups may influence the perceptions we form towards those individuals (Yogeeswaran, & Dasgupta, 2014). Thus, the present study investigated the role of *distinct religious primes* (i.e., primes that differ in religious content) in activating religious cognitions, and construal levels, on evaluations towards religious and non-religious others. The following section elaborates on distinct religious primes and how they can elicit differing religious cognitions. Individual differences in approaches to religiosity (religious quest and fundamentalism) are also discussed.

Priming Religious Cognitions

Research on religiosity and intergroup attitudes has used priming methods to determine how activating religious cognitions can influence attitudes towards religious and non-religious others. Experimental research that utilizes priming techniques typically uses words, pictures, or auditory stimuli to determine how the processing of one stimulus influences the subsequent processing of another (Bargh & Chartrand, 2000). A recent meta-analysis by Shariff, Willard, Andersen, et al. (2016) established that religious priming techniques have an average moderate effect size, regardless of the priming method used (e.g., explicit, implicit, subliminal, or contextual). The same meta-analysis showed that religious priming had a robust effect on prosociability, but only among religious individuals; non-religious individuals appeared to be less affected by the religious primes when it came to prosocial behaviour in past studies.

Given the observed effects of religious priming on prosocial behaviour, it is possible that the prosocial benefits could extend to evaluations of religious or non-religious others. Although this was not specifically evaluated in the aforementioned meta-analysis, there is evidence to suggest that priming aspects of religiosity can lead to more tolerant attitudes towards dissimilar others. For example, Clobert and colleagues (2015; Study 1) showed that priming a sample of Belgian and French Buddhist participants with Buddhist religious primes (e.g., *Buddha*, *Dharma*) led to less explicit prejudice towards ethnic (Americans and Africans), religious (Christian, Hindus, and Muslims), non-religious (atheists), and other "moral" outgroups (gay men & single mothers) compared to those who were primed with neutral, or Christian religious primes. In a second study, Clobert and colleagues (2015) showed that implicitly priming Buddhist concepts via an implicit association task reduced prejudice towards religious (Muslim) and ethnic (African-Americans) outgroups in a sample of Belgian Christian university students. Research by Johnson and colleagues (2015) also showed that priming a sample of American Christian university students with benevolent Bible verses led to greater prosocial behaviours toward a religious outgroup member. In their study, participants were randomly assigned to read one of three verses: (1) a benevolent Bible verse, (2) the same Bible verse that was attributed to a U.S. statesman, or (3) neutral quotes obtained from English literature. Participants were then escorted to another room in the department where they passed a female confederate, who was either wearing a hijab (Islamic headscarf) or not and had dropped a pile of envelopes in front of the participant when crossing paths. Results showed that those who were primed with the benevolent Bible verse, regardless of whether it was attributed to the Bible or a statesmen, were more likely to help the confederate wearing the hijab than those who were primed with neutral quotes. These

findings studies suggest that priming benevolent aspects of religiosity can lead to more tolerant attitudes towards, and greater prosociality with, religious and non-religious others.

However, there is also research to suggest that priming religiosity can lead to less tolerant attitudes towards some religious and non-religious others. For example, Johnson and colleagues (2012) showed that priming religious cognitions led to less favourable attitudes towards some religious and non-religious groups in a sample of American Christian university students. In their research, participants were randomly assigned to one of two conditions where they were exposed to Christian primes, (i.e., *Bible*, *faith)* or neutral primes (i.e., *shirt*, *butter*) through a lexical decision task. Participants were then asked to evaluate various "value-violating" outgroups (Muslims, atheists, and gay men) relative to their own ingroup (Christians and heterosexuals) using feeling thermometers. Results showed that those who were exposed to Christian primes reported significantly less favourable attitudes towards the "value-violating" outgroup members, and more favourable attitudes towards the ingroup members, compared to those who were exposed to neutral primes. These results suggest that priming aspects of religiosity led to greater intergroup biases (i.e., ingroup favouritism) among Western Christian university students. Research by Shamoa-Nir and Razpurker-Apfeld (2019) also showed that priming a sample of Arab Muslim participants with Jewish primes, and Arab Christian participants with Christian primes, led to the greater use of negative stereotypes (i.e., outgroup derogation) towards Jewish individuals. These findings suggest that priming certain aspects of religiosity can lead to greater intergroup biases (i.e., outgroup derogation) among diverse university students. Thus, it seems that priming aspects of religiosity can have both positive and negative effects on intergroup attitudes and relations.

In light of the disparate findings that have been observed in past religious priming studies, many researchers are trying to discern why activating religious cognitions lead to more favourable attitudes towards outgroups in some cases and less favourable attitudes in others. Critiques have also emerged among studies that have used religious priming methods as some researchers have attempted to replicate past results but have been unsuccessful (Ramsay et al., 2016; Gomes & McCullough, 2015). Moreover, some researchers have noticed a trend in which certain religious primes may be more likely to elicit ingroup favouritism effects compared to other types of religious primes. For example, Preston and Ritter (2013) showed that priming a sample of American participants with the word "God" or "Religion" led to differential effects in charitable donations towards ingroup and outgroup members. In their study, participants were asked to complete a short health survey regarding their willingness to fight the swine flu when the outbreak occurred in 2009. Participants were randomly assigned to a "God" or "Religion" priming condition that was manipulated through the first question on the survey. The "God" priming condition asked participants at the beginning of the survey if they believed in God (Yes/No) whereas the "Religion" priming condition asked participants, "What is your religion?" The last question on the survey gave participants the opportunity to donate 99 cents to one of two charities involved in fighting the swine flu, the American Red Cross or the Mexican Red Cross. Results showed that those primed with the word "God" donated significantly more money to the Mexican Red Cross than did those primed with the word "Religion". In discussing their results, the authors speculated that the "God" prime may have activated concerns of "moral impression management" whereas the "Religion" prime may have activated thoughts related to ingroup practices (Preston & Ritter, 2013). Thus, there is some evidence to suggest that certain religious

primes can elicit differential effects on prosociality towards dissimilar others, which may be due to the activation of differing religious cognitions.

Other research by Ritter and Preston (2013) has also noted that past religious priming studies tend to use an amalgamation of religious primes that may have elicited differential effects on various outcome measures. As a result, they conducted two studies to evaluate lay peoples' perceptions of Christian and generic religious primes using a computerized card sorting task. Both studies contained samples that were largely White (72-75%) and Christian (61-66%) that were obtained from the United States. In their first study, a sample of undergraduate students was present with various Christian religious primes that had been commonly used in past research and were asked to sort the primes into two to five meaningful piles based on their own criteria. Multidimensional scaling, property fitting, and cluster analyses were used to analyze the proximities and latent dimensions among the religious priming stimuli. Results showed that the division of Christian religious primes mapped onto three distinct categories: Religious agents (e.g., God, prophet), spiritual/abstract words (e.g., faith, heaven), and institutional/concrete words (e.g., baptism, sermon). In their second study, the same card-sorting procedure was used to evaluate distinctions among generic religious primes in a separate sample of participants. Results showed that the generic religious primes mapped onto the same three distinct categories: Religious agents (e.g., saint, angel), spiritual/abstract words (e.g., faith, revelation), and institutional/concrete words (e.g., ritual, scripture). Taken together, these studies suggest that lay people are able to distinguish at least three different types of religious priming stimuli that have been associated with different aspects of religion. Thus, it is possible that past religious priming studies may have been activating different religious cognitions simultaneously that could have elicited the differential effects that have been observed in past research.

Furthermore, in discussing the results from their research, Ritter and Preston (2013) proposed that *distinct religious primes* (i.e., primes that differ in religious content) may have produced the differential effects that have been observed in past religious priming studies. The authors also suggested that spiritual/abstract or institutional/concrete religious primes may elicit differing religious cognitions that may influence the evaluations of religious, or non-religious, others. Specifically, the authors suggested that institutional/concrete religious primes may lead to greater ingroup favouritism, or outgroup derogation, by activating thoughts associated with ingroup religious practices. Conversely, the authors suggested that spiritual/abstract religious primes may lead to less ingroup favouritism, or outgroup derogation, by activating thoughts associated with "moral impression management" (Ritter & Preston, 2013). Although this was not directly tested in their research, the present study aimed to extend the work of Ritter and Preston (2013) by evaluating the effects of abstract and concrete religious primes on evaluations towards, and perceived similarity with, religious and non-religious others. Additionally, the present study explored the moderating role of religious orientation (religious quest and fundamentalism), as previous research has shown that these individual differences can influence the effects of religious priming on evaluations towards religious and non-religious others (Blogowska, & Saroglou, 2013; Haji & Hall, 2014; Van Tongeren et al., 2013).

Construal Level Theory, elaborated upon below, provides a theoretical account of how spiritual/abstract and institutional/concrete religious primes could affect outgroup evaluations.

Construal Level Theory

The framework of Construal Level Theory (CLT; Trope & Liberman, 2010), which describes how objects, actions, or events are cognitively represented, may be useful in framing predictions regarding distinct religious primes and their effects on evaluations towards religious

and non-religious others. According to CLT, how people perceive and interpret objects, actions, or events vary based on their level of abstraction. For instance, an action such as *reading* can be construed abstractly (i.e., gaining knowledge) or concretely (i.e., following lines of print; Vallacher & Wegner, 1989). Abstract construals represent objects in terms of central, schematic features that broaden cognitive processes; concrete construals represent objects in finer details that narrows cognitive processes (Förster et al., 2004). Another aspect of CLT asserts that psychological distance (i.e., how far or close an object or event is to an individual) can influence how they construe those objects and events. For example, research by Liberman and colleagues (2002; Study 1) showed that thinking about an event in the near, or distant, future resulted in different cognitive representations of objects that are typically seen or used at those events. In their first study, participants were asked to think about a scenario that was provided (e.g., a camping trip, moving into an apartment, a yard sale, or a trip to New York City) that was either in the near, or distant, future and were provided with a list of objects that may be seen or used at those events. Participants were then asked to group objects that belonged together based on their own criteria. Results showed that those who thought about the event in the distant future used fewer categories to group the objects typically seen or used at those events; however, those who thought about the event in the near future used more categories when grouping the objects. These findings suggest that those who construed events in the distant future used broad and more inclusive cognitions to categorize those objects into fewer groups compared to those who thought about the events in the near future (Liberman et al., 2002).

The same idea may apply when we think about people and social groups that are either familiar/unfamiliar, or similar/dissimilar to us, only in this case the psychological distance would be social rather than temporal. In the case of familiarity, research has shown that those who are

highly familiar to us (i.e., less social distance) tend to be construed concretely compared to those who are unfamiliar to us (i.e., greater social distance; Prentice, 1990; Idson & Mischel, 2001). Research has also shown that a person's tendency to construe actions or goals concretely were more likely to report greater perceive dissimilarity between themselves and dissimilar others, less empathy for dissimilar others, and less helping behaviours towards dissimilar social groups; the reverse was true for those who tended to think more abstractly (Levy et al., 2002). Research has also shown that priming participants to think of multiculturalism abstractly resulted in less prejudicial attitudes among White Americans towards ethnic minority groups; conversely, priming participants to think of multiculturalism concretely lead to greater prejudicial attitudes (Yogeeswaran & Dasgupta, 2014). These studies suggest that abstract and concrete construals may lead to differences in perceived similarity that could impact intergroup relations.

However, the research is not unequivocal when it comes to the effects of construal levels on outgroup attitudes and evaluations. For instance, there is some research to suggest that outgroup members are perceived more abstractly and schematically (i.e., Park & Rothbart, 1982) which may lead to a greater use of stereotypes (McCrea et al., 2012). Research by Stephan and colleagues (2011) also showed that temporal construals of social interactions led to less perceived familiarity (Study 1), less perceived similarity (Study 2), and that construing others' actions in abstract or concrete terms influenced levels of perceived social distance (Study 3), and the allocation of resources (Study 4). In their first two studies, participants were asked to think about a social interaction that was either in the near (concrete condition) or distant future (abstract condition). Participants were then given a brief description of the other person and were asked to report their level of perceived familiarity (Study 1) or similarity (Study 2). Results showed that those who anticipated meeting the other person in the near future reported greater

perceived familiarity and similarity than those who anticipated the meeting the individual in the distant future. Additionally, they found that construing other peoples' actions in terms of *how* (concrete) or *why* (abstract) resulted in greater perceived social distance (i.e., less perceived familiarity) and less allocation of resources in the abstract conditions. These findings suggest that temporal distance from a target can increase perceived social distance; however, it does not address how perceived social distance can influence the evaluations or perceptions of others.

So what role could CLT have in the relationship between religiosity and outgroup evaluations? As demonstrated by Ritter and Preston (2013), participants are able to distinguish at least three different types of religious priming stimuli (i.e., religious agents, spiritual/abstract, and institutional/concrete primes). They also alluded to the potential for two types of religious primes identified in their research (abstract and concrete) to elicit differential effects on outgroup attitudes and evaluations, which closely resemble the construal levels described in CLT. Thus, it is possible that these distinct religious primes may elicit similar abstract or concrete religious cognitions that influence how people evaluate and perceive dissimilar religious or non-religious others. Research by Luguri and colleagues (2012) explored a similar idea in a sample of liberal and conservative individuals and showed that inducing abstract or concrete construal levels in conservative participants led to differing outgroup attitudes. In their study, abstract and concrete construal levels were manipulated by having participants think about a specific goal such as maintaining good health; those who were assigned to the abstract condition were asked to think of reasons *why* they would want to maintain good health, whereas those who were assigned to the concrete condition were asked to think of *how* they would maintain good health. Participants were then asked to complete evaluation thermometers towards normative and non-normative groups. Normative groups were operationally defined by dominant groups in Western cultures

(i.e., Whites and Christians), whereas non-normative groups were defined by minority groups in Western cultures (i.e., atheists, gay men, lesbians, and Muslims). Results showed a significant interaction between construal levels and political orientation; conservative individuals in the abstract condition reported significantly more positive attitudes towards non-normative groups than did those in the concrete condition. Although conservative individuals tended to report more positive attitudes towards the normative groups in both conditions, the results suggest that there are conditions that can mitigate the effects of negative outgroup attitudes by inducing abstract mindsets, particularly among those who are known to be more intolerant of dissimilar others. Thus, the present study sought to determine if abstract and concrete religious primes lead to abstract and concrete construal levels described in CLT, and if this relationship influences evaluations towards religious and non-religious others. Furthermore, the present research assessed how the effects of concrete and abstract religious primes are moderated by individual differences in religious quest and fundamentalism, described in detail below.

Religious Quest

Individual differences in religiosity is another important aspect to consider when evaluating the effects of distinct religious primes on evaluations towards religious and non-religious others. *Religious quest* describes an approach to religiosity that is characterized by aspects of moral deliberation, exploration of religious doubt, and openness to new and changing religious views (Batson et al., 1993). This dimension of religiosity has been associated with more tolerant attitudes towards dissimilar religious and non-religious others (Batson et al., 2001; Leak & Finken, 2011; Van Tongeren, Hakim et al., 2016). For instance, Van Tongeren and colleagues (2016) showed that higher levels of religious quest predicted significantly more positive attitudes towards atheists and non-Christian religious groups in a sample of American Christian university

students. Moreover, Leak and Finken (2011) showed that religious quest was negatively associated with prejudice towards individuals from differing sexual orientations, ethnicities, and religious groups. Given that religious quest has been associated with greater tolerance towards dissimilar religious and non-religious others, it is possible that the priming manipulation may be less effective in eliciting intergroup biases such as ingroup favouritism or outgroup derogation.

Although religious quest has been associated with more tolerant attitudes towards dissimilar religious and non-religious others, there is some research to suggest that quest is not universally tolerance or compassionate towards all religious others (Goldfried & Miner, 2002; Batson et al., 2008). For instance, Goldfried and Miner (2002) showed that Australian university students high in quest were less likely to help a student win a monetary prize if they read that the student had a religious fundamentalist approach to religiosity compared to another student who was depicted as having an unspecified religious belief. This led the researchers to conclude that quest is not universally compassionate towards all religious others, but that individuals high in quest can still be prejudice against those who violate values central to their belief systems (i.e., openness-mindedness and exploration of religious doubt; Goldfried & Miner, 2002).

Interestingly, there is also evidence to suggest that religious quest can buffer against some of the negative effects that may arise from those who espouse dogmatic religious views. For example, an experimental study by Haji and Hall (2014) randomly assigned a sample of Christian university students ($N = 55$) to one of two priming conditions. One condition required participants to read a brief vignette describing an individual with a religious fundamentalist belief style; the other required participants to read a brief vignette describing an individual with a religious quest belief style. Participants were then asked to rate their attitudes towards various religious groups (i.e., Christians, Jews, and Muslims). Results showed a significant interaction

between quest and the priming conditions, such that higher scores of quest significantly predicted more favourable attitudes towards the religious outgroups (i.e., Jews and Muslims) in response to the religious fundamentalist priming condition. In discussing these results, Haji and Hall (2014) suggested that the religious fundamentalist prime may have elicited a defensive response among those who score high in quest, as past research suggests that these individuals are less tolerant of dogmatic religious views (Goldfried & Miner, 2002; Batson et al., 2008).

Thus, it is possible that distinct religious primes might lead individuals high in religious quest to develop more (or less) favourable evaluations towards some religious or non-religious others. It could also be that individuals high in quest will react against the concrete religious primes that highlight religious ingroup practices, or given that they already tend to be more open in their attitudes toward religious outgroups, they may be less influenced by the abstract religious primes. It will also be interesting to see if construal levels are related to religiosity, or religious orientation, as those high in quest may already be more inclined to think abstractly which may contribute to their open and inclusive mindsets (Batson et al., 1993).

Religious Fundamentalism

Another individual difference that may influence the effects of distinct religious primes on evaluations towards religious or non-religious others is religious fundamentalism (RF). RF is an approach to religiosity that is absolute in its beliefs and devotion to religious texts, and it has been associated with greater prejudicial attitudes towards dissimilar ethnic, religious, and non-religious others (Altemeyer & Hunsberger, 1992; Laythe et al., 2001; Leak & Finken, 2011; Rowatt, & Franklin, 2004). Leak and Finken (2011) demonstrated this association when they examined the relationship between RF and three forms of prejudice (racial, religious, and sexual orientation). Results showed that RF was weakly associated with racial prejudice, moderately

associated with prejudice towards Muslims, and strongly associated with prejudice towards gay men. Moreover, Johnson and colleagues (2011) showed that RF mediated the relationship between religiosity and less tolerant attitudes towards value-violating groups. RF has also been associated with more rigid cognition, less cognitive complexity, and a stronger preference for consistency (Pancer et al., 1995; Hill et al., 2010). Given that RF has been associated with less tolerance and more rigid cognitions, it may be the case that individuals high in RF will be more influenced by concrete religious primes, and less affected to the anticipated effects of abstract religious primes in eliciting openness towards other religious or non-religious groups.

Although several studies have evaluated the link between RF and prejudice towards dissimilar others, there is less research on the effects of religious priming and RF on evaluations towards dissimilar religious or non-religious others (Blogowska & Saroglou, 2013; Rothschild et al., 2009). Research by Blogowska and Saroglou (2013; Study 3) was one of few studies that showed priming individuals high in RF with violent (versus benevolent) Bible verses led to less prosocial behaviour towards an outgroup member. In their research, participants were randomly assigned to read: (a) Bible verses where God endorses violence, in addition to two short neutral excerpts, (b) Bible verses where God commends prosociability, in addition to two short neutral excerpts, or (c) two short neutral excerpts. Afterwards, participants were presented with a short description about an individual who had been robbed, in need of help, and was on their way to an atheist convention. Participants were then asked to rate their willingness to help the individual. Results showed that individuals high in RF were less willing to help the outgroup member after being exposed to violent Bible verses. This led Blogowska and Saroglou (2013) to suspect that priming RFs with violent religious texts might have induced threatening perceptions of the outgroup member which may have led to less helping behaviour.

Thus, it is possible that distinct religious primes might lead individuals high in religious fundamentalism to develop less (or more) favourable evaluations towards some religious or non-religious others. Concrete religious primes were predicted to elicit greater ingroup religious cognitions among individuals high in RF that may led them to report less favourable views towards dissimilar religious or non-religious others. Conversely, abstract religious primes were predicted to elicit concerns of moral impression management among individuals high in RF that may lead them to endorse more favourable views of religious and non-religious others.

The Present Study

Rationale

Given the discrepancy of findings that have been observed among previous religious priming studies, the present research aimed to extend the work of Ritter and Preston (2013) by evaluating the effects of distinct religious primes (abstract and concrete) on evaluations towards, and perceived similarity with, religious and non-religious others. Based on past research (Preston & Ritter, 2013; Shariff & Norenzayan, 2007) it is reasonable to believe that primes that differ in religious content may elicit differing evaluations towards, or perceived similarity with, religious or non-religious others. For example, primes that activate ingroup religious cognitions (i.e., thoughts about one's own ingroup religious practices) may elicit more favourable evaluations towards religious ingroup members and less favourable evaluations towards religious outgroup members. Conversely, primes that activate thoughts of moral impression management may mitigate the effects of ingroup favouritism or outgroup derogation.

Furthermore, it is also possible that distinct religious primes might elicit abstract or concrete construal levels as described in CLT. Given that research has shown a relationship between construal levels (abstract vs. concrete) and outgroup evaluations (Luguir et al., 2012) it

is possible that distinct religious primes may influence how one construes religious ingroup and outgroup members that, in turn, influence evaluations towards, or perceived similarity with, dissimilar religious or non-religious others. Considering that Ritter and Preston's (2013) abstract and concrete religious primes represent aspects of religiosity that are either broad (e.g., belief, faith) or highly specific (e.g., church, baptism), they may elicit abstract or concrete religious cognitions that discourage or promote ingroup favouritism or outgroup derogation. Thus, the present study aimed to evaluate the role of distinct religious primes on evaluations towards, and perceived similarity with, religious and non-religious others. An additional novel contribution was the examination of the possible moderating effects of religious fundamentalism and quest.

Research Questions

The aim of the present study was to address the following research questions: (1) Can distinct religious primes (abstract or concrete) elicit differential effects on evaluations towards, or perceived similarity with, dissimilar religious and non-religious others? (2) Will abstract or concrete religious primes elicit construal levels as described in CLT? (3) Will individual differences in religious quest or fundamentalism moderate the effects of distinct religious primes on evaluations towards, or perceived similarity with, religious and non-religious others?

These research questions were evaluated in the entire sample and in a subsample of Christian participants derived from the entire sample to establish clear religious ingroup and outgroups effects. For example, if more favourable evaluations towards, or perceived similarity with, Christian others occurred in the Christian subsample, it would indicate a clear religious ingroup effect (i.e., ingroup favouritism). Conversely, less favourable evaluations towards, or perceived similarity with, dissimilar religious others would clearly indicate a religious outgroup

effect (i.e., outgroup derogation). Subset analyses were conducted for Christians only, as they were the only religious group with enough participants for meaningful statistical analyses.

Hypotheses

H1: Based on past research (Preston & Ritter, 2013; Shariff & Norenzayan, 2007) it was predicted that distinct religious primes (abstract or concrete) would elicit differential effects on evaluations towards, and perceived similarity with, religious and non-religious others. Abstract religious primes were predicted to elicit more favourable evaluations towards, and greater perceived similarity with, dissimilar religious and non-religious others. Concrete religious primes were predicted to elicit less favourable evaluations towards, and less perceived similarity with, dissimilar religious and non-religious others.

H2: Distinct religious primes may elicit differing construal levels as described in CLT. Abstract religious primes were predicted to elicit abstract construals that may lead to more inclusive perceptions of dissimilar religious or non-religious others. Concrete religious primes were predicted to elicit more concrete construals that may lead to narrower and discriminating perceptions of dissimilar religious or non-religious others.

H3: Individual differences in religious quest were predicted to moderate the effects of distinct religious primes (abstract or concrete) on evaluations towards, and perceived similarity, with religious and non-religious others. For individuals high in quest, it was predicted that abstract religious primes would elicit highly favourable evaluations towards, and greater perceived similarity with, dissimilar religious and non-religious others. For those low in quest, it was predicted that abstract religious primes would elicit moderately favourable evaluations, and perceived similarity with, dissimilar religious and non-religious others. For concrete religious primes, it was predicted that individuals high in quest would show moderately favourable

evaluations, and perceived similarity with, dissimilar religious and non-religious others. Conversely, for individuals low in quest, it was predicted that concrete religious primes would elicit less favourable evaluations towards, and perceived similarity with, dissimilar religious and non-religious others.

H4: Individual differences in RF were predicted to moderate the effects of distinct religious primes (abstract or concrete) on evaluations towards, and perceived similarity, with religious and non-religious others. In the case of abstract religious primes, it was predicted that high RF would elicit low to moderately favourable evaluations towards, and perceived similarity with, dissimilar religious and non-religious. For those low in RF, it was predicted that abstract religious primes would elicit highly favourable evaluations towards, and perceived similarity with, dissimilar religious and non-religious others. In the case of concrete religious primes, it was predicted that high RF would elicit less favourable evaluations towards, and perceived similarity with, dissimilar religious and non-religious others. Conversely, for low RF, it was predicted that concrete religious primes would elicit moderately favourable evaluations towards, and perceived similarity with, dissimilar religious and non-religious in response to concrete religious primes.

For ease of reference, Table 1 depicts the hypothesized effects of religious quest and fundamentalism on outgroup evaluations in response to the priming manipulation.

Table 1

Hypothesized effects of religious outgroups evaluations as a function of religious quest and fundamentalism and the priming manipulation

Religious Prime	Quest (high)	Quest (low)
Abstract	Highly favourable evaluations and greater perceived similarity.	Moderate favourability and perceived similarity.
Concrete	Moderate favourability and perceived similarity.	Less favourable evaluations and low perceived similarity.
Religious Prime	RF (high)	RF (low)
Abstract	Moderate favourability and perceived similarity.	Highly favourable evaluations and greater perceived similarity.
Concrete	Less favourable evaluations and low perceived similarity.	Moderate favourability and perceived similarity.

Method

Participants

A convenience sample of 225 participants was recruited from a research participant pool at Laurentian University (n = 217), and through in-class recruitment announcements and advertisements posted at a confederate school, Thorneloe University (n = 8). Eligibility criteria required participants to be at least 18 years of age and to self-identify as spiritual or religious, as previous research has shown that religious priming effects are inconsistent among non-religious individuals (Shariff et al., 2016). As a result of this criterion, 28 participants were excluded from the data analysis due their religious group affiliation (14 participants self-identified as atheists, 11 self-identified as non-religious, and 3 with missing data). This left a total of 197 participants

for the entire sample. Participants who were recruited through the research participant pool received partial course credit for their participation; those who were recruited through in-class announcements and advertisements were entered into a draw for a chance to win a $20 coffee shop gift card.

Sample characteristics of the entire sample consisted of 163 women, 28 men, 4 non-binary individuals, 1 preferred not to say, and 1 missing data. The majority of the entire sample self-identified as White or Caucasian (70.1%) and with a Christian-based religious affiliation (63.5%), however, a considerable degree of ethnic and religious diversity was also observed. Table 2 depicts sample demographics for the entire sample and Christian subsample. The mean age of participants in the entire sample was 25.31 (*SD* = 8.63) that ranged from 18 to 60 years. A subset of Christian participants (*n* = 125) derived from the entire sample was also evaluated to establish clear religious ingroup and outgroup effects. The Christian subsample consisted of 106 women, 17 males, and 1 preferred not to say, and 1 missing data. The majority of the subsample self-identified as White or Caucasian (76.8%) with a mean age of 24.49 years (*SD* = 8.56).

Table 2

Sample Characteristics

		Entire sample $N = 197$		Christian subsample $n = 125$	
Variable		*n*	%	*n*	%
Age					
	18 - 24	123	62.4	81	64.8
	25 - 34	38	19.3	22	17.6
	35 - 44	25	12.7	14	11.2
	45 - 54	3	1.5	2	1.6
	55 +	3	1.5	2	1.6
	Missing	5	2.6	4	3.2
	Total	197	100.0	125	100.0
Gender					
	Male	28	14.2	17	13.6
	Female	163	82.7	106	84.8
	Non-Binary	4	2.1	0	0.0
	Prefer not to say	1	0.5	1	0.8
	Missing	1	0.5	1	0.8
	Total	197	100.0	125	100.0
Ethnicity					
	Asian	12	6.1	2	1.6
	African/Black	12	6.1	10	8.0
	Caucasian/White	138	70.1	96	76.8
	Hispanic	2	1.0	2	1.6
	Indigenous	6	3.0	4	3.2
	Middle Eastern	4	2.0	1	0.8
	Mixed	14	7.1	7	5.6
	Other	6	3.1	1	0.8
	Prefer not to say	1	0.5	0	0.0
	Missing	2	1.0	2	1.6
	Total	197	100.0	125	100.0
Religious Affiliation					
	Agnostic	16	8.1	0	0.0
	Buddhist	10	5.1	0	0.0
	Christian	125	63.5	125	100.0
	Jewish	3	1.5	0	0.0
	Muslim	9	4.6	0	0.0
	Sikh	3	1.5	0	0.0
	Other	31	15.7	0	0.0
	Missing	0	0.0	0	0.0
	Total	197	100.0	125	100.0

Materials

Stimuli. Religious priming stimuli were selected from Ritter and Preston's (2013) generic religious primes that were established in their research. Abstract religious primes consisted of words such as "*belief*" and "*faith*" which were shown to be conceptually related in a cluster analysis. Concrete religious primes consisted of words such as "*prayer*" and "*ritual*" which were also shown to be conceptually related in Ritter and Preston's (2013) research. Neutral primes such as "*bread*" and "*butter*" were also included in the priming manipulation (i.e., the sentence-unscrambling task) to implicitly prime participants with abstract and concrete religious concepts. A list of the primes that were used in the priming manipulation can be found in Appendix A.

Sentence-Unscrambling task. Participants were exposed to distinct religious primes (abstract or concrete) through a sentence-unscrambling task (Srull & Wyer, 1979) which has been used in past research as a valid priming procedure (Aveyard, 2014; DeWall & Bushman, 2009; Fergus & Rowatt, 2015; Shariff & Norenzayan, 2007; Toburen, & Meier, 2010). Participants were presented with 10 five-word scrambled sentences in which one irrelevant word had to be dropped to create a meaningful four-word sentence. For example, the item with the following string of words: "beliefs, me, sacred, very, are," yielded the following sentence when the word "me" was dropped and the remaining words had been unscrambled: "beliefs are very sacred." The task consisted of 10 items with religious primes embedded in five of the items; neutral primes were embedded in the other five items to implicitly prime participants with abstract or concrete religious concepts. The abstract condition contained scrambled sentences with abstract religious primes (i.e., *faith*, *belief*) while the concrete condition contain scrambled sentences with concrete religious primes (i.e., *prayer*, *ritual*). The sentence-unscrambling task has been shown to be an effective method for implicitly priming religious concepts, in which

very few participants have reported awareness of being primed to think about religiosity (Ahmed & Hammarstedt, 2011; Aveyard, 2014).

Measures

Revised Religious Life Inventory. Religious individual differences were assessed with the Revised Religious Life Inventory (RLI-R; Hills et al., 2005). The scale contains 24-items that measured dimensions of intrinsic, extrinsic, and quest religiosity. Although the focus of the present study was to evaluate religious quest as an individual difference measure, the full scale was administered for exploratory purposes. The intrinsic subscale consisted of 9 items that included statements such as "I try hard to carry my religion over into all my other dealings in life" and "My religious beliefs are what lie behind my whole approach to life". The extrinsic subscale consisted of 7 items that included statements such as "Although I believe in my religion, I feel there are many more important things in life" and "The purpose of prayer is to secure a happy and peaceful life". The quest subscale consisted of 8 items that measured religious curiosity and spiritual growth with items such as "I am constantly questioning my religious beliefs" and "There are many religious issues on which my views are still changing". Responses were rated on a 7-point scale ranging from 1 (*strongly agree*) to 7 (*strongly disagree*). The subscales have high internal consistency of .93 for Intrinsic, .76 for Extrinsic, and .83 for Quest (Hills et al., 2005). The RLI-R has been used as a valid measure in other studies (Hills, & Francis, 2005; Henningsgaard, & Arnau, 2008).

Revised Religious Fundamentalism Scale. RF was measured with an adapted version of the Revised Religious Fundamentalism Scale (RRFS; Altemeyer & Hunsberger, 2004). The scale contains 12 items designed to assess conservative religious beliefs with items such as "To lead the best, most meaningful life, one must belong to the one, fundamentally true religion". Responses were measured on a 7-point Likert scale ranging from 1 (*very strongly disagree*) to 7 (*very strongly agree*). Scores on the RRFS range from 12 (low fundamentalism) to 108 (high fundamentalism). The scale has a high internal consistency ranging from .88 to .91 that has been used in other studies to assess RF (Carlucci et al., 2015; Cila & Lalonde, 2014; Johnson, LaBouff, et al., 2012; Keller et al., 2015).

Religious Identity. Participants completed an additional item related to religious identity. Religious identity was measured with the following item: "To what extent do you identify with your religious group?", with 1 (*not at all*) to 7 (*very much*). This item was included due to the fact that religious orientation may be distinct, or separate, from a person's degree of personal identity with their religion. Similar self-report items have been used in previous studies to account for the degree of one's religious identity (Abu-Rayya & Abu-Rayya, 2009; Greenfield & Marks, 2007).

Construal Levels. After the religious priming task participants completed a subset of items from the Behavioural Identification Form (BIF; Vallacher & Wegner, 1989) to determine if the distinct religious primes elicited abstract or concrete construals. Participants reviewed 10 actions from the BIF and made a dichotomous choice regarding whether the action represented an abstract or a concrete action. For example, the item "Pushing a doorbell" was given two options, an abstract action (i.e., seeing if someone is home) or a concrete action (i.e., moving a finger). Appendix B depicts a list of the 10 items that were used in the present study. Item

responses with an asterisk beside them represent abstract construals, or cognitions. The total score of the measure was based on the number of abstract actions, with abstract actions being scored as 1 and concrete actions being scored as zero. Total scores ranged from 0 to 10 with higher scores indicating higher (abstract) construals. The scale's internal consistency has a Cronbach's alpha of 0.84 which indicates high reliability that taps into a single dimension of higher construal levels. Previous research has used this measure to evaluate abstract and concrete construals with Cronbach's alpha ranging from .71 to .84 (Levy et al., 2002; Luguri et al., 2012).

Feeling Thermometers. Attitudes towards various religious and non-religious others were evaluated with feeling thermometers (Haddock et al., 1993). Items included statements such as, "What are your feelings towards Christians?" and "What are your feelings Atheists?" Responses were reported on a visual-analogue scale that ranged from 0 (*very cold, extremely unfavourable*) to 100 (*very warm, extremely favourable*). Items were adapted to measure favourable or unfavourable feelings towards the following religious groups: atheists, agnostics, Christians, Buddhists, Hindus, Jews, Muslims, religious and non-religious others. Feeling thermometers have been used as a valid measure of explicit attitudes towards groups in past research (Cairns et al., 2006; Hodson & Costello, 2007; Johnson et al., 2010; Morrison et al., 2010).

Modified Version of the Inclusion of Other in the Self (IOS) scale. A modified version of the Inclusion of Other in the Self scale (IOS; Aron et al., 1992) was used to evaluate levels of perceived similarity with various religious and non-religious others. Participants completed a computerized version of the scale where they were presented with seven diagrams of increasingly overlapping circles to depict the degree of perceived similarity between the self and the religious or non-religious other (see Appendix E for sample items). Participants were asked

to select the diagram that best represented how similar (or dissimilar) they perceived themselves to be in respect to the religious or non-religious others, with responses ranging from 1 (*not similar at all*) to 7 (*extremely similar*). The IOS scale has been used in its original and modified format in several other studies to evaluate perceived similarity (Coats et al., 2000; Myers & Hodges, 2012; Welker et al., 2014).

Demographics and Awareness Check. Demographic information related to age, gender, and religious affiliation was collected at the end of the survey. An awareness check was also included at the end of the study in which participants were asked, "In your opinion, what was the purpose of this study?". A textbox was provided below the question so that participants could leave comments about their impressions of the study. Among those in the entire sample, only 22 participants answered the question for the awareness check. Most participants indicated that the purpose of the study had to do with evaluating attitudes towards other religious groups. However, no participants alluded to other focal aspects of the study, such as evaluating the effects of distinct religious primes, construal levels, or individual differences in religiosity. In reviewing all the responses made to the awareness check, no participants were able to discern the true purpose of the study.

Procedure

Once the study gained approved by the university's research ethics board, it was facilitated as an online survey through a research platform called Qualtrics. Participants were provided with a URL link to the survey through the Laurentian University's research participant pool, or through email if they had been recruited through the poster or flyer method. This link directed participants to a webpage that described the nature of the study, the eligibility criteria, the types of questions and tasks they would be asked to complete, and their rights as participants

to withdraw without academic penalty. Resources were also provided so that participants could contact someone if they had questions or concerns about the study. Once participants indicated they had read the informed consent page and met the eligibility requirements, they were directed to a webpage that contained the religious individual differences measures (i.e., the R-RLI and RRFS), in addition to a brief measure of religious identity. After participants completed the religious individual difference measures they were exposed to a distractor task. The distractor task required participants to read a short neutral paragraph in which they were asked to count all the letter A's in the paragraph. This task was included to prevent possible interference between the religious individual difference measures and the religious priming task. Participants were asked to enter the number of letter A's they counted in a text box that was displayed below.

After the distractor task, participants were randomly assigned to one of two religious priming conditions (abstract or concrete). In each priming condition, participants were asked to complete a sentence-unscrambling task which consisted of 10 items (scrambled-sentences). Half of the items contained a religious prime (abstract or concrete) while the other half contained a neutral prime. After the sentence-unscrambling task participants were asked to complete the BIF (Vallacher & Wegner, 1989) which measured for construal levels. This scale was administered after the sentence-unscrambling task to determine if the abstract or concrete religious primes elicited abstract or concrete cognitions. Afterwards, participants were asked to rate their feelings towards various religious and non-religious groups using feeling thermometers, in addition to a modified IOS scale which measured for perceived similarity. Participants were then asked to complete a short demographic questionnaire and a suspicion probe before they were debriefed.

Results

Descriptive Statistics

Data screening and descriptive statistics were computed for the entire sample and the Christian subsample. The entire sample (N = 197) included cases with missing data on three of the religious individual difference measures: intrinsic religiosity (two), and RF (one). The entire sample also included cases with missing data on evaluation thermometers towards agnostics (eight), atheists (10), Buddhists (five), Christians (five), Jews (seven), Muslims (nine), religious others (four), and non-religious others (seven). Case with missing values were also observed for the Inclusion of Others in the Self scale (i.e., perceived similarity) with Buddhists (one), Christians (one), Jews (one), and Muslims (two). Descriptive statistics and alpha reliabilities for the primary measures in the entire sample and Christian subsample are displayed in Table 3. Normality of the distributions was assessed with the Shapiro-Wilk test. Results showed that all primary measures significantly deviated from a normal distribution ($p < .05$). Although the distributions were somewhat skewed or kurtotic, transformation was not an option for correcting non-normality as this would have complicated the data generated by PROCESS (Hayes, 2018), making the interpretation of the results more difficult. Importantly, according to central limit theorem, the sample size is considered robust to approach assumptions of normality without the violations affecting the results significantly (Gravetter & Wallnau, 2014).

Table 3

Means, Standard Deviation, and Alpha Reliabilities for Primary Measures

	Entire Sample			Christian Subsample		
Measure	*M*	*SD*	*α*	*M*	*SD*	*α*
Individual difference measures						
Religious Quest	4.50	1.13	.80	4.37	1.04	.75
Religious Fundamentalism	3.01	1.28	.91	3.29	1.19	.90
Intrinsic Religiosity	4.67	1.31	.87	4.78	1.20	.86
Extrinsic Religiosity	4.01	1.08	.74	4.11	0.98	.69
Religious Identity	3.26	1.00	-	3.15	0.93	-
Construal Levels	0.63	0.24	.70	0.64	0.24	.70
Dependent measures						
EV Agnostics	66.20	27.72	-	61.51	28.70	-
EV Atheists	61.51	30.89	-	59.26	32.50	-
EV Buddhists	75.19	23.12	-	72.30	24.15	-
EV Christians	74.49	23.66	-	80.19	20.93	-
EV Jews	72.08	23.01	-	71.65	23.47	-
EV Muslims	66.66	27.4	-	65.41	28.07	-
EV Religious Others	74.25	22.37	-	76.97	20.07	-
EV Non-Religious Others	71.92	25.12	-	71.26	25.94	-
IOS Agnostics	3.37	1.89	-	3.12	1.72	-
IOS Atheists	3.07	1.87	-	2.93	1.80	-
IOS Buddhists	3.91	1.75	-	3.67	1.64	-
IOS Christians	4.87	1.78	-	5.69	1.21	-
IOS Jews	3.69	1.69	-	3.85	1.58	-
IOS Muslims	3.35	1.84	-	3.35	1.68	-
IOS Religious Others	4.48	1.55	-	4.65	1.45	-
IOS Non-Religious Others	3.94	1.72	-	3.92	1.75	-

Note: N = 197; M = Mean; SD = Standard Deviation; α = Cronbach's alpha. EV = Evaluation Thermometer; IOS = Inclusion of Other in the Self (Perceived Similarity).

Data screening and descriptive statistics were also computed for a subset of Christian participants derived from the entire sample (see Table 3). The Christian subsample (n = 125) included cases with missing values on two of the religious individual difference measures, intrinsic religiosity (one) and RF (one). The Christian subsample also included cases with missing data on evaluation thermometers towards agnostics (four), atheists (six), Buddhists (three), Christians (one), Jews (three), Muslim (six), religious others (one) and non-religious others (three). Cases with missing values were also observed for perceived similarity with Christians (one) and Jews (one). Normality of the distributions was assessed with the Shapiro-Wilk test. Results showed that all primary measures significantly deviation from a normal distribution ($p < .05$); however, quest was shown to be normally distributed ($p > .05$). Although these measures were somewhat skewed or kurtotic, transformation was not an option for correcting non-normality as this would have complicated the data generated by PROCESS (Hayes & Little, 2018). However, given that the subsample is considered robust to approach assumptions of normality (Gravetter & Wallnau, 2014) I proceeded to test for linear relations.

Correlations Among Religiosity Measures

Bivariate correlations for the primary measures in the entire sample are displayed in Table 4. As shown, religious quest showed a significant, negative association with RF and a modest positive association with extrinsic religiosity. RF showed a significant, strong, positive association with intrinsic religiosity, a modest positive association with extrinsic religiosity, and a moderate positive association with religious identity. Intrinsic religiosity showed a significant, strong, positive association with religious identity and a moderate, positive association with extrinsic religiosity. Construal levels (i.e., the BIF) showed a significant modest positive correlation with intrinsic religiosity. Given the significant associations observed among the

religious individual difference measures, these variables were included as covariates in the moderated regression for religious quest and fundamentalism. The rationale was to control confounding effects these religious individual differences may have on the outcome measures.

Table 4

Bivariate Correlations for Primary Measures (Entire Sample)

Measure	Religious Quest	Religious Fundamentalism	Intrinsic Religiosity	Extrinsic Religiosity	Religious Identity	Construal Levels
Religious Quest	-	-.40**	.01	.14*	-.05	.05
Religious Fundamentalism		-	.54**	.24**	.38**	-.02
Intrinsic Religiosity			-	.28**	.59**	.19**
Extrinsic Religiosity				-	.09	.11
Religious Identity					-	.10
Construal Levels						-

Note: ** Correlation is significant at the .01 level. * Correlation is significant at the .05 level.

Bivariate correlations were also computed for the primary measures for the Christian subsample (see Table 5). Religious quest showed a significant, moderate, negative association with RF and a modest positive association with extrinsic religiosity. RF showed a significant, strong, positive association with intrinsic religiosity and a moderate, positive association with religious identity. Intrinsic religiosity showed a significant, strong, positive association with religious identity. Construal levels (i.e., the BIF) did not correlate significantly with any of the religious individual difference measures. Although the religious individual differences did not correlate as strongly with each other in the Christian subsample, they were included as covariates in the moderated regression analyses as they may have a confounding influence on the outcome measures.

Table 5

Bivariate Correlations for Primary Measures (Christian Subsample)

Measure	Religious Quest	Religious Fundamentalism	Intrinsic Religiosity	Extrinsic Religiosity	Religious Identity	Construal Levels
Religious Quest	-	-.36**	-.04	.20*	-.14	.04
Religious Fundamentalism		-	.56**	.01	.52**	-.08
Intrinsic Religiosity			-	.08	.72**	.17
Extrinsic Religiosity				-	.09	.08
Religious Identity					-	.02
Construal Levels						-

Note: ** Correlation is significant at the .01 level. * Correlation is significant at the .05 level.

Distinct Religious Primes and Evaluations of Religious and Non-Religious Others

A series of independent sample *t*-tests was conducted to evaluate the role of distinct religious primes on evaluations towards, and perceived similarity with, religious and non-religious others. These analyses were performed for the entire sample *(N* = 197) and Christian subsample *(n* = 125). Results for the entire sample revealed that distinct religious primes (abstract or concrete) led to significant differences in perceived similarity with agnostics $t(195) = 2.13$, $p < .05$ and atheists $t(195) = 2.26$, $p < .05$. Specifically, it was shown that those who were exposed to concrete religious primes reported higher levels of perceived similarity with agnostic individuals ($M = 3.68$, $SD = 2.02$) compared to those who were exposed to abstract religious primes ($M = 3.11$, $SD = 1.75$). Similarly, those who were exposed to concrete religious primes reported higher levels of perceived similarity with atheist individuals ($M = 3.40$, $SD = 1.97$) compared to those who were exposed to abstract religious primes ($M = 2.80$, $SD = 1.74$). Results

from the Christian subsample revealed no significant differences in evaluations towards, or perceived similarity with, religious or non-religious others as a result of distinct religious primes.

Distinct Religious Primes and Cognitive Construals

A series of independent-samples *t*-tests was also conducted to determine if the distinct religious primes led to differing construal levels as measured by the BIF. Results from the entire sample showed no significant differences between construal levels for those in the abstract (M = 6.18, SD = 2.63) or concrete (M = 6.55, SD = 2.08) priming conditions, $t(194.93) = 1.07$, $p = .28$. This was also true for the Christian subsample; construal levels did not significantly differ between those in the abstract (M = 6.31, SD = 2.68) or concrete (M = 6.57, SD = 1.88) priming conditions, $t(122.958) = .63$, $p = .53$. Thus, I proceeded to evaluate the potential moderating roles of religious quest and fundamentalism in the relationship between distinct religious primes and evaluations towards, and perceived similarity with, dissimilar religious and non-religious others. Religious quest and fundamentalism were also evaluated as potential moderators in the relationship between distinct religious primes and overall construal levels.

Moderation Analysis: Religious Quest and Fundamentalism

To test for the combined effects of distinct religious primes, and each potential moderator (religious quest and fundamentalism), on evaluations towards various religious and non-religious groups, two-way categorical (abstract vs. concrete religious priming) by continuous variable (religious quest and fundamentalism) multiple moderated linear regression was performed with PROCESS macro version 3.5 (Hayes, 2020) for IBM SPSS Statistics version 25. The categorical variable (distinct religious primes) was dummy coded such that the concrete condition was coded as the comparison group (0) and the abstract condition as the group to be contrasted with it (1). The categorical variable (distinct religious primes) was entered into the independent variable

dialogue box (*X*). The mean-centered moderator variable (religious quest or fundamentalism) was entered into the dialogue box for a single moderator (*W*). Afterwards, mean-centered pretest scores of religious individual differences (i.e., intrinsic and extrinsic religiosity, religious quest or fundamentalism, and religious identity), were entered as covariates. Evaluations towards various religious and non-religious groups (e.g., agnostics, Buddhists, etc.), and perceived similarity with these groups, were entered into the outcome variable dialogue box (*Y*). Separate analyses were performed for each religious and non-religious group as only one dependent variable could be entered in the model at a time. Model 1 was used for a simple moderated regression analysis. The "Johnson-Neyman" option was selected in the "options" menu to generate output for conditional effects. These steps were repeated for the RF moderation analysis, only mean-centered RF was entered into the dialogue box for a single moderator (*W*) and mean-centered quest was entered into the model as a covariate. These moderation analyses were computed for the entire sample ($N = 197$) and the Christian subsample ($n = 125$).

Religious Quest

***Entire sample*.** Multiple moderated regression revealed no significant interactions between religious quest and the priming manipulation for evaluations towards, or perceived similarity with, the religious and non-religious others that were evaluated in the present study. Moreover, religious quest did not directly predict evaluations towards, or perceived similarity with, the religious or non-religious groups. Religious quest was also evaluated as a moderator in the relationship between distinct religious primes and construal levels. No significant interactions or direct effects were observed for quest in the relationship between distinct religious primes and construal levels. However, given that the entire sample contained an assortment of religious others, I proceeded to evaluate quest as a potential moderator in the Christian subsample.

Christian Subsample. Multiple moderated regression in the Christian subsample revealed a significant overall moderation model for religious quest and evaluations towards Christians, $F(7, 116) = 3.44$, $p < .01$, $R^2 = .17$, MES = 384.76 (see Table 6 for regression model summary). The second step in the moderation model revealed a significant interaction for quest and the priming manipulation, $\beta = -11.20$, $se = 3.54$, $t(116) = -3.16$, $p < .01$. Analysis of simple slopes revealed a significant interaction for quest at one standard deviation above the mean, $\beta = -12.60$, $se = 5.11$, $t(116) = -2.47$, $p < .05$. Religious quest at one standard deviation below the mean also approached significance, $\beta = 8.40$, $se = 4.76$, $t(116) = 1.77$, $p = .08$ (see Figure 1). To further probe the interaction, the JN technique was used to identify regions of significance that indicate where in a range of values that the moderator (W) significantly interacted with the priming manipulation to produce an effect on evaluations towards Christians. The JN technique revealed two values of the moderator ($W = -1.03$ and $W = .64$) that mark regions of significance where quest significantly interacted with the priming manipulation. Conditional effects analysis showed that when quest (mean-centered) was less than or equal to -1.03, or greater than or equal to .64, distinct religious primes had a significant effect on overall evaluations towards Christians. Specifically, results showed that low quest significantly predicted more favourable evaluations towards Christians in response to abstract religious primes. Conversely, high quest significantly predicted less favourable evaluations towards Christians in response to abstract religious primes. Figure 2 depicts the regions of significance where quest significantly interacted with the priming manipulation to influence evaluations towards Christians.

Table 6

Regression Model Summaries for Evaluations towards Christians, Religious Others, and Buddhists as a Function of Religious Quest and Distinct Religious Primes (Christian Subsample)

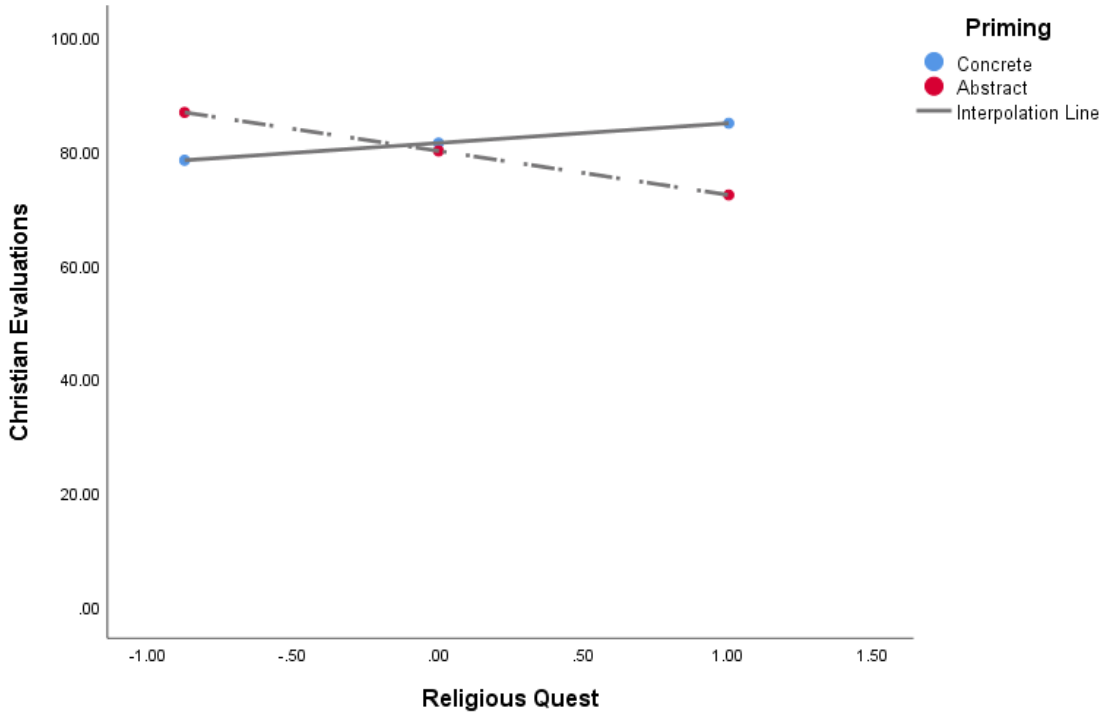
Predictor	Coefficient	*se*	*t*	*p*
Christian evaluations				
Model R2 = .17, MES = 384.76				
Constant	68.33	9.40	7.27	.00
Priming Condition	-1.38	3.64	-.38	.71
Religious Quest	3.47	2.89	1.20	.23
Interaction	-11.20	3.54	-3.16	.01
Covariates				
Intrinsic Religiosity	1.34	2.31	.58	.56
Extrinsic Religiosity	2.92	1.87	1.57	.12
Religious Fundamentalism	-1.82	1.99	-.92	.36
Religious Identity	4.13	2.81	1.47	.14
Interaction ΔR^2	.07		$F = 10.00$	.01
Religious others evaluations				
Model R2 = .14, MES = 366.33				
Constant	65.13	9.21	7.07	.00
Priming Condition	1.05	3.55	.29	.77
Religious Quest	2.02	2.79	.72	.47
Interaction	-9.68	3.43	-2.83	.01
Covariates				
Intrinsic Religiosity	1.48	2.25	.66	.51
Extrinsic Religiosity	1.55	1.81	.86	.39
Religious Fundamentalism	-4.47	1.94	-2.30	.02
Religious Identity	3.63	2.75	1.32	.19
Interaction ΔR^2	.06		$F = 7.99$	.01
Buddhist evaluations				
Model R2 = .11, MES = 552.84				
Constant	60.34	11.36	5.31	.00
Priming Condition	.14	4.38	.03	.97
Religious Quest	1.87	3.43	.54	.59

Interaction	-7.97	4.25	-1.88	.06
Covariates				
Intrinsic Religiosity	1.76	2.79	.63	.53
Extrinsic Religiosity	-.04	2.23	-.02	.99
Religious Fundamentalism	-7.02	2.40	-2.93	.01
Religious Identity	3.85	3.39	1.13	.26
Interaction ΔR^2	.03		F = 3.53	.06

Note. All coefficients are unstandardized and based on models with all primary variables entered.

Figure 1

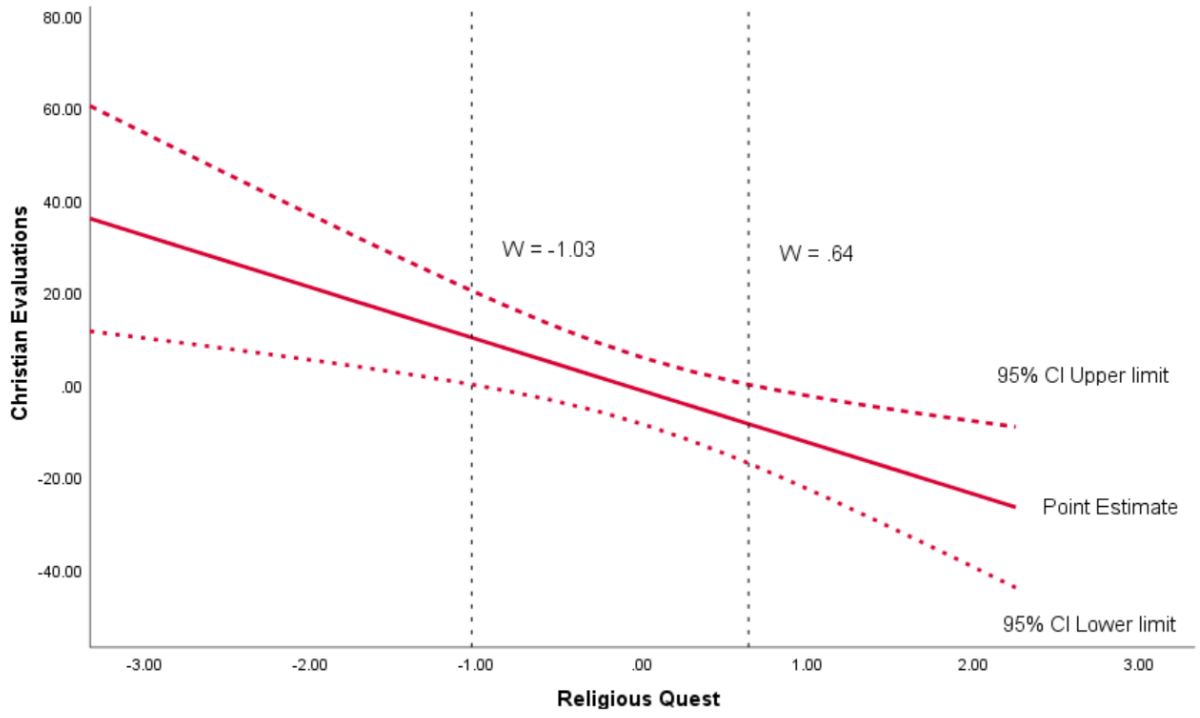
Christian Evaluations as a Function of Religious Quest and Priming Manipulation (Christian Subsample).



Note. This figure depicts data from simple slopes to illustrate the interaction between religious quest and the priming manipulation on evaluations towards Christians. The x-axis represents mean-centred values of religious quest at one standard deviation above and below the mean. The y-axis depicts overall Christian evaluations, with values ranging from 0 to 100 to represent degree of favourability. The data points represent low, medium, and high values of religious quest in the abstract (red) or concrete (blue) priming conditions. The interpolation line represents the line of best fit for the regression model predicting Christian evaluations as a function of religious quest and the priming manipulation.

Figure 2

Conditional Effects of Religious Quest and Priming Manipulation on Christian Evaluations (Christian Subsample)



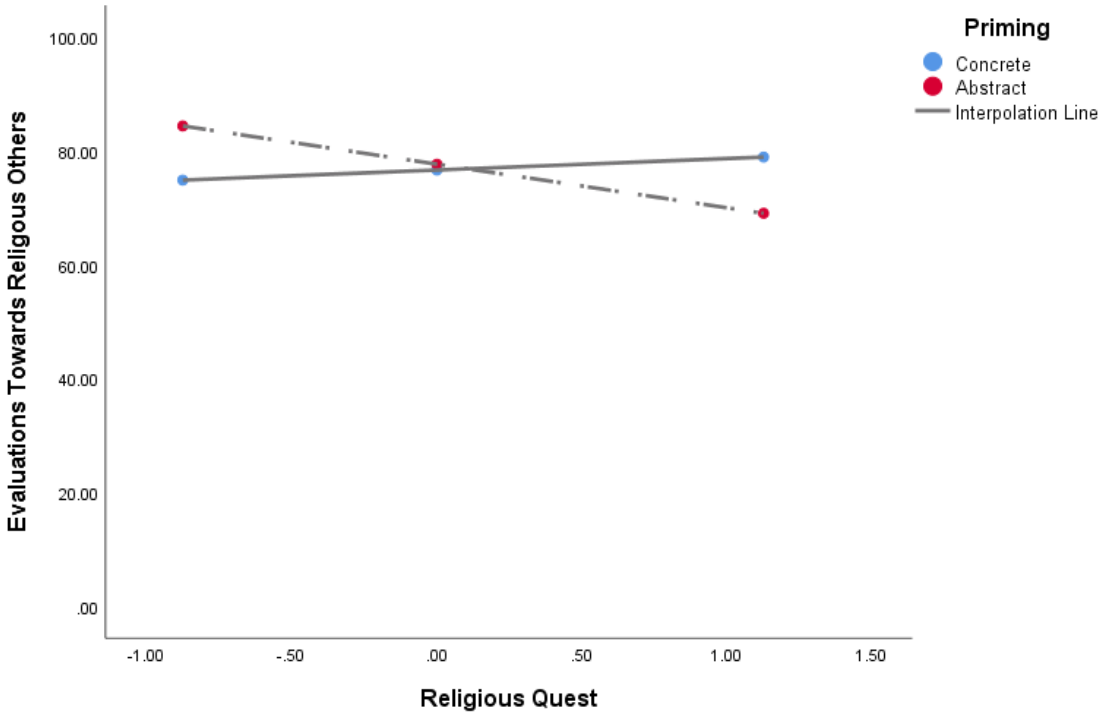
Note. This figure depicts the regions of significance where religious quest significantly interacted with the priming manipulation to produce a conditional effect on evaluations towards Christians. The y-axis represents overall evaluations towards Christians, with values ranging from 0 to 100 to represent degree of favourability. The x-axis represents mean-centred values of religious quest. The dashed vertical lines represent the values of quest where the priming manipulation had a significant effect on Christian evaluations.

A significant overall moderation model was also observed for religious quest and evaluations towards religious others, $F(7, 116) = 2.75$, $p = .01$, $R^2 = .14$, MSE = 366.33 (see Table 6 for regression model summary). The second step in the moderation model revealed a significant interaction for religious quest and the priming manipulation, $\beta = -9.68$, $se = 3.43$, $t(116) = -2.83$, $p < .01$. Analysis of simple slopes revealed a significant interaction for quest at one standard deviation below the mean, $\beta = 9.50$, $se = 4.65$, $t(116) = -2.04$, $p < .05$. Religious quest at one standard deviation above the mean also approached significance, $\beta = -9.87$, $se = 5.23$, $t(116) = -1.89$, $p = .06$ (see Figure 3). To further probe the interaction, the JN technique was used to identify values of the moderator where the interaction became significant. The JN technique revealed two values ($W = -.82$ and $W = 1.23$) where quest significantly interacted with the priming manipulation. Conditional effects analysis showed that when quest (mean-centered) is less than or equal to -.82, or greater than or equal to 1.23, distinct religious primes had a significant effect on overall evaluations towards religious others. Specifically, it was shown that low quest significantly predicted more favourable evaluations towards religious others in response to abstract religious primes. Conversely, high quest significantly predicted less favourable evaluations towards religious others in response to abstract religious primes. Figure 4

depicts the regions of significance where quest significantly interacted with the priming manipulation to produce a conditional effect on evaluations towards religious others.

Figure 3

Evaluations Towards Religious Others as a Function of Religious Quest and Priming Manipulation (Christian Subsample)

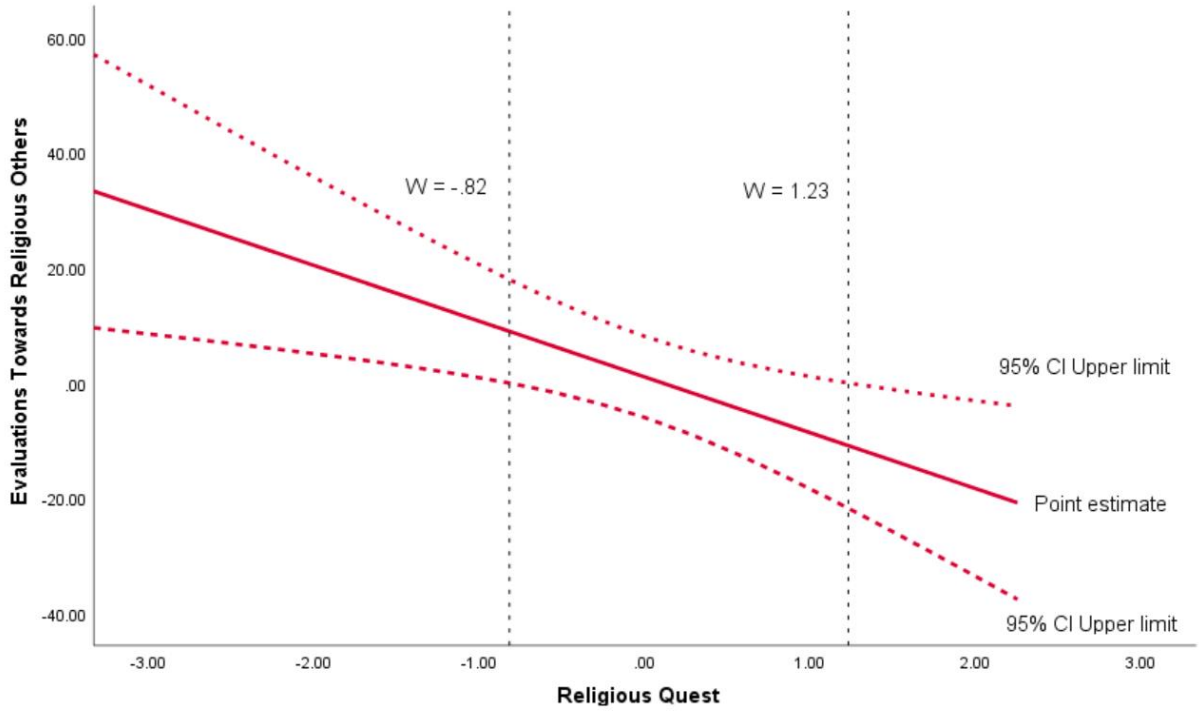


Note. This figure depicts data from simple slopes to illustrate the significant interaction between religious quest and the priming manipulation on evaluations towards religious others. The x-axis represents mean-centered values of religious quest at one standard deviation above and below the mean. The y-axis depicts overall evaluations towards religious others, with values ranging from 0 to 100 to represent degree of favourability. The data points represent low, medium, and high values of religious quest among those exposed to the abstract (red) or concrete (blue) priming conditions. The interpolation line

represents the line of best fit for the regression model predicting evaluations towards religious others as a function of religious quest and distinct religious primes.

Figure 4

Conditional Effects of Religious Quest and Priming Manipulation on Evaluations Towards Religious Others (Christian Subsample)

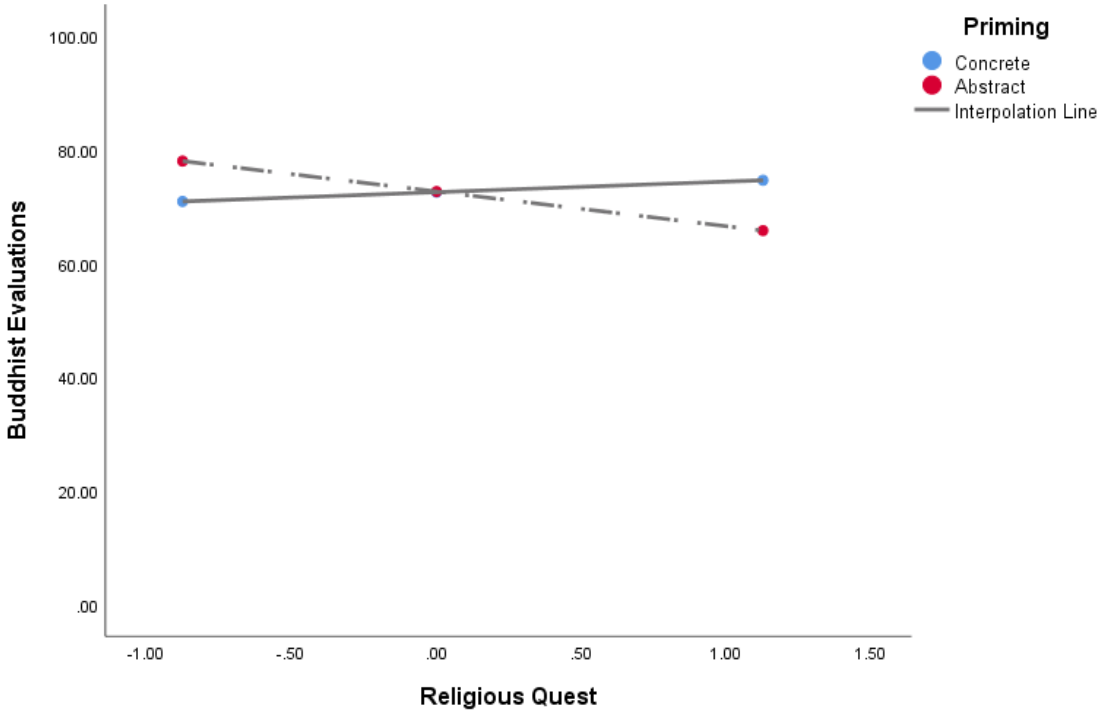


Note. This figure depicts the region of significance where religious quest significantly interacted with the priming manipulation to produce a conditional effect on evaluations towards religious others. The x-axis represents mean-centered values of religious quest; The y-axis represents overall evaluations towards religious others. The dashed vertical lines represent the low and high values of the moderator (religious quest) where the priming manipulation had a significant effect on evaluations towards religious others.

Multiple moderated regression in the Christian subsample also revealed a marginally significant interaction for religious quest and the priming manipulation on evaluations toward Buddhists, β = -7.98, *se* = 4.25, *t*(114) = -1.88, *p* = .06 (see Table 6 for regression model summary). Analysis of simple slopes revealed no significant interaction effects when quest was one standard deviation above, β = -8.85, *se* = 6.45, *t*(114) = -1.37, *p* = .17 or below the mean, β = 7.11, *se* = 5.77, *t*(114) = 1.23, *p* = .22. Thus, the JN technique was used to further probe the interaction to identify values of the moderator that may have significantly interacted with the priming manipulation. The JN technique revealed no values of the moderator where religious quest significantly interacted with the priming manipulation; however, there were values at the upper (*W* = 3.38, *p* = .06) and lower (*W* = -2.29, *p* = .07) limits of the moderator that approached significance. A close examination of the simple slopes showed a trend in which low quest tended to predict more favourable evaluations towards Buddhists in response to abstract religious primes. Conversely, high quest tended to predict less favourable evaluations towards Buddhists in response to abstract religious primes (see Figure 5 for depiction of simple slopes).

Figure 5

Buddhist Evaluations as a Function of Religious Quest and Priming Manipulation (Christian Subsample)



Note. This figure depicts data from simple slopes to illustrate the marginally significant interaction effect between religious quest and the priming manipulation on Buddhist evaluations. The x-axis represents mean-centered values of religious quest at one standard deviation above and below the mean. The y-axis depicts overall evaluations towards Buddhists, with values ranging from 0 to 100 to represent degree of favourability. The data points represent low, medium, and high values of religious quest among those exposed to the abstract (red) or concrete (blue) priming conditions. The interpolation line represents the line of best fit for the regression model predicting Christian evaluations as a function of religious quest and distinct religious primes.

No other significant interactions were observed for religious quest and the priming manipulation for evaluations towards, and perceived similarity with, the other religious or non-religious groups in the Christian subsample. However, a marginally significant interaction was observed between religious quest and the priming manipulation for construal levels, β = -.08, *se* = .04, $t(117) = -1.92$, $p = .06$ (see Table 7). Analysis of simple slopes revealed a value of the moderator that significantly interacted with the priming manipulation for quest at one standard deviation above the mean, β = -.13, *se* = .06, $t(117) = -2.09$, $p < .05$ (see Figure 6). The JN technique revealed a value of the moderator ($W = .81$) where quest significantly interacted with the priming manipulation. Conditional effects analysis showed that when quest (mean-centered) is equal to or greater than .81, distinct religious primes had a significant effect on construal level scores. Results showed that high quest predicted less abstract construal levels in response to concrete religious primes. Figure 7 depicts the regions of significance where quest significantly interacted with the priming manipulation to produce a conditional effect on construal levels.

Table 7

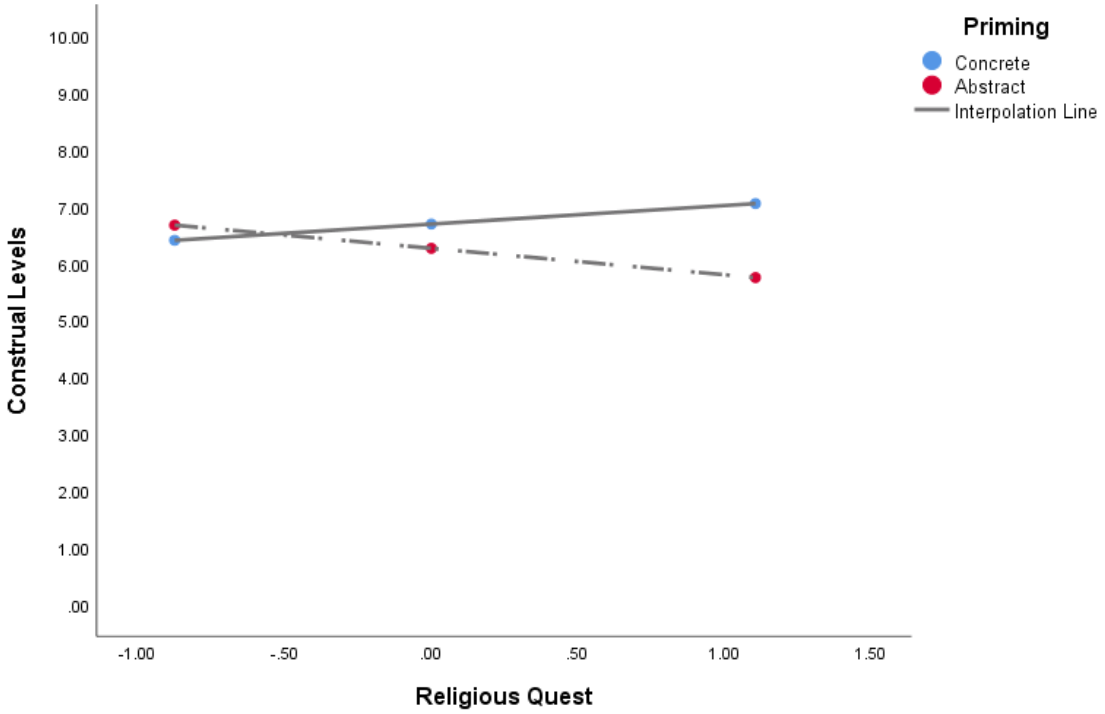
Regression Model Summary for Construal Levels as a Function of Religious Quest and Distinct Religious Primes (Christian Subsample)

Predictor	Coefficient	*se*	*t*	*p*
Model R^2 = .12, MES = 5.29				
Constant	7.91	1.10	7.18	.00
Priming Condition	-.42	.42	-1.00	.32
Religious Quest	.33	.34	.97	.33
Interaction	-.79	.41	-1.92	.06
Covariates				
Intrinsic Religiosity	.75	.27	2.79	.01
Extrinsic Religiosity	.16	.22	.74	.46
Religious Fundamentalism	-.45	.23	-1.91	.06
Religious Identity	-.39	.33	-1.17	.24
Interaction ΔR^2	.03		F = 3.70	.06

Note. All coefficients are unstandardized and based on models with all primary variables entered.

Figure 6

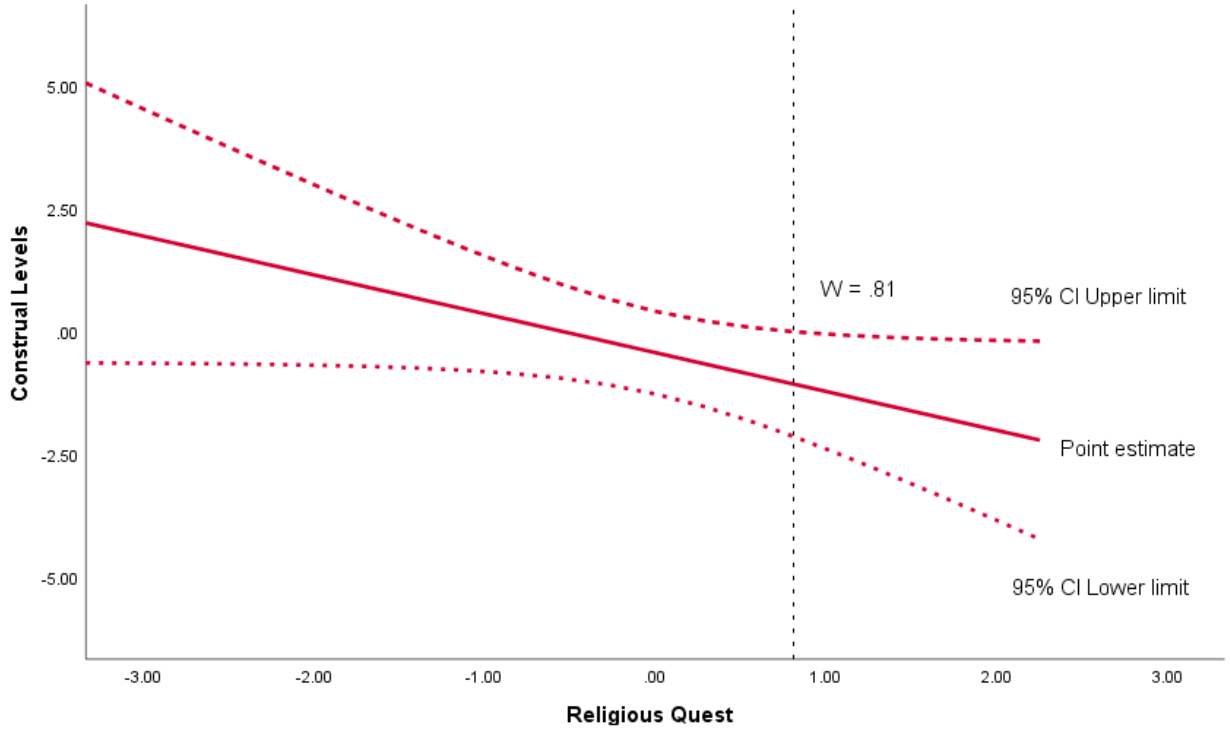
Construal Levels as a Function of Religious Quest and Priming Manipulation (Christian Subsample)



Note. This figure depicts data from simple slopes to illustrate the marginally significant interaction between religious quest and distinct religious primes on construal levels. The x-axis represents mean-centred values of religious quest at one standard deviation above and below the mean. The y-axis depicts construal level scores ranging from 0 to 10, with higher values indicating greater abstract construals. The data points represent low, medium, and high values of religious quest among those exposed to the abstract (red) or concrete (blue) priming conditions. The interpolation line represents the line of best fit for the regression model predicting construal levels as a function of religious quest and distinct religious primes.

Figure 7

Conditional Effects of Religious Quest and Priming Manipulation on Construal Levels (Christian Subsample)



Note. This figure depicts the region of significance where religious quest significantly interacted with the priming manipulation to produce a conditional effect on construal levels. The x-axis represents mean-centered values of religious quest. The y-axis represents total construal level scores. The dashed vertical line represents the value where quest significantly interacted with the priming manipulation to influence construal levels.

Results from the Christian subsample also revealed that religious quest had a direct effect on levels of perceived closeness with non-religious others, β = -.53, *se* = .30, *t*(117) = -2.20, p < .05. Results showed that high quest significantly predicted less perceived similarity with non-religious others. No other significant direct effects were observed for religious quest. Taken together, the interactions observed for religious quest and the priming manipulation seem to suggest that abstract primes have the potential to improve religious outgroup attitudes among those low in quest. However, for those high in quest abstract religious primes predicted less favourable evaluations towards some religious others, and potentially less abstract construals.

Religious Fundamentalism

Entire sample. Multiple moderated regression revealed no significant interactions between RF and the priming manipulation for evaluations towards, or perceived similarity with, religious or non-religious others in the entire sample. Additionally, no moderated or predictive effects were observed for RF in the link between distinct religious primes and construal levels. However, direct effects were observed for RF in regards to evaluations towards agnostics, β = -6.08, *se* = 2.58, *t*(209) = -2.36, p = .02 and Buddhists, β = -6.41, *se* = 2.15, *t*(212) = -2.99, p < .01. Specifically, it was shown that low RF significantly predicted more favourable evaluations towards agnostics and Buddhists among those in the entire sample. A marginally significant direct effect was also observed for RF and evaluations towards non-religious others, β = -4.50, *se* = 2.36, *t*(209) = -1.91, p = .06. Specifically, it was shown that higher RF tended to predict less favourable evaluations towards non-religious others. RF also significantly predicted perceived similarity with agnostics, β = -.38, *se* = .17, *t*(217) = -2.19, p < .05, Buddhists, β = -.52, *se* = .16 *t*(216) = -3.21, p < .01, and Christians, β = .32, *se* = .16 *t*(216) = 2.04, p < .05. Results showed that low RF significantly predicted greater perceived similarity with agnostics and Buddhists.

Conversely, high RF significantly predicted greater perceived similarity with Christians. Given that the finding for perceived similarity with Christians could have reflected a religious ingroup in the entire sample, I proceeded to evaluate RF as a moderator in the Christian subsample.

Christian Subsample. Multiple moderated regression revealed a significant overall moderation model for RF and evaluations towards agnostics, $F(7, 113) = 2.48$, $p < .05$, $R^2 = .13$, MES = 757.99 (see Table 8 for regression model summary). The second step in the moderation model revealed a significant interaction for RF and the priming manipulation, $\beta = 9.52$, $se = 4.51$, $t(113) = -2.66$, $p = .04$. Analysis of simple slopes revealed that RF approached significance at one standard deviation below the mean, $\beta = 11.94$, $se = 7.06$, $t(113) = -1.69$, $p = .09$ (see Figure 8). To further probe the interaction, the JN technique was used to identify values of the moderator where the interaction became significant. The JN technique revealed a value of the moderator ($W = -1.92$) where RF significantly interacted with the priming manipulation, and another value of the moderator that approached significance ($W = 3.38$, $p = .06$). Conditional effects analysis showed that when RF (mean-centred) was less than or equal to -1.92, distinct religious primes had a significant effect on overall evaluations towards agnostics. Results showed that low RF significantly predicted more favourable evaluations towards agnostics in response to concrete religious primes. Moreover, a trend was observed in which higher levels of RF tended to predict less favourable evaluations towards agnostics in response to concrete religious primes. Figure 9 depicts the region of significance where RF significantly interacted with the priming manipulation to produce a conditional effect on evaluations towards agnostics.

Table 8

Regression Model Summary for Evaluations towards Agnostics, Religious Others, and Buddhists as a function of RF and Distinct Religious Primes (Christian Subsample)

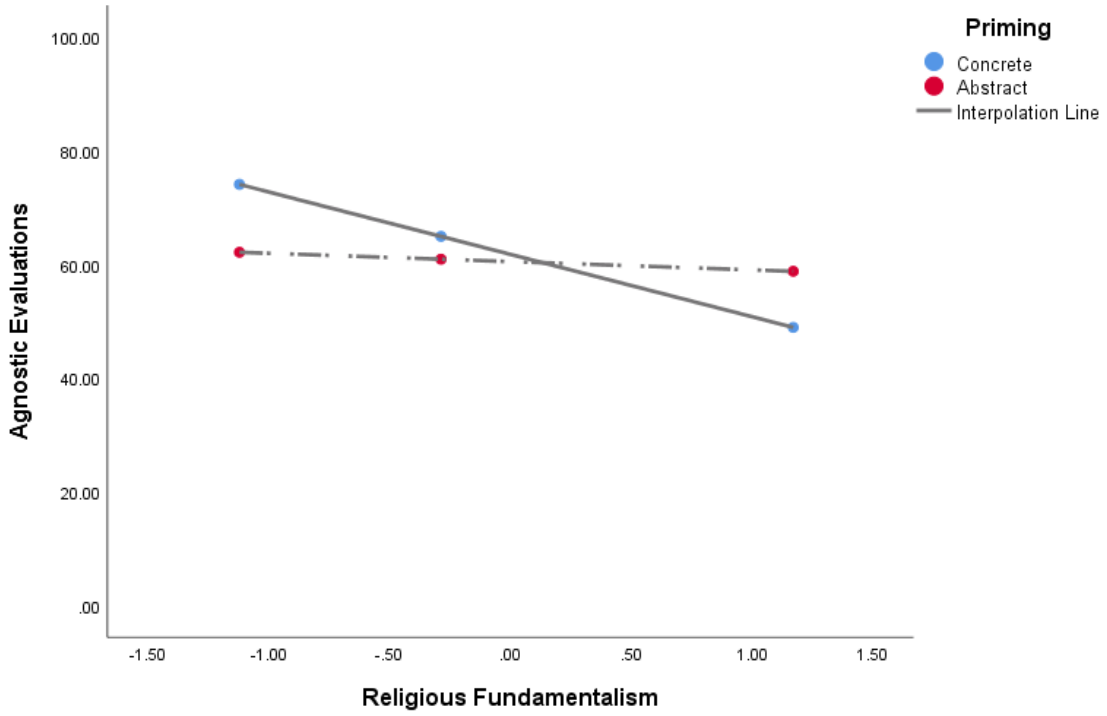
Predictor	Coefficient	*se*	*t*	*p*
Agnostic evaluations				
Model R^2 = .13, MES = 757.99				
Constant	27.14	13.35	2.03	.04
Priming Condition	-1.27	5.18	-.24	.81
Religious Fundamentalism	-10.98	4.12	-2.66	.01
Interaction	9.52	4.51	2.11	.04
Covariates				
Intrinsic Religiosity	0.14	3.26	.04	.97
Extrinsic Religiosity	-2.46	2.66	-.92	.36
Religious Quest	1.01	2.72	.37	.71
Religious Identity	10.98	3.99	2.75	.01
Interaction ΔR^2	.03		F = 4.46	.04
Religious others evaluations				
Model R^2 = .12, MES = 376.67				
Constant	67.56	9.36	7.22	.00
Priming Condition	1.15	3.60	.32	.75
Religious Quest	-9.34	2.84	-3.29	.01
Interaction	6.67	3.11	2.14	.03
Covariates				
Intrinsic Religiosity	3.17	2.28	1.39	.17
Extrinsic Religiosity	1.42	1.85	.77	.44
Religious Fundamentalism	-3.98	1.90	-2.10	.04
Religious Identity	2.67	2.80	.95	.34
Interaction ΔR^2	.03		F = 4.59	.03
Buddhist evaluations				
Model R^2 = .11, MES = 550.06				
Constant	62.92	11.35	5.54	.00
Priming Condition	.26	4.37	.06	.95
Religious Quest	-12.46	3.44	-3.62	.01

Interaction	7.66	3.78	2.03	.05
Covariates				
Intrinsic Religiosity	3.41	2.77	1.23	.22
Extrinsic Religiosity	-0.35	2.24	-.16	.88
Religious Fundamentalism	-3.09	2.31	-1.34	.18
Religious Identity	2.84	3.40	.84	.41
Interaction ΔR^2	.03		$F = 4.12$	.05

Note. All coefficients are unstandardized and based on models with all primary variables entered.

Figure 8

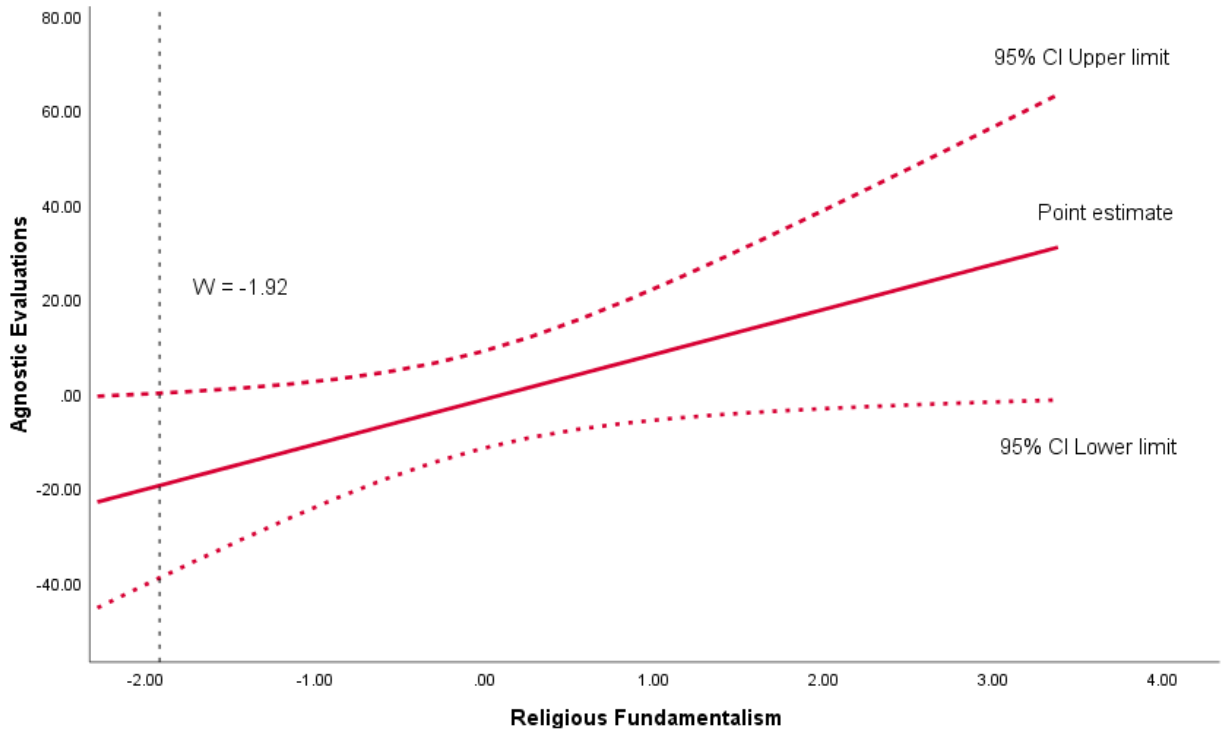
Agnostic Evaluations as a Function of Religious Fundamentalism and Priming Manipulation (Christian Subsample)



Note. This figure depicts data from simple slopes to illustrate the significant interaction between RF and the priming manipulation on evaluations towards agnostics. The x-axis represents mean-centered values of RF. The y-axis depicts overall evaluations towards agnostics, with values ranging from 0 to 100 to represent degree of favourability. The data points represent low, medium, and high values of RF among those exposed to the abstract (red) or concrete (blue) priming conditions. The interpolation line represents the line of best for the regression model predicting agnostic evaluations as a function of RF and distinct religious primes.

Figure 9

Conditional effects of Religious Fundamentalism and Priming Manipulation on Agnostic Evaluations (Christian Subsample)

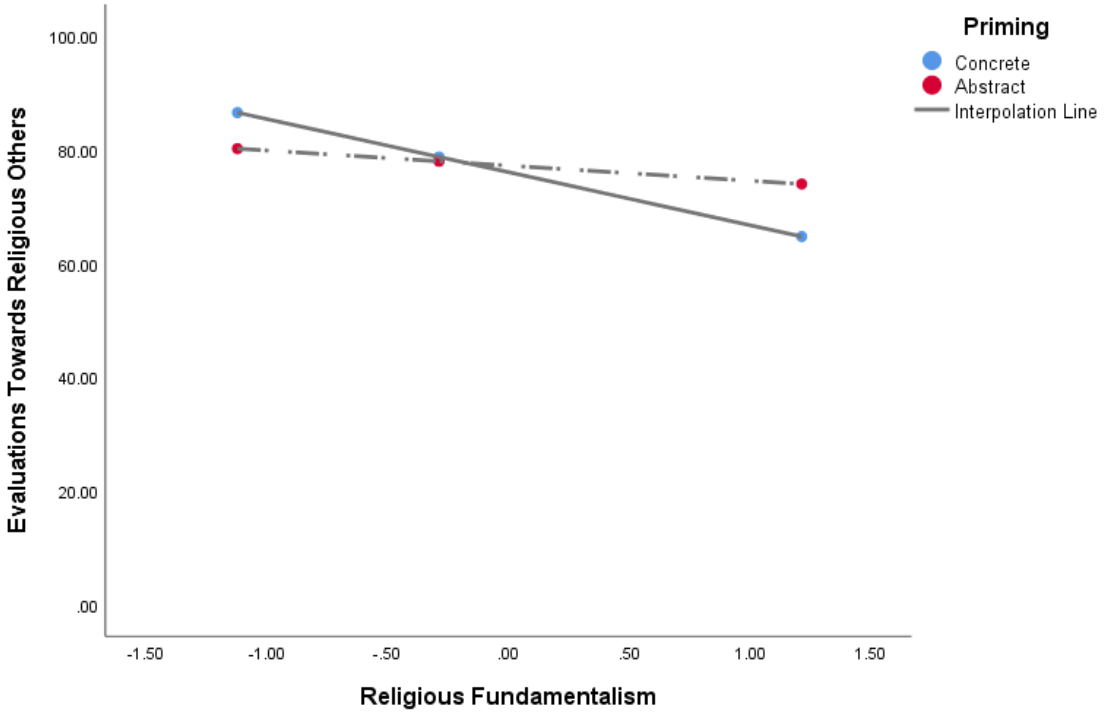


Note. This figure depicts the region of significance where RF significantly interacted with the priming manipulation to produce a conditional effect on evaluations towards agnostics. The x-axis represents mean-centred values of RF. The y-axis represents overall evaluations towards agnostics, with values ranging from 0 to 100 to represent degree of favourability. The dashed vertical line represents the value of the moderator where RF significantly interacted with the priming manipulation to influence agnostic evaluations.

In the Christian subsample, multiple moderated regression revealed a significant overall moderation model for RF and evaluations towards religious others, $F(116) = 2.22$, $p < .05$, $R^2 = .12$, MES = 376.67 (see Table 8 for regression model summary). The second step of the moderation model revealed a significant interaction between RF and distinct religious primes, $\beta = 6.67$, $se = 3.11$, $t(116) = 2.14$, $p < .05$. Analysis of simple slopes revealed a marginally significant effect for RF at one standard deviation above the mean $\beta = 9.24$, $se = 5.27$, $t(116) = 1.75$, $p = .08$ (see Figure 10). To further probe the interaction, the JN technique was used to identify values of the moderator where the interaction became significant. The JN technique revealed a value of the moderator ($W = 1.91$) where RF significantly interacted with the priming manipulation. Conditional effects analysis showed that when RF (mean-centred) is equal to or greater than 1.91, distinct religious primes had a significant effect on overall evaluations towards religious others. Results showed that high RF significantly predicted less favourable evaluations towards religious others in response to concrete religious primes. Figure 11 depicts the region of significance where RF significantly interacted with the priming manipulation.

Figure 10

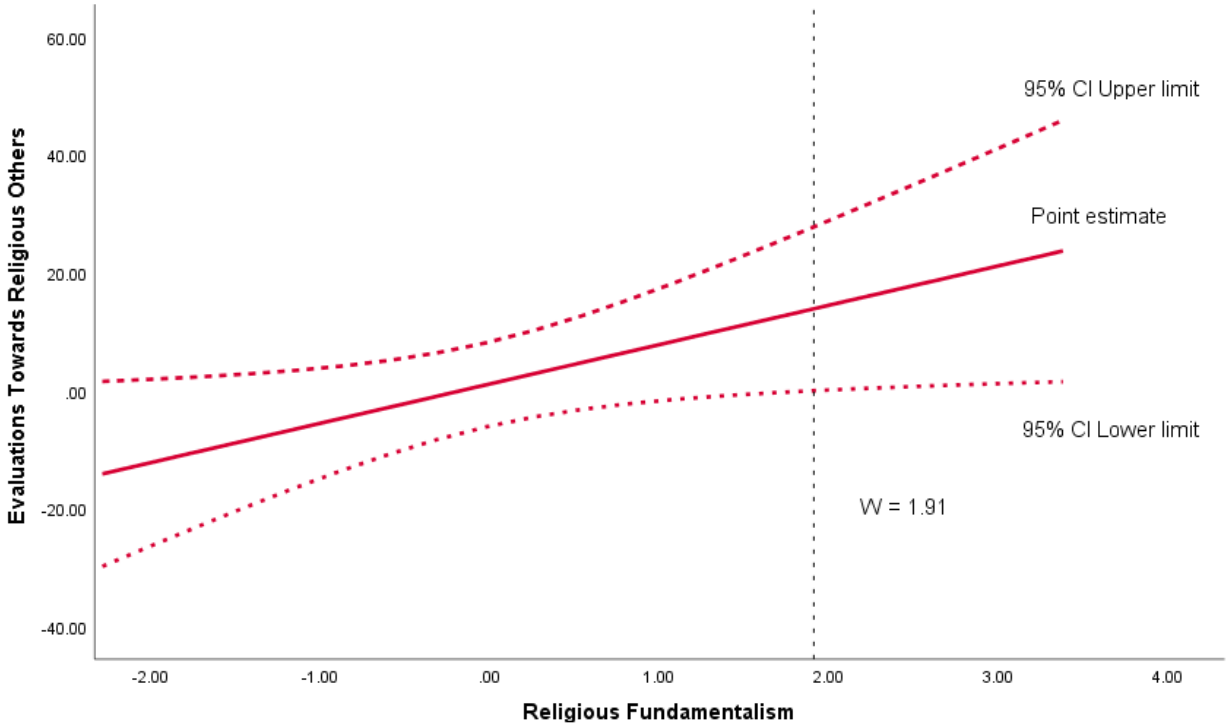
Evaluations of Religious Others as a Function of Religious Fundamentalism and Priming Manipulation (Christian Subsample)



Note. This figure depicts data from simple slopes to illustrate the predictive effect of distinct religious primes on evaluations towards religious others as a function of RF. The x-axis represents mean-centered values of RF at one standard deviation above and below the mean. The y-axis depicts overall evaluations towards religious others, with values ranging from 0 to 100 to represent degree of favourability. The data points represent low, medium, and high values of RF among those exposed to the abstract (red) or concrete (blue) priming conditions. The interpolation line represents the line of best fit for the regression model predicting evaluations towards religious others as a function of RF and distinct religious primes.

Figure 11

Conditional Effects of Religious Fundamentalism and Priming Manipulation on Evaluations Towards Religious Others (Christian Subsample)

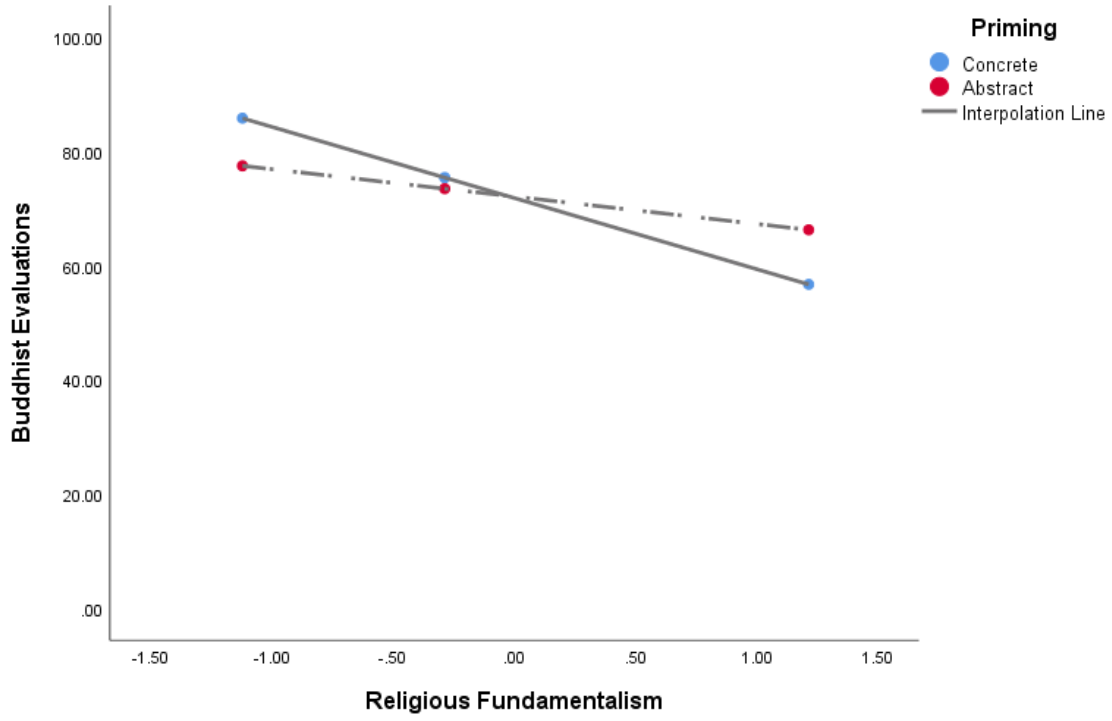


Note. This figure depicts the region of significance where RF significantly interacted with the priming manipulation to produce a conditional effect on evaluations towards religious others. The x-axis represents mean-centered values of RF. The y-axis represents overall evaluations towards religious others, with values ranging from 0 to 100 to represent degree of favourability. The dashed vertical line represents the value where RF significantly interacted with the priming manipulation to influence evaluations towards religious others.

Multiple moderated regression also revealed a marginally significant overall moderation model for RF and evaluations towards Buddhists in the Christian subsample, $F(114) = 2.04$, $p = .06$, $R^2 = .11$, MSE = 550.06 (see Table 8 for regression model summary). The second step in the moderation model revealed a significant interaction between RF and the priming manipulation, $\beta = 7.66$, $se = 3.78$, $t(114) = 2.03$, $p < .05$. Analysis of simple slopes revealed no significant effects for RF at one standard deviation above, $\beta = 9.55$, $se = 6.41$, $t(114) = 1.49$, $p = .14$, or below the mean, $\beta = -8.33$, $se = 6.01$, $t(114) = -1.39$, $p = .17$. The JN technique was used to further probe the interaction to identify values of the moderator that may have significantly interacted with the priming manipulation. The JN technique revealed no values where RF significantly interacted with the priming manipulation; however, conditional effects analysis revealed that high levels of RF ($W = 3.38$) approached significance ($p = .06$). A close examination of the simple slopes suggests a trend in which higher levels of RF tended to predict less favourable evaluations towards Buddhists in response to concrete religious primes (See Figure 12).

Figure 12

Buddhists Evaluations as a Function of Religious Fundamentalism Priming Manipulation (Christian subsample)



Note. This figure depicts data from simple slopes to illustrate the marginally significant interaction between RF and the priming manipulation on Buddhist evaluations. The x-axis represents mean-centered values of RF at one standard deviation above and below the mean. The y-axis depicts overall Buddhist evaluations, with values ranging from 0 to 100 to represent degree of favourability. The data points represent low, medium, and high values of RF among those in the abstract (red) or concrete (blue) priming conditions. The interpolation line represents the line of best fit for the regression model predicting Buddhist evaluations as a function of RF and distinct religious primes.

Results from multiple moderation regression also revealed that RF had a significant direct effect on evaluations towards agnostics (β = -10.98, *se* = 4.12, $t(113) = -2.66$, $p < .01$), Christians (β = -6.09, *se* = 2.95, $t(116) = -2.06$, $p < .05$), Jews (β = -9.32, *se* = 3.47, $t(114) = -2.69$, $p < .01$), Muslims (β = -9.50, *se* = 4.38, $t(111) = -2.17$, $p < .05$), and non-religious others (β = -11.14, *se* = 3.71, $t(114) = -2.99$, $p < .01$) in the Christian subsample. Specifically, it was shown that low RF significantly predicted more favourable evaluations towards agnostics, Christians and Jewish others. Conversely, high RF significantly predicted less favourable evaluations towards Muslims and non-religious others. Additionally, a significant direct effect was observed for RF and perceived similarity with Buddhists (β = -.68, *se* = .23, $t(117) = -3.01$, $p < .01$). Specifically, results showed that high RF significantly predicted less perceived similarity with Buddhist individuals. Finally, RF showed a direct effect on construal level in the Christian subsample, such that, low RF significantly predicted higher construal level scores.

Taken together, the findings suggest that concrete primes have some potential to elicit more favourable evaluations towards some religious and non-religious others among those low in RF; however, they may also increase less favourable evaluations towards some religious others among those high in RF.

Discussion

Over the last decade there has been new research to suggest that priming religiosity can have differential effects on attitudes towards various religious and non-religious others (Clobert, Saroglou, & Hwang, 2015; Shariff & Norenzayan, 2007; Preston & Ritter, 2013). These findings are significant considering that past religious priming studies have been critiqued due to inconsistencies or an inability to replicate findings (Ramsey, Tong, Pang, et al., 2016; Gomes & McCullough, 2015). Given that research has shown that different types of religious priming

stimuli, such as the word “God” or “Religion”, can lead to differential effects in prosociability with an outgroup member (Preston & Ritter, 2013), the present study aimed to determine if distinct religious primes would predict differences in evaluations towards, and perceived similarity with, dissimilar religious and non-religious others. Distinct religious primes (abstract or concrete) were also evaluated as predictors of construal levels as described in CLT. Individual differences in religiosity (religious quest and fundamentalism) were evaluated as potential moderators in the link between distinct religious primes and evaluations towards, and perceived similarity with, dissimilar religious and non-religious others. These research aims were evaluated in the entire sample, which contained a heterogeneous mix of various religious individuals, and in a subsample of Christian participants derived from the entire sample in order to establish clear religious ingroup and outgroups effects. The findings of the present study are summarized and discussed in terms of the research questions and hypotheses in the proceeding sections.

Direct Effects of Distinct Religious Primes

The first research question evaluated was whether distinct religious primes (abstract or concrete) would lead to significant differences in evaluations towards, or perceived similarity with, dissimilar religious or non-religious others. Results from the entire sample revealed that distinct religious primes led to significant differences in levels of perceived similarity with agnostic and atheist individuals; however, they did not lead to significant differences in evaluations towards, or perceived similarity with, other dissimilar religious groups. Results from the independent-samples *t*-tests showed that concrete religious primes led to significantly greater levels of perceived similarity with agnostic and atheist individuals compared to abstract religious primes. Although the priming manipulation elicited differences in perceived similarity with agnostics and atheists in the entire sample, it did not lead to significant differences in evaluations

towards dissimilar religious others. Moreover, the pattern of results was contrary to what was predicted. Hypothesis one posited that abstract religious primes would lead to more favourable evaluations towards, and greater perceived similarity with, dissimilar religious and non-religious others as a result of activating broad and inclusive cognitions. Conversely, concrete religious primes were predicted to lead to less favourable evaluations towards, and perceived similarity with, dissimilar religious and non-religious others as a result of activating ingroup religious cognitions. However, the findings that were observed suggests that concrete religious primes lead to greater perceived similarity with agnostic and atheist individuals in the entire sample. Thus, it can be concluded that hypothesis one was largely unsupported in the entire sample.

It is also important to note that the finding observed for the priming manipulation in the entire sample did not hold true for those in the Christian subsample. No direct effects were observed for distinct religious primes on evaluations towards, or perceived similarity with, dissimilar religious or non-religious others. Thus, hypothesis one was not supported in the Christian subsample. One possible explanation for the discrepancy observed between the two samples could be due to the content of the religious primes that was used in the priming manipulation. The present study used Ritter and Preston's (2013) 'generic religious primes' that were established in their research to target a larger religious demographic; however, that research also included a set of Christian religious primes that represented abstract and concrete representations of religiosity. Future research may want to consider replicating the present findings in a larger sample of Christian participants to determine if abstract or concrete Christian religious primes can elicit a similar effect for perceived similarity with agnostics and atheists.

A question still remains to why concrete religious primes lead to greater levels of perceived similarity towards agnostics and atheists among participants in the entire sample. One

possible explanation for these results could be that agnostics, in general, tend to be viewed less negatively and more heterogeneously as a group (Bergstrom et al., 2021) which may have allowed for greater perceived similarity to occur among religious participants in the entire sample. However, the direct effect observed for concrete religious primes on levels of perceived similarity with atheists is less clear as research suggests that atheists tend to be viewed more negatively by religious others (Gervais et al., 2011). In theory, less perceived similarity should have occurred for atheists among those who were exposed to concrete religious primes if concrete religious primes elicit thoughts related to ingroup practices. However, an alternative explanation for these results may be attributed to processes involved CLT. For instance, research on CLT suggests that construing objects or events concretely reduces the psychological distance perceived between the individual and the object or event (Trope & Liberman, 2010). Thus, it is possible that concrete religious primes reduced levels of psychological distance for the religious participants in the entire sample that lead to greater perceived similarity with atheists. Future research could explore how construing religious concepts concretely can influence perceived psychological distance with agnostic and atheist individuals, and if this has an effect on overall evaluations towards these non-religious groups.

Distinct Religious Primes and Construal Levels

The second research question the present research aimed to address was whether distinct religious primes (abstract or concrete) would lead to differing construal levels as proposed by CLT. In discussing the findings from their research, Ritter and Preston (2013) noted that their abstract and concrete religious primes closely resembled the abstract and concrete construal levels that have been described in CLT. As previously mentioned in the literature review, manipulating construal levels has been shown to influence attitudes towards minority groups

(Lurguri, Napier, and Dovidio, 2012) as well as perceived similarity with other social groups (Levy et al., 2002). Thus, the present study aimed to determine if distinct religious primes (abstract or concrete) could elicit differing construal levels as suggested by past research.

Results from the independent-samples *t*-test revealed no significant differences in the construal levels among those who were exposed to abstract or concrete religious primes, which was contrary to what was predicted for this research question. This was true for participants in the entire sample and Christian subsample. One important hindsight observation is that the measure used in the present study to assess construal levels (i.e., the BIF) did not specifically measure for abstract or concrete religious cognitions, which may have been a limitation of the present study. Moreover, new research has emerged to lend support to the idea that some types of religious primes (i.e., "God" or "Religion") can elicit abstract or concrete construals that mediate prosocial or generous behaviours with religious ingroup and outgroup members (Karataş, & Gürhan-Canli, 2020). Thus, it is possible that only certain religious primes (i.e., God or Religion) are salient enough to elicit abstract or concrete construals that influence prosocial attitudes and behaviours towards some religious and non-religious groups. Future research should use different paradigms for inducing abstract or concrete cognitions to explore this possibility.

Moderating Influences of Religious Quest and Fundamentalism

The third research question the present study aimed to address was whether individual differences in religiosity (religious quest and fundamentalism) would moderate the effects of distinct religious primes (abstract or concrete) on evaluations towards, and perceived similarity with, religious and non-religious others. In the proceeding sections, the findings observed for religious quest and fundamentalism are summarized and discussed in terms of the moderation hypotheses.

Religious Quest. Research has shown that religious quest can be a protective factor against certain aspects of religiosity that may promote intergroup biases such as ingroup favouritism or outgroup derogation (Hunsberger, 1995; Haji & Hall, 2014; Van Tongeren, Hakin, Hook, et al., 2016). Given that religious quest has been shown to mitigate some of the negative effects of intergroup biases on prosocial attitudes and behaviours towards dissimilar others, the present study aimed to determine if religious quest would mitigate the potential negative effects of distinct religious primes on evaluations towards, and perceived similarity with, dissimilar religious and non-religious others. For abstract religious primes, it was expected that low quest would predict moderately favourable evaluations towards, and perceived similarity with, dissimilar religious and non-religious others. Alternatively, high quest was expected to predict highly favourable evaluations towards, and greater perceived similarity with, dissimilar religious or non-religious groups in response to abstract religious primes. For concrete religious primes, it was expected that low quest would predict less favourable evaluations towards, and less perceived similarity with, dissimilar religious and non-religious others. Alternatively, high quest was expected to predict moderately favourable evaluations towards, or perceived similarity with, dissimilar religious or non-religious others in response to concrete religious primes.

Results from the entire sample revealed that the hypotheses proposed for religious quest were unsupported; religious quest did not significantly interact with the priming manipulation to influence evaluations towards, or perceived similarity with, dissimilar religious and non-religious groups. Moreover, no direct effects were observed for religious quest and evaluations towards, or perceived similarity with, dissimilar religious and non-religious others. A moderation analysis

was also conducted to determine if religious quest moderated the effects of distinct religious primes on construal levels; no significant results were observed.

The potential moderating role of religious quest was also evaluated in the Christian subsample to test for clear religious ingroup and outgroup effects. Multiple moderation from the Christian subsample revealed significant interactions between religious quest and the priming manipulation for evaluations towards Christians and religious others. Specifically, results showed that low quest significantly predicted more favourable evaluations towards Christians and religious others in response to abstract religious primes. Conversely, high quest significantly predicted less favourable evaluations towards Christians and religious others in response to abstract religious primes. These findings are partially consistent with hypotheses proposed for religious quest. Consistent with the predictions outlined for quest in Table 1, individuals low in quest showed moderately favourable evaluations towards Christian and religious others in response to abstract religious primes, and less favourable evaluations towards these groups in response to concrete religious primes. Thus, this finding may suggest that abstract religious primes were somewhat successful in increasing positive attitudes towards Christians and religious others among those low in religious quest. However, the results observed for those high in religious quest was not consistent with the hypotheses. Initially, it was predicted that abstract religious primes would predict highly favourable evaluations towards dissimilar religious and non-religious others among those high in quest, and moderately favourable evaluations in response to concrete religious primes. However, concrete religious primes predicted more favourable evaluations towards Christians and religious others among those high in quest in the Christian subsample. One possible explanation for this finding could be a religious ingroup effect. For instance, considering that these interaction effects were not significant until analyzed

in the Christian subsample, it is possible that concrete religious primes activated thoughts of religious ingroup practices that lead to more favourable evaluations towards these perceived ingroup members (i.e., Christians and religious others).

An alternative explanation for the results discussed above could be processes of CLT. For example, research by Trope and Liberman (2010) showed that abstract construals tend to predict greater psychological distance with an evaluative target. Thus, it is possible that abstract religious primes elicited greater perceived psychological distance among those high in religious quest that led to less favourable evaluations towards Christians and religious others. It is also possible that for people who tend to think more abstractly (i.e., those high in quest), abstract religious primes may have generated greater psychological distance, which may have predicted less favourable evaluations towards other religious groups. Conversely, for people who tend to think more concretely (i.e., individuals low in quest) abstract religious primes may have elicited broader and more inclusive mindsets that led to more favourable evaluations towards these religious others. Future research could explore if the tendency to construe actions or objects abstractly or concretely influences the cognitive processes that become activated by religious priming, and how this may affect evaluations towards religious or non-religious others.

A marginally significant interaction was also observed between religious quest and distinct religious primes for evaluations towards Buddhists in the Christian subsample. Although analysis of simple slopes revealed no values where quest significantly interacted with the priming manipulation, conditional effects revealed a value of the moderator that approached significance at the upper limit. This finding may suggest that higher levels of quest tended to predict less favourable evaluations towards Buddhists in response to abstract religious primes.

However, considering that this effect was marginally significant caution is warranted when interpreting this result.

A marginally significantly interaction was also observed between religious quest and distinct religious primes on construal levels. Results showed a trend in which high religious quest tended to predict less abstract construal levels in response to abstract religious primes. This finding would be counterintuitive to what would be expected for abstract religious primes as abstract representations of religiosity should elicit more abstract cognitions or construal levels. However, it is possible that individual differences in the tendency to think more abstractly or concretely, may have interacted with the priming manipulation to elicit these effects. Although this finding was only marginally significant, it lends supports to the cognitive processes involved with CLT (Trope & Liberman, 2010) and suggests that individual differences in religiosity and cognition may play a role in one responds to abstract or concrete religious priming stimuli.

Results also showed that religious quest had a direct effect on levels of perceived similarity with non-religious others in the Christian subsample. Specifically, it was shown that high quest significantly predicted less perceived similarity with non-religious others. This finding may suggest that individuals high in quest view themselves as somewhat dissimilar to non-religious others among those in the Christian subsample. A summary of results obtained from the moderation for religious quest and distinct religious primes is provided below.

Table 9

Summary of Findings for Religious Quest Moderation Analysis (Christian Subsample)

Priming Condition		Low Quest	High Quest
Christian evaluations			
	Abstract	Greater favourability	Less favourability
	Concrete	Moderate favourability	Moderate favourability
Religious others evaluations			
	Abstract	Greater favourability	Less favourability
	Concrete	Moderate favourability	Moderate favourability
Buddhist evaluations (Marginally Sig.)			
	Abstract	Greater favourability	Less favourability
	Concrete	Moderate favourability	Moderate favourability
Construal levels (Marginally Sig.)			
	Abstract	Moderate construal levels	Lower construal levels
	Concrete	Moderate construal levels	Moderate construal levels

Religious Fundamentalism. Although RF has been associated with less tolerance towards dissimilar others in past research (Johnson, Rowatt, Barnard-Brak, et al., 2011; Leak & Finken, 2011; Rowatt & Franklin, 2004), the present study aimed to determine if distinct religious primes could mitigate some of the negative effects of RF on evaluations towards, and perceived similarity with, dissimilar religious and non-religious others. For abstract religious primes, it was expected that low RF would predict highly favourable evaluations towards, and greater perceived similarity with, dissimilar religious and non-religious others. Conversely, high

RF was expected to predict moderately favourable evaluations towards, and perceived similarity with, dissimilar religious or non-religious others in response to abstract religious primes. For concrete religious primes, it was expected that low RF would predict moderately favourable evaluations towards, and perceived similarity with, dissimilar religious and non-religious others. Conversely, high RF was expected to predict less favourable evaluations towards, and lower perceived similarity with, dissimilar religious or non-religious others in response to concrete religious primes.

Results from the entire sample revealed no significant interactions between RF and distinct religious primes which suggests that the moderated hypotheses for RF was not supported in a diverse religious sample. However, RF had a direct effect on evaluations towards, and perceived similarity with, some religious and non-religious others. Specifically, results showed that low RF significantly predicted more favourable overall evaluations towards agnostics and Buddhists in the entire sample. A marginally significant effect was also observed for RF and evaluations towards non-religious others, such that, higher RF tended to predict less favourable evaluations towards non-religious others. Results also showed that low RF significantly predicted greater perceived similarity with agnostic and Buddhist individuals. These results are consistent with past research that has shown low RF to be associated with greater tolerance towards religious and non-religious others (Altemeyer, 2003; Hunsburger & Jackson, 2005). However, the direct effect observed for RF and evaluations towards Christians suggests that high RF significantly predicted greater perceived similarity with Christians. This finding may be explained by the religious demographics of the entire sample considering that the majority self-identified with a Christian-based religion (63.5%). Given that a potential ingroup effect may

have occurred for those high RF, I proceeded to evaluate RF as a moderator in the Christian subsample.

In the Christian subsample, significant interactions were observed between RF and distinct religious primes for evaluations towards agnostics, religious others, and Buddhists. Results showed that low RF significantly predicted more favourable overall evaluations towards agnostics in response to concrete religious primes. Additionally, a trend was observed in which higher values of RF tended to predict less favourable evaluations towards agnostics in response to concrete religious primes; although this interaction effect did not reach significance. These results are consistent with the hypotheses proposed for RF in response to concrete religious primes. However, abstract religious primes did not predict evaluations towards agnostics for those low or high in RF. Thus, the predictions proposed for RF were only partially supported in moderation analysis for the Christian subsample. The observed interaction effect for low RF and concrete religious primes may be best explained by processes of CLT. For instance, it could be that concrete religious primes reduced levels of perceived psychological distance between those low in RF and the evaluative target (i.e., agnostics). Furthermore, the trend that was observed for high RF in response to concrete religious primes may suggest that concrete religious primes have the potential to elicit ingroup religious cognitions. Future research may consider evaluating the effects of concrete religious primes in sample with pre-establish groups of individuals who score low and high in religious fundamentalism, as the distribution of scores for RF in the entire and the Christian subsample were somewhat positively skewed in the present study.

A significant interaction was also observed between RF and distinct religious primes for evaluations towards religious others in the Christian subsample. Results showed that high RF significantly predicted less favourable evaluations toward religious others in response to concrete

religious primes. These results are consistent with the hypothesis proposed for RF in response to concrete religious primes. However, abstract religious primes appeared to have a negligible effect on evaluations towards, or perceived similarity with, dissimilar religious others among those high or low in RF. These findings may suggest that concrete religious primes are somewhat successful at eliciting cognitions associated with ingroup religious practices (i.e., prayer, ritual), which may have predicted less favourable evaluations towards those from other religious groups. Given that research has shown that individuals high in RF are less open to those from differing religious faiths (Altemeyer, 2003; Höllinger, 2020), it is possible that the concrete religious primes elicited an ingroup favouritism effect among those high in RF in the Christian subsample.

A marginally significant interaction was also observed between RF and the priming manipulation for evaluations towards Buddhists. However, analysis of simple slopes and conditional effects revealed no values of the moderator that significantly interacted with the priming manipulation. A close examination of the conditional effects revealed that at high values of RF were approaching significance in the JN analysis. Specifically, a trend was observed such that higher levels of RF tended to predict less favourable evaluations towards Buddhists in response to concrete religious primes. A summary of findings obtained from the RF moderation in the Christian subsample is displayed in Table 10. Given that this trend was similar to the interaction effect observed for high RF, distinct religious primes, and evaluations towards religious others, it is possible that individuals high in RF are more susceptible to the effects of concrete religious priming. The present study is the first to our knowledge that has shown differential effects in evaluations towards religious others in response to concrete religious primes, and that these effects can be moderated by individual differences in religiosity.

Results from the Christian subsample also revealed that RF directly predicted overall evaluations towards Christian, Jewish, Muslim and non-religious others. Specifically, it was shown that low RF significantly predicted more favourable evaluations towards Christians and Jewish others; high RF significantly predicted less favourable evaluations towards Muslim and non-religious others. RF also directly predicted perceived similarity with Buddhists among those in the Christian subsample; high RF significantly predicted less perceived similarity with Buddhist individuals. These findings are consistent with past research that has shown high RF to be associated with less tolerance towards dissimilar religious others (Johnson, Rowatt, Barnard-Brak, et al., 2011; Leak and Finken, 2011). Moreover, the direct effects observed for RF and overall evaluations towards Christian and Jewish others may be indicative of a religious ingroup effect, given the Judeo-Christian common heritage. Results from the Christian subsample also showed that RF had a direct effect on overall construal levels. Specifically, it was shown that low RF significantly predicted greater abstract construals than those high in RF. This finding is consistent with past research that has shown low RF to be associated with greater cognitive complexity and openness to religious doubt (Hunsberger et al., 1996). These results suggest that individual differences in religiosity may be accompanied with cognitive differences associated with construal levels. Future research may want to explore how manipulating abstract or concrete construal levels can influence religious outgroup evaluations among individuals high in RF.

Table 10

Summary of Findings for Religious Fundamentalism Moderation Analysis (Christian Subsample)

Priming Condition		Low RF	High RF
Agnostic evaluations			
	Abstract	Moderate favourability	Moderate favourability
	Concrete	Greater favourability	Less favourability (Marginal)
Religious others evaluations			
	Abstract	Moderate favourability	Moderate favourability
	Concrete	Moderate favourability	Less favourability
Buddhist evaluations (Marginally Sig.)			
	Abstract	Moderate favourability	Moderate favourability
	Concrete	Less favourability	Moderate favourability

Limitations and Future Considerations

There are some limitations of the present research that merit discussion. As previously mentioned, one limitation may have been the measure that was selected to assess for abstract and concrete cognitions following the priming manipulation. The measure that was used to evaluate construal levels (i.e., the BIF) contained items that were general in content which may not have captured abstract or concrete religious cognitions. The rationale for using this measure was that past research had used this scale as a manipulation check following a construal level priming procedure (Luguri, Napier, & Dovidio, 2012; McCrea, Wieber, & Myers, 2012). Future research should consider using a measure that is specifically designed to assess for abstract or concrete religious cognitions in order to determine if distinct religious primes elicit differing construal

levels. At the time of this research, I was unable to find a measure specifically designed to assess abstract or concrete religious cognitions; however, for research purposes, a measure could be constructed that is similar to the BIF that contains specific religious item content. For instance, the action of "praying" could be represented abstractly (i.e., "to communicate with God or a deity") or concretely (i.e., "putting one's hands together and kneeling"). A measure such as this would have been more appropriate for discerning construal levels in a religious context.

Another potential limitation of the present research may have been the priming method that was used to elicit abstract or concrete religious cognitions. As previously noted, research that has studied CLT has typically used a different priming procedure to induce abstract or concrete construal levels that would be followed by the BIF as a manipulation check (Luguri, Napier, & Dovidio, 2012; McCrea, Wieber, & Myers, 2012). In this procedure, participants would complete a task in which they would generate reasons as to *why* (abstract) they would want to achieve a certain goal, such as maintaining good health versus *how* (concrete) they would maintain good health (Luguri, Napier, & Dovidio, 2012). Although this experimental task has been shown to be effective in inducing abstract or concrete mindsets, the purpose of the present research was not to explicitly induce abstract or concrete mindsets, but to see if distinct religious primes (abstract or concrete) predicted differing construal levels. Moreover, it may have been beneficial to measure baseline construal levels before the priming manipulation to determine if distinct religious primes predicted differences in post-test construal level scores.

Another limitation to consider is the representativeness of the sample, or subsample, and the generalizability of results. For instance, the sample recruited for the present study was convenience-based which contained participants who were largely White and Christian. This may also explain why more significant results were observed in the Christian subsample than in

the entire sample. This means that the representativeness of the entire sample is limited, despite the large sample size. Furthermore, descriptive statistics from the entire sample and Christian subsample revealed a lack of high values for religious quest and fundamentalism. Thus, the generalizability of results in the moderation analyses may be limited to those who are moderately high in religious quest and fundamentalism. Given these limitations, the results of the present study should be interpreted cautiously when considering their implications in real world settings. However, is it also important to acknowledge that reactions to religious content in a complex multicultural society may themselves be complex. Thus, the present study examined a small piece of the bigger picture, but many other pieces remain to be evaluated in a religious context.

Conclusion

Although the present study has provided some evidence to suggest that distinct religious primes can predict differential effects on levels of perceived similarity with some non-religious others (agnostics and atheists), they did not appear to influence overall evaluations towards other dissimilar religious groups. Significant interactions were observed between the distinct religious primes and religious quest and fundamentalism for evaluations towards some religious and non-religious others, however. Thus, the effects of distinct religious primes seem to depend on individual differences in religiosity. Among Christians, low levels of quest predicted more favourable evaluations towards Christians and religious others in response to abstract religious primes, whereas higher levels of quest predicted less favourable evaluations towards Christians and religious others in response to abstract religious primes. From a CLT perspective, it is suspected that perceived psychological distance may be influenced by abstract representations of religiosity among those high or low in religious quest.

Concrete religious primes appeared to have more of an influence on RF. Among Christians, low RF predicted more favourable evaluations towards agnostics in response to concrete religious primes, whereas high RF predicted less favourable evaluations towards agnostics in response to concrete religious primes. Moreover, high levels of RF predicted less favourable evaluations towards religious others in response to concrete religious primes.

Taken together, these findings lend support to the idea that concrete religious primes may elicit cognitions associated with religious ingroup practices among those high in RF. For those in the Christian subsample, it seems that concrete religious primes can elicit greater intolerance for religious difference among those high in RF, whereas they may increase acceptance of religious difference among those low in RF. In contrast, abstract religious primes appear to have the potential to increase acceptance of religious difference among those low in religious quest. Thus, it's possible that distinct religious primes have the potential to increase or decrease tolerance for some religious and non-religious outgroups, but this also depends on individual differences in religious quest and fundamentalism. This novel study that investigated the combined effects of concrete vs. abstract religious primes and individual differences in religiosity suggests a potential way of influencing attitudes toward religious outgroups among those high in fundamentalism or low in quest, two groups that are typically less favourable toward religious difference. Future research may seek to apply these findings in interventions aimed at improving religious outgroup attitudes.

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Appendix A: Priming Stimuli

Generic Religious Primes

Concrete Primes	**Abstract Primes**
Prayer	Belief
Ritual	Faith
Scripture	Miracle
Sermon	Religion
Shrine	Revelation

Ritter, R. S., & Preston, J. L. (2013). Representations of religious words: Insights for religious priming research. *Journal for the Scientific Study of Religion*, *52*(3), 494-507.

Appendix B: Behavior Identification Form

Instructions: Your task is to choose the identification (a or b) that best describes the behavior for you. Simply place a checkmark next to the option you prefer. Be sure to respond to every item. Please mark only one alternative for each pair. Remember, mark the description that you personally believe is more appropriate for each pair. Note: only the items in **bold** were used.

1. Making a list
   a) Getting organized*
   b) Writing things down

2. Reading
   a) Following lines of print
   b) Gaining knowledge*

3. Joining the Army
   a) Helping the Nation's defense*
   b) Signing up

4. Washing clothes
   a) Removing odors from clothes*
   b) Putting clothes into the machine

5. Picking an apple
   a) Getting something to eat*
   b) Pulling an apple off a branch

6. Chopping down a tree
   a) Wielding an axe
   b) Getting firewood*

7. Measuring a room for carpeting
   a) Getting ready to remodel*
   b) Using a yard stick

8. Cleaning the house
   a) Showing one's cleanliness*
   b) Vacuuming the floor

9. Painting a room
   a) Applying brush strokes
   b) Making the room look fresh*

10. Paying the rent
   a) Maintaining a place to live*
   b) Writing a check

11. Caring for houseplants
   a) Watering plants
   b) Making the room look nice*

12. Locking a door

a) Putting a key in the lock
b) Securing the house*

13. Voting

a) Influencing the election*
b) Marking a ballot

14. Climbing a tree

a) Getting a good view*
b) Holding on to branches

15. Filling out a personality test

a) Answering questions
b) Revealing what you're like*

16. Tooth brushing

a) Preventing tooth decay*
b) Moving a brush around in one's mouth

17. Taking a test

a) Answering questions
b) Showing one's knowledge*

18. Greeting someone

a) Saying hello
b) Showing friendliness*

19. Resisting temptation

a) Saying "no"
b) Showing moral courage*

20. Eating

a) Getting nutrition*
b) Chewing and swallowing

21. Growing a garden

a) Planting seeds
b) Getting fresh vegetables*

22. Traveling by car

a) Following a map
b) Seeing countryside*

23. Having a cavity filled

a) Protecting your teeth*
b) Going to the dentist

24. Talking to a child

a) Teaching a child something*
b) Using simple words

25. Pushing a doorbell

a) Moving a finger
b) Seeing if someone's home*

Appendix C: Revised Religious Life Inventory

Intrinsic subscale

1) I try hard to carry religion over into all my other dealings in life.
2) Quite often I have been keenly aware of the presence of God or the Divine Being.
3) My religious beliefs are what lie behind my whole approach to life.
4) It is important to me to spend periods of time in private religious thought and mediation.
5) If not prevented by unavoidable circumstances, I attend church.
6) Religion is especially important to me because it answers many questions about the meaning of life
7) I read literature about my faith or church.
8) It doesn't matter so much what I believe so long as I lead a moral life.
9) If I were to join a church group, I would prefer to join a Bible study group rather than a social fellowship.

Extrinsic subscale

1) I find religious doubts upsetting (-)
2) A primary reason for my interest in religion is that my church is a congenial social activity.
3) One reason for my being a church member is that such membership helps to establish a person in the community.
4) I pray chiefly because I have been taught to pray.
5) The purpose of pray is to secure a happy and peaceful life.
6) Occasionally, I find it necessary to compromise my religious beliefs in order to protect my social and economic well-being.
7) Although I am a religious person, I refuse to let religious considerations influence my everyday affairs

Quest subscale

1) I was not very interested in religion until I began to ask questions about the meaning of life.

2) I have been driven to ask religious questions out of a growing awareness of the tensions in my world and in my relation to the world.
3) My life experiences have led me to rethink my religious convictions.
4) God wasn't very important to me until I began to ask questions about the meaning of life.
5) It might be said that I value my religious doubts and uncertainties.
6) For me doubting is an important part of what it means to be religious.
7) I find religious doubts upsetting (R).
8) Questions are far more central to religious experience than are answers.

Appendix D: Revised Religious Fundamentalism Scale

"The following questionnaire measures for individual differences in religiosity. Please rate your degree of agreement (or disagreement) for the following statements ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

1) God has given humanity a complete, unfailing guide to happiness and salvation, which must be totally followed.
2) No single book of religious teachings contains all the intrinsic, fundamental truths about life.[a]
3) The basic cause of evil in this world is Satan, who is still constantly and ferociously fighting against God.
4) It is more important to be a good person than to believe in God and the right religion[a]
5) There is a particular set of religious teachings in this world that are so true, you can't go any "deeper" because they are the basic, bedrock messages that God has given humanity.
6) When you get right down to it, there are basically only two kinds of people in the world: the Righteous, who will be rewarded by God: and the rest, who will not.
7) Scriptures may contain general truths, but they should NOT be considered completely, literally true from beginning to end.[a]
8) To lead the best, most meaningful life, one must belong to the one, fundamentally true religion.
9) "Satan" is just the name people give to their own bad impulses. There really is *no such thing* as a diabolical "Prince of Darkness" who tempts us.[a]
10) Whenever science and scared scripture conflict, *science* is probably right[a]
11) The fundamentals of God's religion should never be tampered with, or compromised with others' beliefs.
12) *All* of the religions in the world have flaws and wrong teachings. There is *no* perfectly true, right religion.[a]

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[a] indicates item is worded in the con-trait direction, for which the scoring key is reversed."

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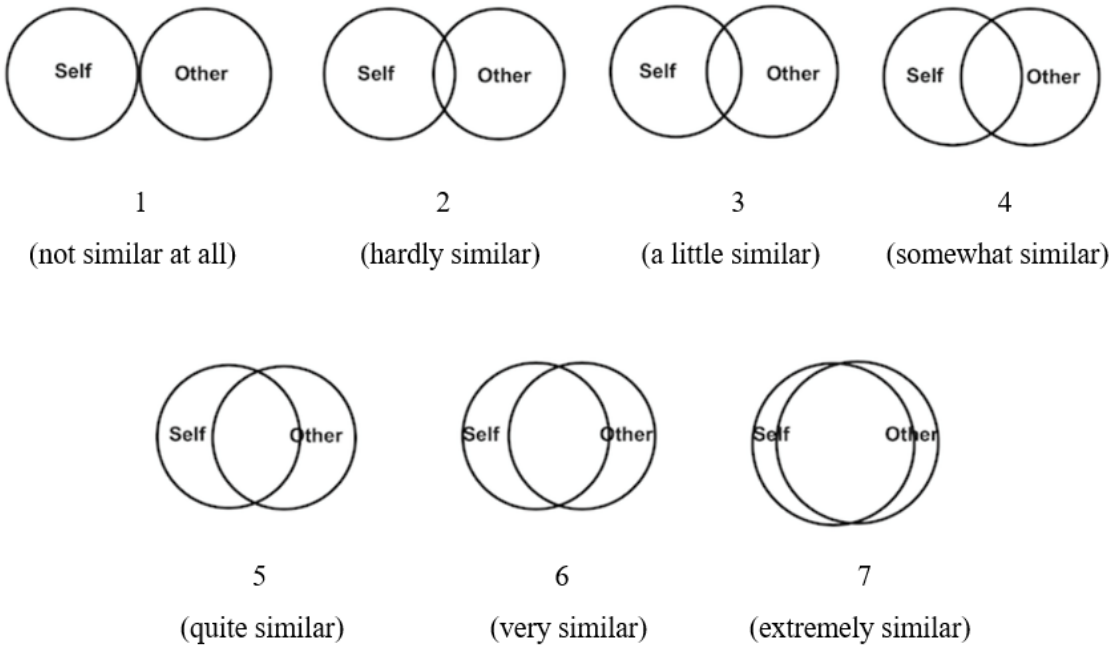
Appendix E: Modified Version of the Inclusion of Others in the Self (IOS) Scale

Which diagram best represents how similar or dissimilar you feel in regards to the following religious (or non-religious) groups:

Buddhists



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