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### Rethinking Value Violation: Priming Religion Increases Prejudice in Singaporean Christians and Buddhists

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## RESEARCH

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# Rethinking Value Violation: Priming Religion Increases Prejudice in Singaporean Christians and Buddhists

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Ingroup religious priming has been shown to increase prejudice in American Christians, but it is currently unknown whether this effect can be generalized to other religions and cultures. The present research assessed the effects of religious priming on attitudes toward religious and cultural outgroups in Christian and Buddhist students at a Singapore university. Both Christians and Buddhists primed with religious ingroup words demonstrated more negative pretest to posttest attitude change toward homosexuals than those primed with neutral words. This effect remained even when statistically controlling for levels of right-wing authoritarianism and spirituality. These results indicate that religious priming affects Christians and Buddhists in the same way, promoting bias towards culturally relevant outgroups even in the absence of religious value-violation. This suggests that religion may exert its prejudicial effects indirectly through activation of associated cultural value systems, such as traditionalism/conservatism.

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In their 2010 Munk debate, former British prime minister Tony Blair and the late Vanity Fair columnist Christopher Hitchens went head to head over the following resolution: “Be it resolved, religion is a force for good in the world.” Blair, a recent Roman Catholic convert, argued in support of the motion, suggesting that religious belief compels adherents to act with kindness and benevolence, whereas Hitchens (a self-described “antitheist”) opposed, citing humanity’s long and bloody history of religious persecution and warfare. These polarized viewpoints illustrate a fundamental conundrum: How can religion be both a force for good *and* a force for evil?

At first glance, the scientific study of religion paints a similarly contradictory picture. Correlational research shows that religious individuals report giving more money to charity and doing more voluntary work (Brooks, 2006), yet dimensions of religiosity have been found to negatively correlate with attitudes toward a variety of value-violating groups (Altemeyer & Hunsberger, 1992; Jackson & Hunsberger, 1999; Rowatt, LaBouff, Johnson, Froese, & Tsang, 2009; Rowatt et al., 2006). Furthermore, priming studies (Bargh & Chartrand, 2000) have shown that subconscious activation of religious mental representations can have both prosocial and antisocial effects. Individuals primed with religious imagery exhibit more generosity (Shariff & Norenzayan, 2007) and cheat less (Randolph-Seng & Nielsen, 2007), yet they also display enhanced prejudice toward non-Christians and homosexuals (Johnson, Rowatt, & LaBouff, 2012).

Graham and Haidt (2010) adopted a social functionalist approach to tackle this apparent paradox, suggesting that prosociality and antisociality are engaged in selectively, depending on whether the target is an ingroup or outgroup member. They argued that religion’s primary function is the creation and maintenance of stable moral communities and that community ties can be strengthened either by favoring ingroup members or by derogating outgroup members. Much empirical evidence is consistent with this account. Individuals exposed to religious primes display greater ingroup cooperation (Ritter & Preston, 2010), allocate more money to ingroup members than outgroup members (Shariff, 2009; Shariff & Norenzayan, 2007), and show an increased disparity between attitudes toward ingroup versus outgroup members (Johnson et al., 2012). Prejudice may therefore play a valuable role in protecting religious communities.

It would, however, be a mistake to assume that all religions promote the same pattern of ingroup favoritism and outgroup derogation when the majority of research has been conducted using predominantly Christian samples in North America or Europe (although there are notable exceptions, e.g., Hunsberger, Owusu, & Duck, 1999). Not only does this limit the generalizability of findings to other religions, particularly nonmonotheistic religions such as Hinduism and Buddhism, but also risks neglecting possible cultural variation in the relationship between religion, attitudes, and behavior. Well-documented instances of cultural variability (e.g., Triandis, 1989) may moderate the link between religion and social behavior; thus it is important that findings derived from a particular religious sample be replicated in other cultures if generalized conclusions are to be drawn regarding the religion in question.

As other researchers have pointed out (e.g., Johnson et al., 2012, p. 11), priming religious concepts in more “stereotypically peaceful” religions such as Buddhism may in fact decrease prejudice. Although the Golden Rule (the commandment to treat others as we ourselves would wish to be treated) is known to be a central moral principle in many world religions (H. Smith, 1991; Terry, 2007)—Christianity and Buddhism included—religious texts frequently condone or even demand prejudice. As Graham and Haidt (2010) pointed out, the Bible’s second

great commandment, “Love thy neighbor as thyself” (Leviticus 19:18), was actually directed toward “the children of thy people” (i.e., fellow Israelite believers), whereas the Qu’ran warns, “Do not take the Christians and Jews as allies: they are allies only to each other. Anyone who takes them as an ally becomes one of them—God does not guide such wrongdoers” (5:51). Buddhism, however, is widely considered to be more inclusive, with the Dalai Lama publicly embracing the idea of a multifaith world and doing much to foster interfaith dialogue (Berzin & Chodron, 1991). Similarly, although the Bible condemns homosexual relations as “a detestable act” (Leviticus 18:22), Buddhist texts do not even mention homosexuality, instead preaching abstinence irrespective of sexual orientation (Vilaythong, Lindner, & Nosek, 2010). If compassion and tolerance are indeed more fundamental to the Buddhist worldview, then priming religion among Buddhists could decrease prejudice toward outgroups.

To the authors’ knowledge, only one study to date has investigated the effect of priming Buddhist faith on prejudice. Vilaythong et al. (2010) primed both Christians and Buddhists with variants of the Golden Rule, finding that Christians display more homophobic attitudes when the Golden Rule prime message is attributed to Buddha (compared to either a neutral prime control or a Jesus-attributed Golden Rule prime). Priming the Golden Rule in Buddhists, however, had no effect on prejudicial attitudes. So although certain tolerance messages were actually found to increase prejudice in Christians, Buddhists did not display this effect, suggesting that more general religious priming may not increase prejudice in members of the Buddhist faith.

Yet there is reason to believe that priming religion may increase prejudice in Buddhists, despite their faith’s emphasis on tolerance and inclusivity. Johnson, Rowatt, and LaBouff (2010) demonstrated that priming American Christians with religious imagery increases prejudice toward African Americans, even though most Black Americans are themselves Christian. Thus religious prejudice, at least in the case of White American Christians, is extended not only toward those outgroups who violate core religious values (e.g., homosexuals) but also to outgroups defined by nonreligious criteria such as race.

Why should religious priming promote prejudice toward non-value-violating groups? Researchers such as Johnson et al. (2010) suggested that priming religious concepts may spread activation to related constructs, such as Protestant Puritanism (Uhlmann, Poehlman, & Bargh, 2009), right-wing authoritarianism (Altemeyer, 1981), or traditionalism/conservatism (Inglehart & Baker, 2000), and that activation of these constructs may in turn promote prejudice. This is a key theoretical departure, implying that religious primes exert their effects not only by emphasizing specifically religious prejudicial values but also by activating related value systems that endorse and protect existing social dominance hierarchies, such as traditionalism and conservatism.

Consistent with this interpretation, religious fundamentalism, which is considered by many theorists to be a manifestation of traditionalism/conservatism (e.g., Hall, Matz, & Wood, 2010), has been found to predict antihomosexual prejudice above and beyond that which is demanded by Christian scripture (Fulton, Gorsuch, & Maynard, 1999). Moreover, recent priming studies have suggested that religious primes induce social conservatism even in nonbelievers. Rutchick (2010) found that individuals voting in churches were more likely to support conservative candidates and policies than those voting in secular institutions, and LaBouff, Rowatt, Johnson, and Finkle (2012) found that individuals passing by a prominent religious building displayed more conservative attitudes and more prejudice than those passing by a nonreligious structure, irrespective of their individual belief in God.

As such, the central Buddhist value of tolerance may be difficult to reconcile with a pan-religious and pan-cultural tendency toward social conservatism. In a meta-analysis, Saroglou, Delpierre, and Dernelle (2004) found that members of different faiths—including Christians, Jews, and Muslims—tend to prefer values that promote social order, such as traditionalism and conformity, whereas associations between religious fundamentalism, right-wing authoritarianism, and prejudice have been found to be stable across cultures (Hunsberger et al., 1999). Critically for the present research, Norris and Inglehart (2004) observed that religious participation is associated with conservative values across 71 nations and most world religions, Buddhism included.

## THE PRESENT RESEARCH

The preceding literature review raises two competing possibilities. On one hand, it is possible that religious ingroup primes may exert different and opposing effects on members of faiths with different value systems, such as Christians and Buddhists. Evidence of this would emphasize the importance of specifically religious beliefs and values in promoting or preventing prejudice. However, it is also possible that religious ingroup primes may activate related constructs, such as traditionalism/conservatism, to promote prejudice in members of different religions who share a common cultural identity. In the case of Buddhists living in a conservative society, this would involve sociocultural values overriding egalitarian religious principles, giving rise to the same prejudice previously observed in Christians.

The contribution of the present research is therefore twofold. First, we investigate the effects of ingroup religious priming on Christian prejudice in a non-Western setting to assess the generalizability of previous findings to members of a different culture. Second, we compare two competing hypotheses—whether religious ingroup priming promotes prejudice via activation of religious or cultural value systems—by investigating the effect of such primes in members of two ideologically dissimilar religions, Christianity and Buddhism, who share a common culturally conservative environment. Singapore is a socially conservative nation (Lee, 2007) with a large Buddhist population and vocal minority of evangelical Christians (44.2% and 18.3%, respectively; Singapore Department of Statistics, 2010), making it an ideal testing ground for these competing theories.

To this end, Christian students from a Singaporean university were primed with Christian concepts to investigate whether the same pattern of prejudice toward multiple outgroups identified by Johnson et al. (2012) could be observed in a non-Western sample. We hypothesized that Singaporean Christians, like their American counterparts, would exhibit enhanced prejudice toward outgroups defined by religion, race, sexual orientation, and nationality when primed with religious imagery, compared to those primed with neutral imagery. In addition, Buddhist students from the same university were primed with Buddhist concepts to investigate whether Buddhism's emphasis on tolerance and pluralism reduces prejudice (religious values as driving force), or whether the sociocultural conservatism of the Buddhist and wider Singaporean community means that religious primes promote prejudice just as they do for Christians (cultural values as driving force). Because the findings from previous research are somewhat inconsistent, no specific hypothesis was made in this case.

## METHOD

### Participants

One hundred fifty-one current undergraduates and recent graduates from Nanyang Technological University participated in the study in return for either partial course credit or \$20 SGD. The sample was 67.9% female with a mean age of 20.63 years ( $SD = 1.59$ ). Most participants identified themselves as ethnically Chinese (92.2%), whereas of the remaining participants, 0.8% identified themselves as Malay, 3.1% as Indian, 1.6% as Caucasian/Eurasian, and 2.3% as belonging to another ethnic group.

Seven participants were excluded from the analysis because their responses to the funneled debriefing questions suggested awareness either of the prime words or the experimental hypothesis, whereas three participants were excluded on the grounds of suspicious or uncooperative responding to the attitude measures. In total, 141 participants contributed data to the analysis.

### Design and Procedure

The study utilized a pre–post design, comprising two experimental sessions that took place exactly 2 weeks apart. In the first session, participants' preexisting attitudes toward a number of outgroups defined by race, religion, sexual orientation, and nationality were measured alongside other relevant personality variables. In the second session, participants' outgroup attitudes were measured again after subliminal exposure to either ingroup religious or neutral prime words.

In the first session, participants were invited in to the laboratory to complete a computerized survey ostensibly investigating religious beliefs and social behavior under the supervision of an experimenter. Participants read and signed a consent form, indicating their willingness to participate in the study, before moving on to the survey. The survey included a number of items measuring attitudes toward various social groups, as well as a 10-item Right Wing Authoritarianism (RWA) scale (Mavor, Macleod, Boal, & Louis, 2009; A. G. Smith & Winter, 2002), the Spiritual Experience Index–Revised (Genia, 1997), and a number of demographic questions. Several additional psychometric indices, which are not the focus of the present analysis, were also administered. All sessions were conducted in a group setting with between 15 and 25 participants in the room.

The second session took place at the same location exactly 2 weeks later. Upon arrival at the laboratory, participants were allocated to either the experimental or control condition before being asked to complete a lexical decision task (LDT), which was introduced to them as a word categorization task. Participants in the experimental condition completed an LDT in which momentary presentation of religious prime words (e.g., *Christ, Messiah* for Christians; *Buddha, temple* for Buddhists) subliminally primed religious concepts, whereas those in the control condition were exposed to neutral primes (e.g., *shirt, butter*). After completion of the LDT, participants were asked to fill out an almost identical version of the survey they completed during Session 1. More details on the attitude items, the LDT, and the additional psychometric measures can be found in the Materials section next.

## Materials

**Attitude Items.** Individual 11-point Likert scales were used to measure overt prejudice toward different outgroups. Participants were asked to indicate how “warm or cold” they felt toward members of these groups by marking the appropriate temperature on a thermometer, with 0° representing the coldest possible feelings, 50° neutral feelings, and 100° the warmest possible feelings. As such, lower scores on these items were indicative of increased prejudice. Attitudes toward a number of different outgroups were measured, including those defined by religious affiliation (Muslims, Hindus, atheists), ethnicity (Singaporean Malay, Singaporean Indian, Caucasian), sexual orientation (gay men, lesbian women), and nationality (foreigners).

**LDT.** The LDT was administered using the online version of the experimental administration software Inquisit (Millisecond Software, Seattle, WA). Upon arrival at the laboratory for the second session, participants were assigned to either the religious or neutral prime condition. Alternating computers, which were separated by dividing screens, had been preloaded with either the religious or neutral prime version of the LDT, and participants were seated in the order of their arrival at the laboratory. Participants were told that their task was to classify letter strings as either words or nonwords, pressing the A key if they believed the word to be a genuine English word or the 5 key if they believed the word does not exist in the English language. Words were presented centrally, on-screen, and in randomized order. After participants indicated their lexical decision by pressing either the A or 5 key, the next trial automatically commenced.

Participants completed five experimental blocks, each containing 16 trials. Each trial began with central presentation of a fixation point (+), which was replaced with a premask (XXXXXXXXXX) after 1 s. The premask remained in place for 70 ms, after which the prime word was displayed for 35 ms, followed by a postmask, which remained for a further 70 ms. Participants were then required to focus on a blank screen for 395 ms before the next letter string stimulus was presented. This trial timing and structure represents an exact replication of the procedure employed by Johnson et al. (2010), originally adapted from Dijksterhuis, Preston, Wegner, and Aarts (2008).

Whereas the Christian (*Bible, faith, Christ, church, gospel, heaven, Jesus, Messiah, prayer, and sermon*) and neutral prime words were identical to those utilized by Johnson et al. (2010), suitable primes for Buddhists had to be developed for the present study. We identified 10 effective Buddhist prime words using a two-stage pretesting procedure. First, a group of self-identified Buddhist students was asked write down at least 20 words related to Buddhism, and a second group of Buddhist students was asked to rate the most commonly cited Buddhist terms (generated by the first pretest group) by responding to the following questions: (a) How related is the word to Buddhism? (b) Does the word have a positive or negative association with Buddhism? The 10 words, which were judged by the second group to be most related to Buddhism and most positive in their association, were selected for use as Buddhist prime words in the study proper. These words were *Buddha, enlightenment, temple, scripture, monk, devotion, calm, offerings, kind, and chanting*.

**Additional Measures.** Two additional measures were administered for potential use as covariates in the main analysis. The RWA scale (A. G. Smith & Winter, 2002) is a 10-item



TABLE 1  
Descriptive Statistics for Measures (Including Subscales) of  
Right-Wing Authoritarianism and Religiosity by Religious Group

	<i>Christians<sup>a</sup></i>		<i>Buddhists<sup>b</sup></i>	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
RWA	3.99	.78	3.71	.66
Aggression	3.74	1.42	4.10	1.06
Submission	4.13	.96	4.23	.96
Conventionalism	4.06	1.30	3.02	.84
Spiritual Support	4.71	.83	3.71	.90
Spiritual Openness	3.85	.63	4.22	.45

*Note.* RWA = right-wing authoritarianism as measured by the RWA scale (A. G. Smith & Winter, 2002), whereas Aggression, Submission, and Conventionalism are the three subscales that compose this measure. Spiritual Support and Spiritual Openness are the two subscales of the Spiritual Experience Index—Revised (Genia, 1997).

<sup>a</sup>*n* = 72. <sup>b</sup>*n* = 69.

measure with three subscales: RWA Aggression, RWA Submission, and RWA Conventionalism. Example items include, “What our country really needs is a strong, determined leader who will crush evil, and take us back to our true path” (RWA Aggression), “What our country needs most is discipline, with everyone following our leader in unity” (RWA Submission), and “Everyone should have their own lifestyle, religious beliefs, and sexual preferences, even if it makes them different from everyone else” (RWA Conventionalism; reverse scored). All responses were made on a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). The internal consistency of the RWA scale was acceptable (Cronbach’s  $\alpha = .64$ ), whereas the mean scores for the Christian and Buddhist samples are displayed in Table 1.

The Spiritual Experience Index—Revised (Genia, 1997) is a 23-item measure of faith and spiritual journey. It was chosen on the grounds that it does not impose any particular faith on the questions, and so it is equally applicable to Christians and Buddhists. The scale comprises two subscales: Spiritual Support (SS; 13 items) and Spiritual Openness (SO; 10 items). Example SS items include “My faith gives my life meaning and purpose,” “My faith helps me to confront tragedy and suffering,” and “Sharing my faith with others is important for my spiritual growth,” whereas example SO items include “Ideas from faiths different from my own may increase my understanding of spiritual truth,” “Feel a strong spiritual bond with all of humankind,” and “One should not marry someone of a different faith” (reverse scored). All responses were made on a 6-point Likert scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). The internal consistency of both the SS subscale (Cronbach’s  $\alpha = .96$ ) and SO subscale (Cronbach’s  $\alpha = .61$ ) was good. Mean scores for the Christian and Buddhist samples are displayed in Table 1.

**Awareness Check and Debriefing.** To accurately replicate the procedures of Johnson et al. (2010), participants were debriefed using a funnelled debriefing method (see Chartrand & Bargh, 1996). This widely used technique acts as a safeguard to check for prime word awareness and cognizance of the experiment’s true purpose. Prior to full debriefing, participants were asked whether they remembered any of the words presented during the categorization task and how

they thought the two study elements (LDT and survey questions) were related. Participants whose responses suggested awareness of either the prime words or task purpose were excluded from the final analysis.

## RESULTS

Before investigating the priming effects, we conducted a series of independent samples *t* tests to see whether the Christian and Buddhist samples differed systematically in terms of either spirituality or RWA. Christians scored significantly higher in RWA conventionalism, higher in spiritual support, and lower in spiritual openness than Buddhists. Group means for the various measures of personality are reported in Table 1. Mean scores for RWA and its three subscales were higher, in both Christians and Buddhists, than those obtained in a comparable Western sample (A. G. Smith & Winter, 2002).

A single multivariate analysis of variance (MANOVA) was conducted to assess differences in postprime attitudes toward the various outgroups. Prior to this, pre- and posttest attitude scores were consolidated into a single difference score by subtracting the pretest value from the posttest value. As such, a positive value indicated a positive attitudinal change, whereas a negative value indicated a negative attitudinal change. Scores were then averaged across related outgroups (e.g., attitude scores toward Muslims, Hindus, and atheists were combined to form a composite score reflecting attitude toward religious outgroups), yielding four dependent variables: attitude change toward outgroups defined by religion, ethnicity, nationality, and sexual orientation.

The MANOVA included two fixed, between-subjects factors—condition (ingroup religious vs. neutral prime) and religion (Christianity vs. Buddhism)—and the four dependent variables just listed. Given the significant between-group differences in RWA conventionalism, SS, and SO, each of these variables were included as covariates in the analysis. RWA aggression was also included as a covariate on theoretical grounds, as the Aggression subscale captures aggressive tendencies to discriminate against outgroup members.

The MANOVA yielded a significant main effect of condition on attitudes toward outgroups defined by sexual orientation. Individuals primed with religious words displayed significantly more negative attitude change toward homosexuals than those primed with neutral words, controlling for RWA Aggression, RWA Conventionalism, SS, and SO (see Table 2). For outgroups defined by sexual orientation, the main effect of religion, the Condition  $\times$  Religion interaction, RWA Aggression, RWA Conventionalism, SS, and SO were all nonsignificant.

The main effects of condition on attitude change toward outgroups defined by religion, ethnicity, and nationality were all nonsignificant. In each case, the main effect of religion, the Condition  $\times$  Religion interaction, and the four covariates were also found to be nonsignificant. See Table 2 for a full summary of MANOVA results.

Christians and Buddhists thus displayed an identical pattern of ingroup religious prime-induced prejudice toward homosexuals. Given that these results are consistent with the “cultural values as driving force” explanation, we conducted an additional linear regression to investigate whether RWA conventionalism, which measures adherence to traditions and social norms, predicted preexisting attitudes toward homosexuals. In line with this explanation, RWA conventionalism significantly negatively predicted pretest attitudes toward homosexuals ( $\beta =$

TABLE 2  
Effects of Priming Condition and Religious Affiliation on Attitude Change Toward Various Outgroups

<i>Outgroup</i>	<i>Effect</i>	<i>df</i>	<i>F</i>	<i>p</i>	$\eta_p^2$
Religion	Condition	1, 133	1.40	.24	.01
	Religion	1, 133	.08	.77	.00
	Condition $\times$ Religion	1, 133	.15	.70	.00
Ethnicity	Condition	1, 133	.23	.63	.00
	Religion	1, 133	.04	.85	.00
	Condition $\times$ Religion	1, 133	.73	.39	.01
Nationality	Condition	1, 133	2.99	.09	.02
	Religion	1, 133	.00	.97	.00
	Condition $\times$ Religion	1, 133	1.37	.24	.01
Sexual orientation	Condition	1, 133	7.78	.006	.06
	Religion	1, 133	.35	.56	.00
	Condition $\times$ Religion	1, 133	.05	.82	.00

-.41),  $t(138) = -5.23$ ,  $p < .001$ , but not toward members of religious, ethnic, or national outgroups.

## DISCUSSION

The absence of any significant Condition  $\times$  Religion interactions strongly suggests that religious priming increases prejudice toward certain outgroups in Buddhists and Christians alike. Religious primes were found to increase prejudice toward homosexuals in both the Buddhist and Christian samples, as indicated by the presence of a significant main effect of condition.

This finding is important for two reasons. First, these results suggest that members of religions with dissimilar value systems respond in the same way to priming of their own religious group. Although some researchers have speculated that Buddhism's less proscribed teachings might engender greater tolerance, these results indicate that ingroup religious priming affects Christians and Buddhists in the same way, suggesting that defense of wider cultural values, rather than religious values per se, underpins religious prejudice. Though Buddhist scripture does not condemn (or even mention) homosexuality, these results suggest that Buddhists become more prejudiced toward homosexuals when exposed to ingroup religious primes. Given that religious priming has previously been shown to increase conservatism in believers and nonbelievers alike (LaBouff et al., 2012), it seems highly likely that ingroup religious primes promote prejudice through activation of cultural value systems that are heavily intertwined with religion, such as traditionalism/conservatism. The fact that RWA conventionalism significantly predicted pretest attitudes toward homosexuals provides further evidence of conservatism's key role.

Second, this finding provides a much-needed cross-cultural replication of Johnson et al. (2010, 2012), demonstrating that non-Western Christians also exhibit enhanced prejudice when

exposed to religious primes. Christianity, it seems, still has the power to exert forces of intergroup differentiation when divorced from the predominantly Caucasian, Anglo-American cultural environment in which it has most frequently been studied.

This does, however, beg the question of why homosexuals were targeted for prejudice whereas members of religious, ethnic, and national outgroups were not. Although such results might be unexpected in a Western setting, they can be understood in the context of Singapore's unique cultural milieu. Upon gaining independence in 1965, Singapore became the world's first constitutionally multiracial nation (Huat, 2003), and since then the governing People's Action Party has implemented numerous domestic policies intended to foster a sense of cultural unity, including the Ethnic Integration Policy, which uses a quota system to ensure ethnic balance within public housing estates and to prevent the formation of racial enclaves. Furthermore, religious festivals associated with Buddhism, Christianity, Islam, and Hinduism are given equal precedence in Singapore's calendar of public holidays, ensuring that no one religious group receives undue focus or preferential treatment. Such policies have been highly successful (e.g., Sim, Yu, & Han, 2003), and national surveys reveal that attitudes toward ethnic and religious minorities are overwhelmingly positive (Chan, 2002). As a consequence, researchers have often found little evidence of overt racial prejudice in Singaporean samples. Hewstone and Ward (1985), for example, found that Singaporean Chinese individuals do not exhibit a tendency toward ethnocentric attribution when explaining positive or negative social behaviors, failing to replicate a key finding in the intergroup bias literature (Weber, 1994). Given this harmonious national character, it is perhaps unsurprising that we found no evidence of prejudice toward racial and religious minorities. Such results are consistent with our indirect account of religious prime-induced prejudice, as priming conservatism should increase endorsement of Singapore's multireligious, multiethnic value system.

The typical Singaporean's tolerance does however have its limits, and other outgroups remain the target of prejudice. Singapore's conservatism means that most Singaporeans hold traditional values regarding marriage and family life. Negative attitudes toward homosexuals and media depictions of homosexuality are commonplace (Detenber et al., 2007), and committing homosexual acts is criminalized under section 377A of the Penal Code (Singapore Penal Code, Chapter 224). Thus although disclosing negative attitudes regarding racial or religious groups is frowned upon (Singaporean law classifies materials that "promote feelings of ill-will and hostility between different races or classes" as seditious and hence illegal; Singapore Sedition Act, Chapter 290) the expression of prejudicial views regarding homosexuality is deemed to be both morally and legally defensible. Given the aforementioned, it seems highly likely that prejudice driven by traditionalism/conservatism would target homosexuals, who are seen to violate key Singaporean conservative principles, rather than members of religious, racial, and national outgroups, who do not.

Although the main effect of condition on attitude change toward foreigners was nonsignificant ( $p = .086$ ), this trend toward significance is worthy of comment. Although foreigners, as a diverse and highly heterogeneous group, do not violate any key conservative principles in the way that homosexuals do, Singapore has nonetheless experienced a recent increase in prejudice toward foreigners, particularly migrant workers. Local blogging communities often host xenophobic diatribes from disenfranchised Singaporeans (Holmes, 2012), and during the 2011 election, which was the most keenly contested in Singapore's history, opposition parties made significant inroads after taking an anti-immigration stance (Ng, 2011). Critically, many of

these recent immigrants, particularly those from mainland China, are perceived to have values that differ substantially from those of Singaporeans (Chong, 2012). Although a nonsignificant trend should be interpreted with extreme caution, such a finding can be understood in terms of sociocultural concerns regarding immigration.

### Limitations, Alternative Explanations, and Future Directions

Although these results do suggest that cultural conservatism mediates the effect of ingroup religious priming on outgroup attitudes, we did not test this hypothesis directly. If the activation of religious concepts really is spilling over to activate cognitive representations of traditionalism and conservatism, then future studies should look for evidence of this spillover effect. This could be achieved either by gathering pre- and postprime self-report measures of conservatism, or by more subtle means such as a word completion task, in which participants are given word fragments that can be extended to create words relating to the conservative/traditional ingroup identity (e.g., Edwards & Pearce, 1994; Knowles & Garner, 2008). In addition, if religious primes really do exert their prejudice-inducing effects by activating traditionalism/conservatism, then directly priming these constructs should produce an identical pattern of prejudice. Furthermore, it is possible that religious outgroup primes (e.g., priming Christians with Buddhist religious terms) might also produce this pattern of prejudice, as priming these concepts should also activate the cultural value systems with which they are intertwined. Such investigations may yield further evidence that cultural rather than religious value defense underlies religious prejudice.

Another limitation of the present research relates to the nature of the primes employed. Recent work by Preston and colleagues suggests that priming the communal and divine elements of religion may have different consequences for intergroup attitudes and behaviors. Hernandez and Preston (2010) found that participants primed with religion's communal aspects donated more money to an ingroup (American) charity, whereas those primed with the divine aspect donated more money to an outgroup (Mexican) charity, implying that priming the divine promotes prosociality even toward outgroup members. Some researchers (e.g., Shariff & Norenzayan, 2007) have suggested that these divine primes activate the concept of a supernatural watcher—an “omnipresent and omniscient moralizing agent” (Shariff & Norenzayan, 2007, p. 807)—which promotes moral behavior by making salient the certainty divine punishment and reward. Because the present study employed an approximately equal number of communal (e.g., temple, chanting; church sermon) and supernatural (e.g., Buddha, enlightenment; faith, Christ) Buddhist and Christian primes, it is possible that the differential effects of priming these distinct cognitive representations has been obscured.

Nonetheless, it is interesting to note that a consistent, culturally sensible pattern of outgroup derogation was observed in both Buddhists and Christians, despite their exposure to a significant number of supernatural priming terms. Because supernatural primes should “activate a goal of virtue—to live up to the moral standards set by supernatural agents” (Preston, Ritter, & Hernandez, 2010, p. 587), one would expect such primes to have opposing effects on Christians and Buddhists with respect to antihomosexual prejudice, given the idiosyncrasies of their divinely specified value systems. Even if activation of supernatural monitoring concepts encouraged recursion to a more basic, golden-rule morality promoting universal altruism irrespective of group membership, this would be difficult to reconcile with the selective,

yet culturally consistent, pattern of prejudice observed here. This is not to say that priming supernatural watchers has no effect on attitudes toward outgroups (it most certainly does), just that supernatural monitoring concerns are unlikely to underpin the prime-induced prejudice observed here. Future research should further explore this issue by examining the effects of communal and supernatural primes in isolation.

Another limitation relates to our exclusive use of explicit attitudinal measures. The possibility remains that in the present research negative attitudes toward members of religious, ethnic, and national outgroups may have been disguised due to concerns regarding social desirability, as overt homophobia is generally seen to be more acceptable in Singapore than other prejudices. Utilization of more subtle, covert attitudinal measures, such as the Implicit Association Task (Greenwald, McGhee, & Schwartz, 1998) or the Sorting Paired Features Task (Bar-Anan, Nosek, & Vianello, 2009), would help to resolve this issue. Furthermore, it is worth noting that this study provides evidence of prime-induced prejudice but not discrimination. Future studies should investigate the impact of religious priming on discriminatory behaviors in non-Western religious populations, perhaps by involving participants in a resource allocation task, such as Tajfel's matrices (Tajfel, 1970).

Concerns regarding generalizability also arise from the nature of the Christian and Buddhist samples used in our study. Although the present research addresses the frequently cited (e.g., Johnson et al., 2010) need for cross-cultural research, it nonetheless suffers from sampling biases, as all participants were university undergraduates. Because spiritual development occurs throughout the lifespan (Wink & Dillon, 2002), it would be advisable to further explore these phenomena in more diverse community samples of varying age, educational background, and socioeconomic status.

Finally, it is also important to acknowledge the modest size of the effect reported here ( $\eta_p^2$  of .06). Whereas ingroup religious priming was found to significantly increase prejudice toward homosexuals, this effect was relatively small and should not be taken as evidence that religion causes homophobia. Prejudice and discrimination are complex multifactorial phenomena, and the present research suggests only that ingroup religious priming can play a small but significant role in promoting intergroup differentiation.

## Conclusion

Despite their adherence to religions with very different value systems, Christians and Buddhists sharing a common cultural environment were found to respond identically to ingroup religious primes. Despite their faith's greater emphasis on tolerance and relative lack of proscription, Buddhists displayed the same pattern of prime-induced prejudice toward homosexuals as their Christian counterparts.

Although Christopher Hitchens emerged victorious from the aforementioned debate, an increasing body of research suggests that a tie may have been a more fair and accurate result. There can be little doubt that, in certain circumstances, religion causes prejudice. However, an increasing body of research suggests that religious ingroup priming drives intergroup differentiation not through activation of religious value systems but through powerful associations with psychological constructs that reinforce existing social hierarchies, such as traditionalism/conservatism. The crime of religious prejudice may be one of guilt by association.

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