Morality of Mentality and Culture:
A Registered Replication and Cross-Cultural Extension

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Abstract:
Previous work has established that religious groups vary in the perceived moral status of "thought" versus behavior, with Protestants negatively evaluating people who entertain immoral thoughts more harshly than Jews (Cohen & Rozin, 2001). This work provided early evidence that religion is important in evaluating moral status. However, in the decades since this work, methodological and theoretical advances have suggested that a second glance might be necessary. In this Registered Report, we conducted a direct and conceptual replication of these earlier findings, including a cross-cultural extension in five countries, to investigate the influences of religious and national cultures on the relevance of immoral thoughts versus behaviors in evaluating the moral status of others. We replicate the original finding that American Protestants (but not Jews) consider immoral thoughts equally negatively as actions. We also observe substantial variation across cultures and religions, such that Americans were generally less condemning of immoral thoughts than members of the same religion in other countries. These results provide clues for further theorizing about how both country and religion shape moral judgment.

Key Words: *religion, morality, culture*

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"You shall not commit adultery." Exodus 20:14

"'You have heard that it was said, 'You shall not commit adultery.' But I tell you that anyone who looks at a woman lustfully has already committed adultery with her in his heart.'"

Matthew 5:27-28 NIV

In 2001, Cohen and Rozin published an article entitled "Religion and the Morality of Mentality." In this article, the authors found that Jewish and Protestant participants differed in their perceptions of thoughts and behaviors as being immoral. While both groups condemned immoral *behavior*, they differed in their tolerance of immoral thoughts (e.g., disliking one's parents, thoughts of having a sexual affair, thoughts of harming a dog to retaliate against a professor). Protestant participants evaluated individuals who entertained such thoughts more unfavorably than Jewish participants. This difference was somewhat reduced when controlling for group differences in a belief that thoughts are controllable and more likely to lead to action. Agreement that thoughts are as morally important as actions most eliminated the group differences in moral judgment. Thus, the researchers concluded that Protestants viewed an individual's mental life as morally relevant and worthy of condemnation and punishment when immoral thoughts are entertained, whereas Jews were more focused on behavior —consistent with the theology of the two religious groups.

Context of The Original Article

When the Cohen and Rozin (2001) study was being planned, conducted, and published, psychologists were beginning to identify cultural influences on moral judgments**.** For example, Miller and Bersoff demonstrated that Indians were more collectivistic in their moral reasoning than North Americans (Miller & Bersoff, 1992); Shweder and colleagues showed that different

cultures relied on different moral systems (e.g., community, autonomy, divinity; Shweder et al., 1997); Haidt and colleagues found differences in the reliance on moral emotions and disgust across cultures (Haidt et al., 1993); Lillard (1998) argued that some cultures are more behavior-oriented; and others demonstrated that East Asians were more likely to attend to context compared with Westerners when evaluating others' moral or immoral behavior (Choi et al., 1999; Morris & Peng, 1994).

In line with the later published argument that religion is also a form of culture (Cohen, 2009), Cohen and Rozin were interested in two broad questions about religion and culture. First, could religion be seen as another type of cultural influence that could also affect moral judgments? Second, could some of the previous findings regarding ethnic or national cultures be better explained by religious cultural differences? For example, was it more important that Hindu Indian participants in Miller and Bersoff's (1992) studies were *Indian* or that they were *Hindu*? How much of the many documented national cultural differences were due to religion (i.e., nonreligious vs. Christian) as opposed to nationality (Chinese vs. American)? Though the second question was not explicitly addressed in the original "Morality of Mentality" paper, these were the kinds of questions that Cohen and Rozin aimed to address with later work (Cohen, 2009; Li et al., 2012).

Therefore, Cohen and Rozin sought to identify a psychologically meaningful way in which members of different religions in the U.S. might differ in moral judgments. Beyond fairly obvious differences (e.g., Jewish people think it is less acceptable to eat pork compared with Christians), was it plausible that there are religious differences in moral evaluations in the religious domain? Inspired by then-Governor Jimmy Carter's admission reported in Playboy

magazine of "lusting after women in his heart," Cohen and Rozin set out to investigate differences in the perceived immorality of thoughts.

Protestant Christianity (President Carter's religious denomination) emphasizes faith, inner character, and the condition of one's soul. In contrast, Judaism mainly emphasizes a view about the true measure of character being action. Moreover, Judaism accepts the naturalness of both good and evil inclinations (*yetzer tov* and *yetzer rah*). Overcoming bad inclinations, if not acted upon, may even accrue merit. For instance, theologically, it *may* be more laudable for an individual to show respect to her parents if such respect requires effort. Would these theological differences influence the cultures of people of different religions such that moral judgments (that are not obviously religious) would be affected?

The Present Research

Cohen and Rozin's (2001) paper, now cited over 450 times on Google Scholar (August 2025) and presented in numerous handbooks and textbooks on religion and cultural psychology (Heine, 2010; Pargament, 2011; Hood et al., 2018), has been crucial in understanding how religion affects morality and for understanding sources of religious differences in moral accountability. However, in the two decades since its original publication, the field of psychology has undergone a series of changes in scientific and statistical rigor that has created healthy skepticism towards certain classic findings that were generated in eras with different norms about research practices (Henrich et al., 2010; Leon & Heo, 2009; Shrout & Rodgers, 2018).

In particular, the original "Morality of Mentality" research was conducted using only U.S. undergraduates with relatively small sample sizes (*N*'s ranging from 98 to 196 comparing the two religious groups). Further, though the publication makes claims about explanations of the

effects between religious affiliation and moral judgment of perceived intent to act, the authors did not conduct formal mediation analyses (simply analyses of covariance). Additionally, it is unclear how these findings might replicate in other contexts. Of importance, in the original Cohen and Rozin (2001) samples, U.S. Jewish participants were immersed in a predominantly Christian culture. It could be the case that Jews in the U.S. are affected by the overall Christian context but in theoretically different ways. For example, they could be more "Jewish" in their moral judgments to optimally distance themselves from the Protestant majority. Or, they could be influenced by the Protestant majority and show more "Christian" tendencies than they otherwise would.

Thus, we might expect that in a country where Judaism is the dominant religion, the effect of a religion's morals on mentality has a larger effect. In this case, we would expect Jewish people in Israel to be more forgiving of immoral thoughts that are not acted upon than those in the United States. Alternatively, Jewish persons in the U.S., in an attempt to distinguish themselves from the Christian majority, might be more forgiving of immoral thoughts that are not acted upon than their Israeli counterparts. Therefore, we propose not just a replication of the original paper but a cross-cultural extension to explore these interesting possibilities by obtaining an additional sample of Jewish persons in Israel. In doing so, we can better understand the role of majority v. minority culture on religious moralizing among Protestants and Jews.

Extension to Other Religious Groups: Catholics and the Nonreligious

To establish the extent to which both national and religious cultures influence moral evaluations, it is also necessary to extend beyond Protestant and Jewish religious groups. Here, we opt to explore two additional religious affiliations: Catholics and the nonreligious.

Catholics. Although sharing the umbrella of Christianity, Catholics and Protestants often differ in cognitive style, motivation, and prosocial behaviors (Li et al., 2012; Sheldon, 2006; Van Elk et al., 2017). Catholicism, like Judaism, places heavy emphasis on tradition and ritual, but, like Protestantism, highly emphasizes personal faith. In measures of individualism, Catholics sit somewhere between Protestants and Jewish persons (Cohen, 2015). Therefore, we predict that Catholics would evaluate the moral status of others based on behavior (more like the original Jewish sample than the Protestant sample), with less support for the notion that immoral thoughts are equivalent to immoral actions. Unfortunately, Cohen and Rozin did not present findings from Catholics in their original paper despite having collected those data. This was to make the analyses and findings more clear-cut, again speaking to how research norms have changed.

Nonreligious Groups. Since the original article was published, the psychology of religion has also increased attention to understanding the psychology of the nonreligious (Bullivant, 2013; Geertz & Markússon, 2010; Gervais, 2013; Moon et al., 2018). Relative to religious individuals, nonreligious individuals tend to endorse more scientific, logic-focused mindsets (Johnson et al., 2021; but see McPhetres et al., 2021), are less prejudiced toward many groups (Rowatt & Al-Kire, 2021), are less concerned with traditional family-based lifestyles (Moon, 2021), and are more open-minded (Pennycook et al., 2014).

Nonreligious individuals provide an interesting comparison group for several reasons. On the one hand, secularism seems to spread more readily in Western societies, as people tend to become less religious as they become more prosperous (Inglehart & Baker, 2000; Kusano & Jami, 2022). Western societies may have prospered as a result of the individualistic culture powered by Protestant values of hard work and independence (Henrich, 2020), and nonreligious people embedded in Western cultures might also be inclined to moralize thoughts and character.

But, on the other hand, if Protestants moralize thoughts because Christian doctrines instill these values, the opposite pattern might emerge with nonreligious individuals also rejecting the immorality of one's thought life. Thus, nonreligious individuals will provide an important comparison group to contextualize differences between different religious groups. To further investigate differences between nonreligious individuals in a Protestant-dominant versus a nonreligious-dominant culture, we compared views of the morality of mentality in both the U.S. and China.

Religious Commitment

The original Cohen and Rozin article controlled for religiosity to show that the critical variable was religious affiliation – Jewish versus Protestant – and not how religiously committed participants were. However, the authors assessed religious commitment with impoverished measures. It is important to have multi-item scales for better reliability and to investigate measurement invariance across groups (Cohen et al., 2017; Hill & Pargament, 2003). Moreover, we wanted to know whether religious group differences survive controlling for religious commitment. It may be that between-group differences in religiosity have driven the difference in moralizing. In the case of the original findings, perhaps Christian participants considered themselves more religious than Jewish participants, explaining greater levels of moralizing.

In the present research, we were also interested in religiosity as a moderator of the effects of religious affiliation on moral judgment. For example, Cohen et al. (2017) found that Jewish individuals of all levels of religiosity equally agreed that certain severe offenses, such as genocide, are unforgivable. However, among Christians, religiosity was highly correlated with increasing disagreement with that sentiment. We also want to know if nonreligious Jewish and Christians are the same at certain levels of religiosity. Still, a difference may only emerge at a

certain level of religiosity (see Cohen et al., 2006). Given these findings and taking a more rigorous approach to measurement, we administered more nuanced, multidimensional measures of religiosity as both control and moderating variables (for different hypotheses).

Extension to Other Nations. Reliance on mental states to evaluate moral accountability is likely to vary across cultures. It has often been assumed that intentions are universally important in moral judgments. For example, Westerners seem to agree that intentional moral infractions (e.g., purposely striking another individual) should be viewed more harshly than accidental harms (e.g., tripping and accidentally striking another person; Cushman et al., 2006). However, there is evidence for heterogeneity in the extent to which intentionality matters in different societies (Barrett et al., 2016; Lillard, 1998). Although people in all cultures consider intentionality to some extent, it seems to matter much more in industrialized societies. Indeed, Westerners often over-emphasize dispositional characteristics relative to situation context when evaluating the moral status of others (Choi et al., 1999; Morris & Peng, 1994). In our view, religion and its interaction with national culture are critical variables to consider in such lines of work.

In line with this, we sought to replicate the original Cohen & Rozin (2001) in other cultures, which vary in their religious composition. Given that we were interested in the effects of being Jewish in a country where Judaism is the predominant religion, we opted to collect data in Israel. Further, we sought to replicate this protocol in a country where Protestantism was in the minority—as in Brazil, where Catholicism is the dominant religion. In extending this research beyond Judaism and Protestantism, we selected three additional countries where Catholicism or identifying as nonreligious were the predominant religious orientations, as in Ireland (i.e., Catholicism) and China (i.e., nonreligious).

Study Overview

Here, we conduct a conceptual replication of Study 4 of the original "Morality of Mentality" study (i.e., sexual thoughts), extending the religious groups beyond Jews and Protestants to include Catholics and nonreligious individuals while also examining the effects in four additional countries, to examine the effects of being in the (non)religious majority versus minority. Might the morality of mentality differ across these four religious groups? Does being in the (non)religious majority of a country strengthen or weaken the effect of religious and moral convictions? To test these questions, we replicated Study 4 from the original article in a larger U.S. sample of Jews, Catholics, Protestants, and nonreligious individuals using the Prolific platform. We further administered the study in three other populations with a clear (non)religious majority—Israel (74% Jewish), Ireland (69% Catholic), and China (52% nonreligious; Central Intelligence Agency, 2021). This design enabled us to compare U.S. Jews with Israeli Jews, U.S. Catholics with Irish Catholics, and U.S. nonreligious with Chinese nonreligious. Additionally, we chose to collect data in Brazil where Protestants are in the religious minority (22% Protestant) relative to the Catholic religious majority (65% Catholic; Table S1; Central Intelligence Agency, 2021), to explore the effects of being in a Protestant minority country.

Further, in the interest of transparency and open science, we pre-registered our protocol and hypotheses as is becoming increasingly popular with replications conducted across multiple data collection sites (Hoogeveen & van Elk, 2018; O'Donnell et al., 2018; Wagenmakers et al., 2016). In preparing this registered report and pre-registering our protocol and hypotheses, we can reduce publication bias and questionable research practices, such as low statistical power, *p*-hacking, and hypothesizing after results are known (or HARKing). Before data collection, we wrote this manuscript's introduction and methods section, outlining all planned analyses. The

manuscript, our methods, and the data analysis plan were all peer-reviewed prior to data collection with one exception: we collected data in Ireland instead of Belgium, as pre-registered, due to data collection difficulties in Belgium (see Supplemental Materials). Additionally, we report all statistical tests, regardless of the significance of outcomes.

Method

Preregistration and Supplemental Material

This is a registered report. All materials related to the project, including the surveys, preregistration, anonymized data, and code, can be found on the Open Science Framework at https://osf.io/7raue/?view_only=e171ad59eb5c47ffa7467c1732081010.

Participants

We recruited participants in five different locations: the United States (Protestants, Jews, Catholics, and nonreligious), Brazil (Protestants), Israel (Jews), Ireland (Catholics), and China (nonreligious). The study protocol was the same across these locations, with translation and localization occurring when appropriate (see Table S1 for cross-cultural sampling procedures and descriptions of (non-)religious demographics).

The first goal of this study was to replicate the finding of significant differences between Jews and Protestants in the U.S. regarding the moral status of individuals entertaining immoral thoughts. By our calculation, the original Study 4 (Cohen & Rozin, 2001) found an effect size of Cohen's $d = 0.71$, a large effect (Funder & Ozer, 2019). However, we sought to achieve sufficient power (0.80) to detect a medium effect ($f = .25$) for a two-group ANCOVA with three covariates. A power analysis using G*Power 3.1 (Erdfelder et al., 1996) suggests a minimum sample size of 128 participants (i.e., 64 Jews and 64 Protestants).

The second goal of this research was to extend beyond the original study scope and examine (1) Catholics and nonreligious groups and (2) cross-national differences among the five countries. Similarly, we ran a power analysis for a medium effect size of $f = .25$ with five groups and three covariates, suggesting a total sample size of 196 participants.

After excluding participants who failed an attention check, did not complete more than 50% of the survey, or did not belong to the religious group we were targeting, our final sample consisted of 91 American Protestants, 94 American Jews, 87 American Catholics, 68 American nonreligious individuals, 106 Israeli Jews, 89 Irish Catholics, 138 Chinese nonreligious individuals, and 160 Brazilian Protestants for a total sample size of 833 individuals.

Procedure

All procedures were approved by the [HOME UNIVERSITY] Institutional Review Board, with secondary approval from each of our international collaborators' other home institutions. Participants were pre-screened for (non)religious affiliation (i.e., Jewish, Protestant, Catholic, and nonreligious) and nationality. The original Cohen and Rozin (2001) article contained four studies, the second and last of which present participants with the Mr. B scenario pertaining to sexual thoughts. The last study differs from the second because it introduces several potential additional measures and clarifies what it specifically meant for Mr. B to be consciously entertaining thoughts about an affair. Here, we only intended to do a direct replication of Study 4, the more widely cited scenario in the original article (Heine, 2020). For this pre-registered replication, all participants read the Mr. B vignette:

> "Mr. B. is a recent college graduate. Since graduation, Mr. B. has worked at an entry-level job in a marketing firm. Mr. B. married his college sweetheart six months after they both had their graduation from college. Mr. B. and his wife do not have any children. One of Mr. B.'s colleagues at work is a very attractive woman. This woman sometimes flirts with Mr. B., and they both know she would be willing to have a sexual affair with him. Sometimes, Mr. B. consciously entertains thoughts about having a sexual affair with his colleague."

Then, participants answered a series of questions about their impressions of Mr. B, followed by a brief demographic section (Table S3).

Measures

Impressions of Mr. B

Participants answered a series of five questions about their impressions of Mr. B after reading the vignette, such as "How does it affect your judgment of Mr. B.'s character to know that he consciously entertains thoughts about having a sexual affair with his colleague?" (*1 = Very Negatively* to *7 = Very Positively*) and "How sinful or virtuous do you think Mr. B.'s consciously entertaining thoughts about having a sexual affair with his colleague are?" (*1 = Definitely Sinful* to *7 = Definitely Virtuous)*. The configural model fit was acceptable across countries ($\chi^2(25) = 61.39$, CFI = .97, RMSEA = .10, SRMR = .04), suggesting that the items converge on a single factor ($\alpha = .76$). However, constraining item intercepts in the metric model produced a significant loss of fit ($\Delta\chi^2(16) = 50.98$, $p < .001$; ΔCFI = .03), indicating that metric invariance was not supported. We return to this issue in the Discussion.

Model of Mind

After assessing participants' impressions of Mr. B, we were interested in how participants construe Mr. B's mind and control over his actions and thoughts. Participants rated their agreement with the statement, "Immoral thoughts are as bad as immoral actions", on a scale of 1 (*strongly disagree*) to 5 (*strongly agree*).

Additional Measures

In addition to questions about the scenario, we measured self-construal, in line with the original study, as a potential mediator (Singelis, 1994). We measured religiosity as a control variable using two separate scales— the Four Basic Dimensions of Religiousness Scale

(Saroglou et al., 2020) and the Age-Universal Religious Orientation Scale-Revised, adapted by Cohen et al., 2017 to show good measurement properties and measurement invariance across groups. Additionally, we measured individualism-collectivism (Triandis & Gelfand, 2011), attachment to the religious group (given that Judaism is both a religious and ethnic identity; Roccas et al., 2006), and moral utilitarianism (Kahane et al., 2018) as potential mechanisms in exploratory mediation models. These five scales all showed sufficient configural measurement invariance but insufficient metric variance (Table S2). The demographic section included questions about religious affiliation (for the nonreligious, this meant indicating that they "do not belong to a religion" and providing a rating less than *3* on a *1* to *6* Likert scale item assessing belief in God's existence), religious history (including religious education), and nationality. Finally, an attention check was included in the survey, which asked participants to select a non-obvious option if they were carefully reading the question.

Translation

When materials were not already translated, we used the back translation method with translation and back-translation occurring by bi-lingual speakers. The speakers resolved any discrepancies between the translations. Surveys within the U.S. and Ireland were conducted in English, Portuguese in Brazil, Hebrew in Israel, and Mandarin in China. We also had translators conduct localization—changing items such as political affiliation and race to be more appropriate for the cultural context. This procedure was approved and documented by the [HOME INSTITUTION] Institutional Review Board.

Results

In line with the findings from Cohen & Rozin (2001), we found that American Jews held more positive views of Mr. B than American Protestants did ($M_{J\text{-}US}$ = 0.32, $SE_{J\text{-}US}$ = 0.08; $M_{P\text{-}US}$ = -0.16, $SE_{P\text{-}US}$ = 0.08; $t(183) = 4.47$, $p < .001$; Cohen's $d = 0.66$, 95% CI [0.36, 0.95]). This effect size is nearly the same as in the original findings (Cohen & Rozin, 2001), and the effect was robust, controlling for sex, education, and religiosity.

Next, we ran an ANOVA model predicting impressions of Mr. B by religious affiliation within the US and observed significant differences between religious groups ($F(3, 335) = 9.81$, $p < .001$, $\eta^2 = 0.08$). Within the US, nonreligious Americans held similarly favorable impressions of Mr. B to those of Jewish Americans ($M_{N\text{-}US}$ = 0.26, $SE_{N\text{-}US}$ = 0.08). However, these two religious groups were distinct from Catholics and Protestants, with Catholic Americans reporting relatively negative impressions of Mr. B similar to that of Protestants ($M_{C\text{-}US}$ = -0.09, $SE_{C\text{-}US}$ = 0.08; Table 1). With the exception of the difference between Jewish and Catholic participants, these effects were not robust after controlling for sex, education, and religiosity.

Table 1. *Differences between Religious Groups in Impressions of Mr. B in the United States.*

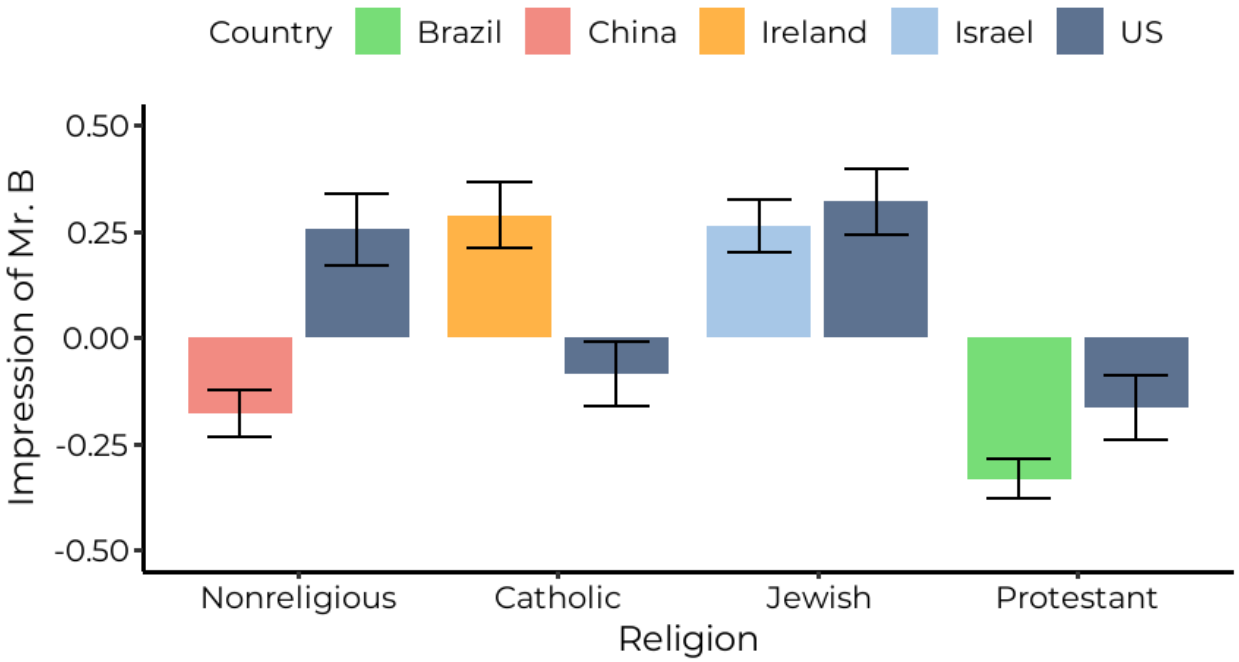
Contrast	Estimate (SE)
Jewish – Nonreligious	0.06 (0.12)
Jewish – Catholic	0.41 (0.11)**
Jewish – Protestant	0.48 (0.11)**
Nonreligious – Catholic	0.34 (0.12)*
Nonreligious – Protestant	0.42 (0.12)**
Catholic – Protestant	0.08 (0.11)

*Note: * p < .05, ** p < .01*

Next, we were interested in the effect of religious affiliation on impressions of Mr. B varied across countries (for the effect of nationality collapsed across religion, see Table S9, Figure S1). Compared to American Protestants, Brazilian Protestants held similar impressions of Mr. B ($M_{P\text{-}BR}$ = -0.33, $SE_{P\text{-}BR}$ = 0.05; $t(154.92) = 1.89$, $p = .06$; Cohen's $d = -0.26$). Israeli Jews and American Jews also held similar views of Mr. B ($M_{J\text{-}IS}$ = 0.26, $SE_{J\text{-}IS}$ = 0.06; $t(185.19) = -0.58$, p

= .56; Cohen's d = 0.08). Within Catholicism, Irish Catholics held significantly more favorable views of Mr. B than American Catholics ($M_{C\text{-}IR}$ = 0.28, $SE_{C\text{-}IR}$ = 0.08; t(172.89) = 3.46, p < .001; Cohen's d = -0.52). Nonreligious individuals from China held significantly *more* negative views of Mr. B ($M_{N\text{-}CH}$ = -0.18, $SE_{N\text{-}CH}$ = 0.05) than US nonreligious participants (t(120.82) = -4.28, p < .001; Cohen's d = -0.66; Figure 1). We report country-level differences (collapsing across religious affiliations in the US) in the Supplemental Materials (Table S4). It is important to note that the effect of country within religious affiliation was not significant after controlling for sex, education, and religiosity except amongst Catholics (Table S5). Moreover, religiosity did not moderate the relationship between religious identity and impressions of Mr. B (Table S6).

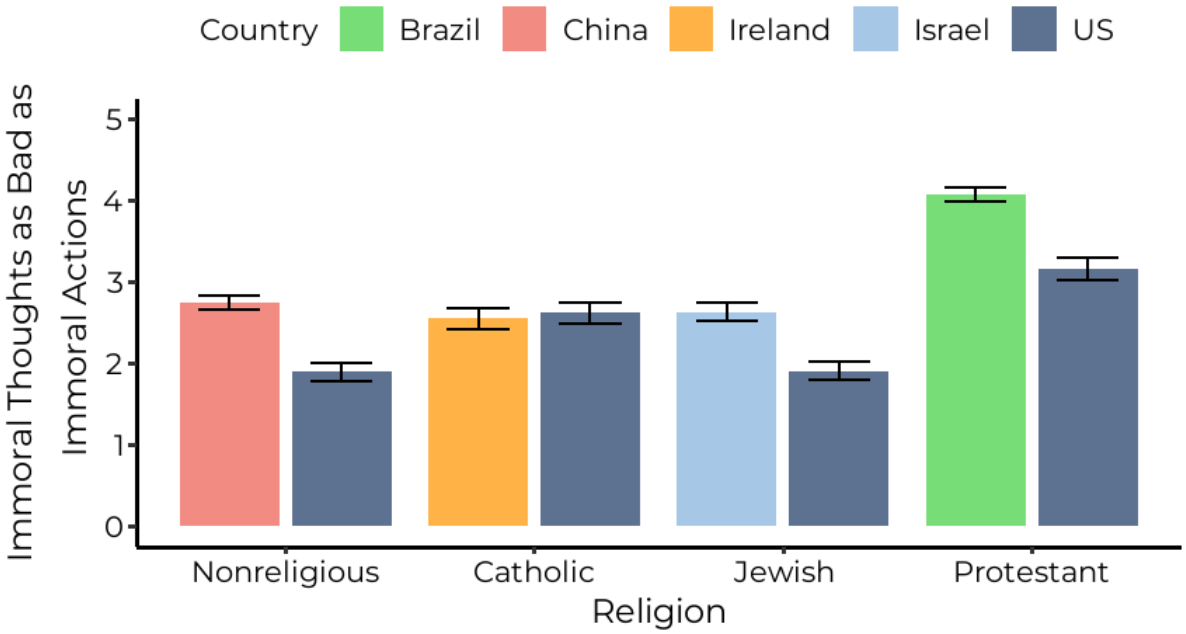
Figure 1. *Impressions of Mr. B by Religious Affiliation and Nationality.*



Co-religionists tended to diverge more in their endorsement of the idea that immoral thoughts are as bad as immoral actions. In exploratory analyses, we found that Israeli Jews were more likely to endorse this statement than American Jews ($M_{J\text{-}US}$ = 1.90, $SE_{J\text{-}US}$ = 0.11; $M_{J\text{-}IS}$ = 2.63, $SE_{J\text{-}IS}$ = 0.11; t(196.46) = 4.56, p < .001; Cohen's d = 0.64) and Brazilian Protestants were

more likely to endorse than American Protestants ($M_{P\text{-}US}$ = 3.16, $SE_{J\text{-}US}$ = 0.13; $M_{P\text{-}BR}$ = 4.07, $SE_{P\text{-}BR}$ = 0.09; t(164.89) = 5.71, p < .001; Cohen's d = 0.78) while Chinese nonreligious individuals were more likely to endorse the idea than American nonreligious individuals ($M_{N\text{-}US}$ = 1.90, $SE_{N\text{-}US}$ = 0.12; $M_{N\text{-}CH}$ = 2.75, $SE_{N\text{-}CH}$ = 0.09; t(139.99) = 5.89, p < .001; Cohen's d = 0.86). There was no difference between Irish Catholics and American Catholics ($M_{C\text{-}US}$ = 2.62, $SE_{C\text{-}US}$ = 0.13; $M_{C\text{-}IR}$ = 2.55, $SE_{C\text{-}IR}$ = 0.12; t(173.35) = 0.40, p = 0.69; Cohen's d = 0.06; Figure 2). Differences between co-religionists across countries in their endorsement of the "As Bad As" item were robust after controlling for sex, education, and religiosity (Table S7).

Figure 2. *Endorsement of the "As Bad As" Item by Religious Affiliation and Nationality.*

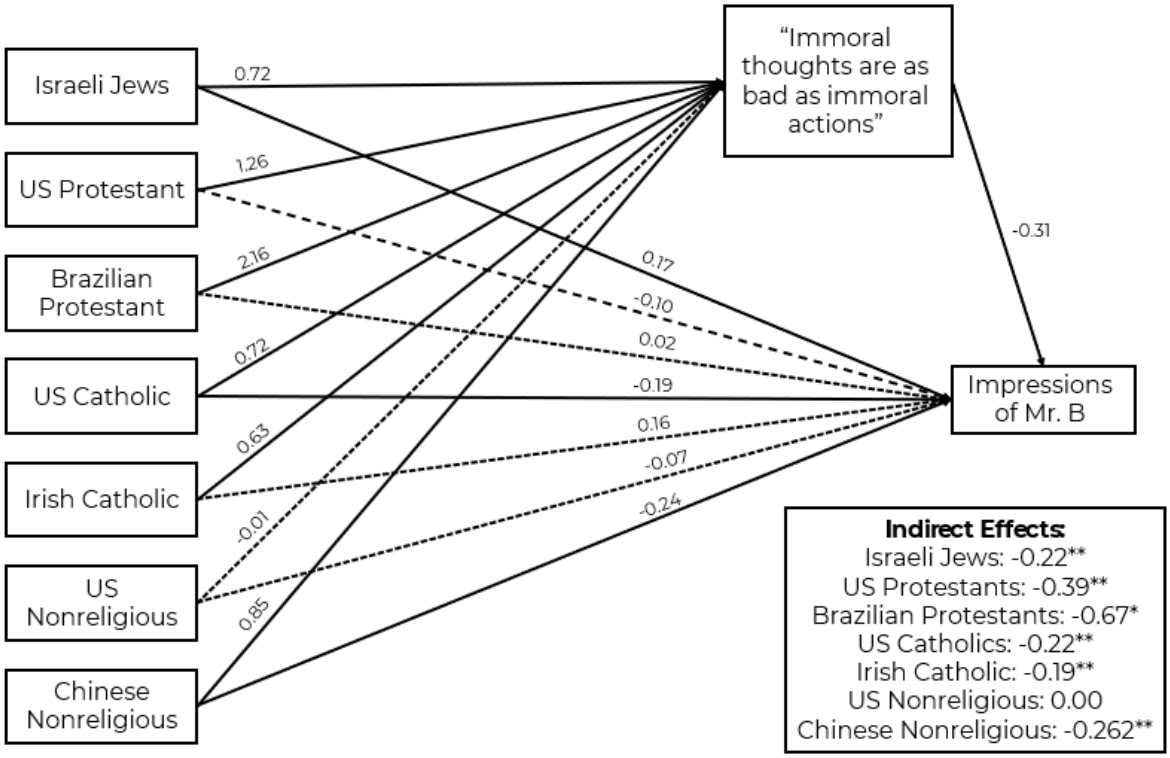


The original study proposed that the belief that immoral thoughts are as bad as immoral actions explains the relationship between religious affiliation and impressions of Mr. B such that those who endorse the belief more strongly also hold more negative views of Mr. B. To directly test the proposal of the original Cohen & Rozin (2001) article, we ran a mediation analysis with 5000 bootstrapped samples where the effect of being Protestant (with Judaism as the reference

group) on impressions of Mr. B was mediated by participant's belief that immoral thoughts are as bad as immoral actions within our US sample. There was a significant indirect effect through the "As Bad As" item (b = -0.43, 95% CI [-0.59, -0.29], p < .001) and the direct effect was no longer significant (b = -0.06, 95% CI [-0.26, 0.15], p = .57), suggesting that the association between religious affiliation and impressions of Mr. B was well explained by the beliefs that immoral thoughts are as bad as immoral actions amongst Jewish and Protestant Americans.

To look across religious affiliations and nationalities, we built a mediation model with dummy codes for each combination of religious affiliation (with US Jews as the reference group). There was a significant indirect effect by way of the "As Bad As" item for all religious groups and nationalities except for US nonreligious, likely because they were remarkably similar to US Jews on both impressions of Mr. B and the "As Bad As" item. This suggests that relative religious and national differences in the idea that immoral thoughts are as bad as immoral actions explain their differing impressions of Mr. B relative to US Jewish participants (Figure 3).

Figure 3. *Indirect Effect (a*b) of the "As Bad As" Item in the Relationship between Religious Affiliation, Nationality, and Impressions of Mr. B.*



*Note: * p < .05; ** p < .001; US Jews serve as the reference group; dashed lines indicate insignificant paths.*

As a final step, we explore whether individualism, collectivism, interdependence, and moral utilitarianism were significant mediators in the relationship between religious affiliation, nationality, and impressions of Mr. B. We ran a series of bootstrapped mediation models with each mediator separately. We did not observe any significant indirect effects by way of individualism or utilitarianism. However, collectivism and interdependence were both significant mediators in the relationship between religious and nationality identity and impressions of Mr. B for US Catholics, Israeli Jews, Brazilian Protestants, and Chinese nonreligious individuals, such by way of higher scores on collectivism and interdependence, individuals from these backgrounds tended to hold more negative views of Mr. B (except for Chinese nonreligious individuals, who tended to be lower on collectivism relative to US Jews, resulting in a positive indirect effect; Table S8). This may suggest that concerns about group or family dynamics as a

result of Mr. B's immoral thoughts (and potential subsequent actions) may also drive negative impressions.

Discussion

In this Registered Report, we replicated and extended past work that found that U.S. Protestants were more likely to moralize immoral thoughts than U.S. Jews. Moreover, we find that Catholic and nonreligious individuals are also less likely to moralize immoral thoughts than Protestants, in the US. We further show that moralizing immoral thoughts has ramifications for how people perceive others and can explain religious differences in moral perception across cultures. Moreover, the effect of religious affiliation varies significantly across nations. While we did not observe a difference in the "As Bad As" item between American and Irish Catholics, we did observe other cross-national differences in the "As Bad As" item; Israeli Jews were more condemning of immoral thoughts than US Jews, and Brazilian Protestants were more condemning of immoral thoughts than US Protestants.

What are we to make of the seeming "suppression" of the moral relevance of thoughts in the US? Perhaps other cultural values in America, such as individualism or an emphasis on free speech, led US participants to feel more forgiving of immoral, but private, thoughts. Alternatively, though the "As Bad As" item does not refer to the scenario, it is important to consider that participants were primed to think about a scenario that focused on a (mental) violation of norms surrounding sexuality and family. It is possible that the American participants were less bothered by this than those in other countries, given that moral values vary significantly across countries (Atari et al., 2023). If Mr. B were thinking about violating a value that Americans hold more dearly, perhaps American participants would have been more likely to endorse the idea that immoral thoughts are as bad as immoral actions. Lastly, it may also be that taking a more extreme belief serves to distance religious minorities in America from the dominant Protestant ideology. In this case, for example, American Jews may endorse the "As

Bad As" item less than Israeli Jews to differentiate themselves more from American Protestants. Below, we discuss further explanations for the observed differences across nationality and religious affiliation.

Israel & Judaism

While US Jews were the *least* condemning of immoral thoughts in this sample, Israeli Jews were significantly more likely than US Jews to condemn moral thoughts. Here, it is important to note that Judaism is both a religious and ethnic identity. In Israel, almost half of Jewish people identify as secular (Starr & Masci, 2016), while 22% of US Jews identify as nonreligious (Pew Research Center, 2013). In this study, US and Israeli Jews reported similar levels of religiosity and the average religiosity score in both samples was below the mid-point of the scale. Thus, these judgments may be more reflective of cultural knowledge, rather than one's religious beliefs. This could potentially further explain differences between Jews and Protestants, who tended to be more religious than Jews in this study.

Brazil & Protestantism

Brazilian Protestants were the most condemning of immoral thoughts and held the most negative impressions of Mr. B in this sample. One possibility is that cultural differences, particularly in how sexuality is perceived and addressed in Brazil and Latin America, might influence how Brazilian Protestants evaluate immoral thoughts. As previously mentioned, one potential issue with this study is its focus on the violation of a sexual norm. If a different scenario was presented (e.g., thinking about poisoning your professor's dog), we may observe different results in how participants perceive an individual who is harboring immoral thoughts. Still, the "As Bad As" item should be agnostic to the *kind* of moral violation. Another possibility is that the survey might have included different Protestant denominations in Brazil versus the

US. For example, the Assembly of God, a Pentecostal movement, is far more prevalent in Brazil than the US (Alencar & Freire, 2017; Assemblies of God, 2024).

China & the Nonreligious

At first blush, it may seem surprising that Chinese nonreligious individuals were more condemning of immoral thoughts than US nonreligious individuals, especially in post-Revolution China where religious exposure is limited. However, we note that China has indeed been deeply influenced by the historical influence of Daoist, Confucian, and Buddhist teaching which include explicit teachings about the moral relevance of thoughts. Confucian ethics, as reflected in the imperial legal system inherited since the Tang dynasty (618–907) and throughout most of premodern China, for instance, has "10 abominations," which define transgression against hierarchy both in action and in thought as one of the ten most heinous crimes. As an example, when it came to the crime of harming one's superior (e.g., parents, king), even thinking about such action was a punishable crime, and telling others or plotting to commit such a crime would be evidence of such thoughts. It is also worth noting that Confucian, Buddhist, and Daoist beliefs dictate that the gods were also privy to one's thoughts. Perhaps the legacy of "the Three Teachings" has influenced modern Chinese to consider the morality of immoral thoughts. As such, it would seem to be an interesting question for future research as to whether Chinese can be induced to "code switch", perhaps moralizing thoughts when primed to think about tradition and not moralizing thoughts when in a modern, nonreligious frame of mind.

Future Directions & Limitations

These results open many future directions. What are the implications of moralizing thoughts on crime and society? Do countries that moralize immoral thoughts offer stricter punishments for acts like the planning of a crime or conspiracy to commit murder? It is also

worth considering why certain cultural mediators emerged. For example, we found that collectivism predicted worse impressions of Mr. B. In an exploratory analysis, we found that endorsement of the "As Bad As" item was associated with greater collectivism, $r(824) = .35$, $p < .001$. Although Cohen has previously proposed that moralizing thoughts is an individualistic tendency (Cohen, 2009), perhaps there are also collectivistic reasons to do so. It may be that maintaining group bonds (e.g., filial piety, marital relations) is so prized that one should even guard against mental infractions in these domains, but this should be investigated more in future work.

As previously noted, this paradigm has a few limitations. We were unable to collect some variables, despite registering to do so, namely age and several additional items to assess the moralization of thoughts. However, the addition of these items would not likely change the findings of this investigation. It is also important to consider that participants were primed to think about a specific kind of moral violation – which may be more or less "wrong" depending on a participant's religious and cultural background. Most critically, we were unable to establish measurement invariance for any of the composite scales in this study. While all of the scales had configural variance, confirming that the items did load on the intended latent variable, each item had different loadings and intercepts, depending on the participants' religious group or country. In theory, this precludes comparison of means, but recent analyses suggest that violations of metric invariance may not preclude meaningful analyses (Funder & Gardiner, 2024; Olivera-Aguilar et al., 2018). However, for the purposes of this direct replication, we proceeded with analyses but caution that findings may be misleading when measurement invariance is not established.

Moreover, some of these effects did not hold after controlling for sex, education, and religiosity. As shown in Table S5, with the exception of Catholics, there was no difference between co-religionists across countries in their Impressions of Mr. B (i.e., Israeli Jews held similar views of Mr. B as US Jews after controls). In contrast, cross-national differences in the endorsement of the "As Bad As" item were robust to the inclusions of controls (Table S7). This underscores the importance of control variables when investigating cultural phenomena but also begs the question: Why might the moralization of thoughts and Impressions of Mr. B vary along these lines? Rather than thinking about certain variables simply as controls, researchers should think carefully about how variables might be meaningfully related. This becomes especially complicated in a cross-cultural framework (e.g., how does religion relate to education in different countries?).

Our preferred theoretical interpretation of the causal order of this effect is that people are socialized by their country and religious traditions of origin, which encourages them to moralize immoral thoughts or not, and this, in turn, shapes how people respond to specific moral scenarios. We hasten to note, however, that people are not and cannot be randomly assigned to religious tradition or country. Still, we retain confidence that the religious affiliation and country of the respondents were pre-existing, before the study measurements. However, there is not clear temporal precedence of the mediator or dependent variable, so it may be useful in future experiments to shore up the causal relation between the mediator and dependent variable; a possible future study would manipulate the importance of the "As Bad As" belief and then observe changes in the impressions of a particular offender. It remains possible that confounds could explain the links between country, religion, the "As Bad As" item, and character impressions of Mr. B. For these problems with random assignment and establishing temporal

preference, causal inference in the psychology of religion can be thorny (J. W. Moon et al., 2023).

Continuing in this regard, we also want to comment on the path from our mediator to our dependent variable. Overall, this path had a substantial effect. We did note that the relation of the "As Bad As" item and impressions of Mr. B varied between groups (strongest amongst Brazilian Protestants group, weaker in Chinese nonreligious). Nonetheless, the direction of the effect was the same across all groups: greater agreement that thoughts are as bad as actions was associated with a worse moral impression of Mr. B. in all groups.

Together, these limitations underscore the difficulty of conducting research on culture and religion. Concepts may have different meanings in different religions (e.g., the definition of "sin" in Catholicism vs. Judaism). Surveys may be run in different languages with careful linguistic nuances. Historical contexts may further muddy the conceptual waters. Together, the "same" religion in different countries may not be practiced or construed in the same way. Irish Catholicism may be different from US Catholicism. What it means to be a US Protestant may be different from what it means to be a Brazilian Protestant. As this work shows, it is critical that we continue to explore how national and religious cultures interact.

Conclusion

In the 25 years since the publication of Cohen & Rozin (2001), it seems not much has changed in how religious identity shapes the moralization of immoral thoughts. American Protestants are still more likely to condemn immoral thoughts than American Jews – and at a similar effect size – but here, we further the original findings by identifying a few key twists in this story. Like many phenomena within social psychology, it is not just one aspect of our identity that shapes our beliefs but rather a complex interplay between religious identity, national culture, and individual differences that explains why, for some, immoral thoughts are as bad as immoral actions.

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712 **SUPPLEMENTAL MATERIALS**

Data Collection in Belgium

We originally pre-registered data collection in Belgium targeting Belgian Catholics. However, we were able to receive only 33 responses from Belgians who self-identified as currently Catholic, despite extensive efforts -- the vast majority of the sample's participants from this secularized country were, in fact, nonreligious. We determined that this sample size was too small to present in the main manuscript and thus began data collection in Ireland, which also has a Catholic majority. This data is still available on OSF for interested parties.

National Differences in Impressions of Mr. B

We ran a pre-registered ANOVA predicting impression of Mr. B from participants' nationality, collapsing across religious affiliation. Nationality as a significant predictor impressions of Mr. B ($F(4,825) = 20.42$, $p < .001$, $\eta^2 = 0.09$). Contrasts revealed multiple significant differences between countries; we present these contrasts in Table S9 and Figure S1.

SUPPLEMENTAL MATERIALS

Table S1. *Details of Cross-Cultural Sampling Methods.*

Country	**Language of Survey**	**(Non)religious Demographics** (Central Intelligence Agency, 2021)	**Nature of Sample**	**Dates of Data Collection**
United States	English	Protestant – 46.5% Nonreligious – 22.8% Catholic – 20.8% Jewish – 1.9%	Online community (Prolific)	Winter 2024
Ireland	English	Catholic – 69.2% Nonreligious – 14.6% Protestant – 3.7% Jewish - NA	Online community (Prolific)	Spring 2025
Israel	Hebrew	Jewish – 74% Catholic – NA Protestant – NA Nonreligious – NA	Online community (Midgam)	Winter 2024
China	Mandarin	Nonreligious – 52.1% Jewish - < .1% Catholic – NA Protestant – NA	Online community recruited via social workers' community networks	Fall 2024
Brazil	Portuguese	Catholic – 65% Protestant – 22.2% Nonreligious – 8% Jewish – NA	Online community recruited via community networks	Winter 2024 – Spring 2025

Table S2. *Measurement Invariance by Construct Across Countries.*

Scale	α	Configural Model	Metric Model	Scalar Model
Impressions of Mr. B	.76	$\chi^2(25) = 61.39$, CFI = .97	$\chi^2(41) = 112.35$, CFI = .94*	$\chi^2(57) = 421.29$, CFI = .67*
Interdependent Self Construal	.75	$\chi^2(270) = 708.65$, CFI = .76	$\chi^2(314) = 802.67$, CFI = .74*	$\chi^2(358) = 1184.67$, CFI = .55*
BBBB Religiosity	.96	$\chi^2(270) = 1191.95$, CFI = .89	$\chi^2(314) = 1318.81$, CFI = .88*	$\chi^2(358) = 1726.04$, CFI = .84*
Intrinsic Religiosity	.84	$\chi^2(100) = 756.77$, CFI = .80	$\chi^2(128) = 917.17$, CFI = .76*	$\chi^2(156) = 1357.98$, CFI = .63*
Extrinsic Religiosity	.82	$\chi^2(45) = 600.25$, CFI = .76	$\chi^2(65) = 652.86$, CFI = .74*	$\chi^2(85) = 859.83$, CFI = .66*
Individualism	.62	$\chi^2(100) = 494.05$, CFI = .63	$\chi^2(128) = 551.34$, CFI = .60*	$\chi^2(156) = 1250.34$, CFI = .00*
Collectivism	.78	$\chi^2(100) = 574.08$, CFI = .67	$\chi^2(128) = 705.42$, CFI = .60*	$\chi^2(156) = 1044.99$, CFI = .38*
Moral Utilitarianism	.68	$\chi^2(100) = 704.62$, CFI = .63	$\chi^2(128) = 733.30$, CFI = .63	$\chi^2(156) = 1133.27$, CFI = .40*

*Note: * indicates a significant difference between that model and the previous model*

Table S3. *Demographics Across Religious Affiliations and Nationality.*

		Jewish		**Protestant**		**Catholic**		**Nonreligious**	
		US	***Israel***	***US***	***Brazil***	***US***	***Ireland***	***US***	***China***
Sex	*Female*	56.4%	43.4%	52.7%	68.1%	54.7%	70.8%	58.2%	69.6%
	Male	43.6%	47.2%	47.3%	24.4%	45.3%	28.1%	41.8%	30.4%
	Missing	0%	0%	0%	7.5%	0%	1.1%	0%	0%
Education	*Less than high school*	0%	< 1%	0%	1.3%	0%	0%	1.5%	2.9%
	High school	0%	23.6%	12.1%	15.6%	5.7%	14.6%	4.4%	65.9%
	Some college	11.7%	14.2%	17.6%	12.5%	11.5%	18%	16.2%	0%
	2 year	5.3%	10.4%	8.8%	7.5%	13.8%	10.1%	13.2%	< 1%
	4 year	48.9%	37.7%	40.7%	35.0%	50.6%	29.2%	45.6%	29%
	Masters	0%	9.4%	0%	1.3%	0%	0%	0%	
	Master or higher	-	-	-	-	-	-	-	1.4%
	Doctorate	0%	1.9%	1.1%	0%	2.3%	1.1%	1.5%	-
	Professional	27.7%	0%	19.8%	0%	16.1%	27.0%	17.6%	0%
	Specialization	-	-	-	20.6%	-	-	-	-
	Missing	0%	1.9%	0%	6.3%	0%	0%	0%	0%
Religiosity (*M, SD*)		2.73 (0.69)	2.80 (0.67)	3.48 (0.56)	3.55 (0.41)	2.96 (0.55)	2.63 (0.57)	1.83 (0.36)	2.68 (0.55)

Table S4. *Impressions of Mr. B and "As Bad As" by Country.*

Country	**Impressions of Mr. B**	**"As Bad As"**
US	0.07 (0.04)	2.42 (0.07)
Israel	0.26 (0.06)	2.63 (0.11)
Ireland	0.29 (0.08)	2.55 (0.12)
China	-0.18 (0.05)	2.75 (0.09)
Brazil	-0.33 (0.05)	4.07 (0.09)

Note: Values represent the mean, with the standard error reported in parentheses

Table S5. *Unstandardized Linear Regression Coefficients Predicting Impressions of Mr. B from Country With and Without Controls.*

	Jewish		**Protestant**		**Catholic**		**Nonreligious**	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Intercept	0.32**	0.67*	-0.16*	0.09	-0.09	0.75*	0.26**	0.04
Non-US Country	-0.06	0.05	-0.17*	-0.10	0.37**	0.30*	-0.43**	-0.30
Religiosity		-0.24**		-0.13**		-0.27**		-0.02
Sex								
Male		0.02		0.05		0.25*		0.50**
Missing		-		-0.34		-1.11		
Education								
Less than High School		0.54		-0.04		-		0.37
Some College		0.28		0.09		-0.05		0.18
Two-Year		0.28		-0.12		-0.00		0.36
Four Year		0.16		0.15		-0.27		-0.12
Masters		0.57*		0.75		-		-
Doctorate		0.93**		0.48		-0.10		0.32
Professional		0.43		0.53**		-0.11		0.33
Specialization		-		0.11		-		-
Masters or higher		-		-		-		0.60
Missing		0.73		-		-		-

*Note: * p < .05, ** p < .01; "-" indicates this option was not selected or provided; the reference group for sex was "Female"; the reference group for education was "High school graduate"*

Table S6. *Unstandardized Regression Coefficients Predicting Impressions of Mr. B from the Interaction between Religious Affiliation and Religiosity with All Four Religiosity Variables.*

	Self-Reported Religiosity	**Intrinsic Religiosity (Cohen et al., 2017)**	**Extrinsic Religiosity (Cohen et al., 2017)**	**Four B's of Religion (Saroglou et al., 2020)**
Intercept	-0.01	-0.17*	-0.08	-0.20*
Catholic	0.14	0.21*	0.20*	0.31*
Jewish	0.27	0.42*	0.37*	0.52*
Protestant	-0.15	0.28*	-0.19*	0.11
Religiosity	0.03	-0.21*	-0.11*	-0.19*
Catholic x Religiosity	-0.26	0.01	0.02	-0.06
Jewish x Religiosity	-0.25	-0.02	0.07	0.03
Protestant x Religiosity	-0.17	-0.20	0.12	-0.08

*Note: * $p < .05$; the reference group was the nonreligious.*

Table S7. *Unstandardized Linear Regression Coefficients Predicting the "As Bad As" Item from Country With and Without Controls.*

	Jewish		**Protestant**		**Catholic**		**Nonreligious**	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Intercept	1.90**	1.20**	3.16**	2.28**	2.62**	1.48**	1.90**	2.08**
Non-US Country	0.72**	0.64**	0.90**	0.93**	-0.07	0.11	0.96**	0.57**
Religiosity		0.22**		0.32**		0.37**		0.20
Sex								
Male		-0.11		-0.32*		-0.71**		-0.41**
Missing		-		0.48		0.92		-
Education								
Less than High School		-1.56		0.82		-		0.43
Some College		-0.59		-0.62*		-0.12		-0.49
Two-Year		0.72*		0.15		0.68		-0.32
Four Year		-0.28		-0.01		0.51		-0.05
Masters		-0.52		-3.00**		-		-
Doctorate		-1.16*		0.77		1.18		-0.28
Professional		-0.54		-0.00		0.38		-0.44
Specialization		-		-0.21		-		-
Masters or higher		-		-		-		-0.35
Missing		0.73		-		-		-

*Note: * p < .05, ** p < .01; "-" indicates this option was not selected or provided; the reference group for sex was "Female"; the reference group for education was "High school graduate"*

Table S8. *Standardized Coefficients from Regression Analyses by Mediator.*

	"As Bad As"	Individualism	Collectivism	Interdependence	Utilitarianism
A-Path					
US Protestant → Mediator	1.26*	0.23*	0.30*	0.26*	0.07
US Catholic → Mediator	0.72*	0.10	0.27*	0.22*	0.04
US Nonreligious → Mediator	-0.01	0.04	-0.33*	-0.19*	-0.08
Israeli Jew →Mediator	0.72*	0.24*	0.32*	0.19*	0.20*
Brazilian Protestant → Mediator	2.16*	0.14	0.78*	0.19*	0.04
Irish Catholic → Mediator	0.63*	0.18*	0.16*	0.04	0.04
Chinese Nonreligious → Mediator	0.85*	0.27*	-0.33*	0.24*	-0.16
B-Path					
Mediator → Impressions	-0.31*	-0.04	-0.12*	-0.24*	-0.03
C-Path					
US Protestant → Impressions	-0.10	-0.51*	-0.45*	-0.43*	-0.48*
US Catholic → Impressions	-0.19*	-0.41*	-0.38*	-0.37*	-0.41*
US Nonreligious → Impressions	-0.07	-0.07	-0.10	-0.12	-0.08
Israeli Jew → Impressions	0.17*	-0.06	-0.02	-0.02	-0.06
Brazilian Protestant → Impressions	0.02	-0.66	-0.57*	-0.62*	-0.65*
Irish Catholic → Impressions	0.16	-0.05	-0.02	-0.03	-0.03
Chinese Nonreligious → Impressions	-0.24*	-0.50*	-0.54*	0.45*	-0.51*
Indirect Effects					
. . . for US Protestants	-0.39*	-0.01	-0.04	-0.06*	-0.00
. . . for US Catholics	-0.22*	-0.00	-0.03*	-0.05*	-0.00
. . . for US Nonreligious	0.00	-0.00	0.04*	0.05	0.00
. . . for Israeli Jews	-0.22*	-0.01	-0.04*	-0.04*	-0.01
. . . for Brazilian Protestants	-0.67*	-0.01	-0.09*	-0.05*	-0.00
. . . for Irish Catholics	-0.19*	-0.01	-0.02	-0.01	-0.00
. . . for Chinese Nonreligious	-0.26*	-0.01	0.04*	-0.06*	0.00

*Note: * $p < .05$; the reference group was American Jews.*

Table S9. *Contrasts for Nationality Predicting Impressions of Mr. B.*

Contrast	Estimate (SE)
Ireland – Israel	0.03 (0.10)
Ireland – US	0.21 (0.08)
Ireland – China	0.47 (0.09)**
Ireland – Brazil	0.52 (0.09)**
Israel – US	0.19 (0.08)
Israel – China	0.44 (0.09)**
Israel – Brazil	0.60 (0.09)**
US – China	0.25 (0.07)**
US – Brazil	0.41 (0.07)**
China – Brazil	0.15 (0.08)

*Note: * p < .05, ** p < .01*

Figure S1. *Nationality Predicting Impressions of Mr. B.*

