

If You Don't Believe in God, Do You at Least Believe in Aristotle?

Evaluations of Religious Outgroup Members Hinge upon Moral Perceptions

Stephanie Mallinas, Florida State University

Paul Conway, University of Portsmouth

### Abstract

Religious people tend to believe atheists are immoral. Although some work suggests that atheists themselves agree, such findings could also reflect symmetric ingroup bias in the moral domain, where atheists likewise view religious targets as untrustworthy and immoral. We examined how American religious and atheist participants rated the morality of atheist and religious targets and assessed a potential intervention: learning that targets adhere to a moral code. Across three studies, both religious and nonreligious participants demonstrated clear ingroup favoritism, rating ingroup targets more moral than outgroup targets. However, this ingroup bias was reduced when participants learned the target adheres to a warm and coherent moral system rooted in philosophy and concern for others. These findings extended beyond evaluations to downstream social consequences such as distancing. Such findings challenge arguments that atheists view themselves as immoral and point the way forward toward reducing religious ingroup bias.

Keywords: morality; person perception; atheists

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*"I'm not saying that atheists can't act morally or have moral knowledge. But when I ascribe virtue to an atheist, it's as a theist who sees the atheist as conforming to objective moral values. The atheist, by contrast, has no such basis for morality. And yet all moral judgments require a basis for morality, some standard of right and wrong."*

—William A. Dembski, Mathematician, Philosopher, & Theologian

Once a relatively invisible minority, atheists are steadily growing in number in the United States (Shermer, 2018), making it increasingly important to study intergroup perceptions of atheists and religious individuals. Unlike religious individuals, atheists do not believe in the existence of God or other divine beings. Although atheism is fundamentally a belief system, atheism also functions as a social category that can shape perception. Indeed, as Dembski illustrates, concerns about morality factor prominently when religious people and atheists meet, and religious people often view atheists as lacking a basis for morality. Morality is a key component of intergroup perception—more important than sociability or competence (Brambilla et al., 2012)—and greatly influences how people behave towards outgroup targets (Brambilla et al., 2013; Leach et al., 2007). Whereas considerable work shows that religious people tend to view atheists as immoral, some work suggests that atheists may even share this negative perception of their own group, at least implicitly (e.g., Gervais et al., 2011; Gervais, 2014). However, evidence on this point is more mixed than commonly portrayed (Guenther, 2012; Moon, 2018; Swan & Heesacker, 2012). It remains possible that ingroup bias in the moral

domain is largely symmetrical, with atheists rating religious targets less moral than atheist targets and vice versa. After all, religious beliefs can sometimes lead to oppression, discrimination, and other immoral actions (e.g., Monroe & Plant, 2019). In the current work, we examined whether religious ingroup bias is primarily symmetrical or asymmetrical.

Moreover, the question remains how to ameliorate negative perceptions of religious outgroups. For religious targets, perceivers can use target adherence toward religious precepts as a heuristic for trustworthiness (Hall et al., 2015). However, such techniques would not apply to atheists, who do not adhere to religious tenets. Indeed, interventions to improve perceptions of atheists have largely proven unsuccessful. For example, manipulating perceptions of the scientific origins of morality does little to improve moral attitudes towards atheism, leading to the conclusion that immoral perceptions of atheists are difficult to change (Mudd et al., 2015). However, as William Dembski argued, such distrust may reflect perceptions that atheists lack an “objective basis” for morality. Moreover, reminders of secular moral authorities, such as police and the justice system, can reduce religious perceivers’ distrust of atheists (Gervais & Norenzayan, 2012). Therefore, we anticipated that learning a religious outgroup target adheres to an ‘objective’ secular basis for morality—systematic adherence to a philosophical moral code, combined with warm concern for individuals—would ameliorate moral concerns, even for religious targets evaluating an atheist.

### **Perceived Morality of Religious People**

Morality is famously difficult to define, but generally refers to social conduct that may impact others positively or negatively (Skitka & Conway, 2019). Morality is complex with many facets, including different moral concerns, such as the individualizing concerns about harm and fairness, and binding concerns about loyalty, authority, and purity (Graham & Haidt, 2009).

Whereas there is considerable variation in binding foundation endorsement across cultural and religious lines, there remains widespread agreement on the moral importance of harm and fairness concerns (Levine et al., 2021)—indeed, people believe that intentionally harming an innocent target is universally immoral (e.g., Piazza et al., 2014). Therefore, we focus primarily on widely shared concerns about individualizing concerns in our operationalization of morality.

Laypeople often associate religiosity with morality (Maclean et al., 2004; Sverdlik & Rechter, 2019). Religions espouse *moral systems*—overarching approaches to morality that require consistent good action across contexts. For example, all religions appear to support a version of the ‘golden rule’ of treating others with reciprocity (Neusner & Chilton, 2008), religious people tend to endorse moral rules (Piazza & Landy, 2013), and reminders of religiosity tend to increase prosociality (e.g., Shariff & Norenzayan, 2008; Shariff et al., 2016).<sup>1</sup> Thus, declaring allegiance to a religion implies that one shares this moral system. Moreover, religious people often foster trust by engaging in effortful, public displays of commitment to religious ideals which increase perceptions of trustworthiness. For example, Hall and colleagues (2015) found that people judged a) Christians who donated to charities, and b) Muslims who followed religious dietary rules (i.e., Halal), as more trustworthy than religious individuals who did not engage in such costly signaling behaviors. Thus, religion can serve as a heuristic for morality; perceivers can infer that a target adheres to a moral system simply by learning that the target identifies with a religion (Gervais, 2014), especially when they display public adherence to religious doctrine (Hall et al., 2015).

On the other hand, there can be reasons to doubt the morality of religious people.

Although laypeople often assume that religious targets have moral characteristics, this inference

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<sup>1</sup> Although the degree to which this is true may depend in part on the target, and partially reflect reporting bias (Shariff et al., 2014; Shariff, 2015).

is unidirectional: laypeople are not more likely to believe that a moral person is religious (Walker & Pitts, 1998). Religious people often view themselves as morally superior to others (Rowatt et al., 2002) and are more likely than others to engage in impression management strategies to communicate moral superiority (Bulbulia, & Sosis, 2011; Paulhus, 2002).

Laypeople can find such signaling of moral superiority threatening, leading to denigration in retaliation (e.g., Cramwinckel et al., 2013). Moreover, religiosity can promote passivity in the face of opportunities to reduce overall suffering (e.g., Barak-Cohen & Bazerman, 2017).

Religious people may deny theory of mind to some outgroup targets, thereby increasing prejudice against them—the so-called ‘dark side’ of morality (Monroe & Plant, 2019).

Moreover, laypeople intuit that religion can lead to violence in some cases (Mercier, Norris, & Shariff, 2018).

Therefore, although laypeople may often associate religiosity with morality, sometimes they view religious people as misguided in their moral approaches (Simpson & Rios, 2016). This may be especially true among atheist or agnostic people, suggesting symmetrical ingroup bias in the moral domain rather than asymmetrical preference for religious over atheist targets even among atheist participants. Importantly, such concerns also raise the possibility that clear evidence of a religious target’s adherence to secular moral systems may increase perceptions of their morality, beyond (or despite) their religious faith. Accordingly, we tested whether providing information that a religious outgroup target adheres to a moral code would improve perceptions of that religious outgroup.

### **Perceived Morality of Atheists**

Unlike religious people, atheists do not publicly demonstrate a commitment to religious ideals, rendering their moral character and beliefs ambiguous to naïve perceivers. The absence of

such public indicators of trustworthiness may lead perceivers to infer that atheists are inherently untrustworthy and immoral—especially among religious perceivers (Gervais, 2014). Indeed, people often hold negative attitudes toward atheists (Cook et al., 2014; Edgell et al., 2006), and rate atheists as relatively immoral and untrustworthy (Edgell et al., 2016; Gervais, 2014; Gervais et al., 2011; Simpson et al., 2019; Simpson & Rios, 2017). In one study, even atheist participants heuristically associated a serial killer with atheism (via the conjunction fallacy, Gervais, 2014). These results could be interpreted as evidence that atheists themselves intuitively judge immorality as representative of atheists. However, it is unclear whether heuristic associations reflect atheists' own personal beliefs or simply represent beliefs that are widespread in society, regardless of personal endorsement (Payne et al., 2017).

Other studies suggest that atheists may perceive other atheists positively. For example, in countries with large atheist populations, people rate atheists as more trustworthy (Gervais, 2011), possibly in part because of a higher proportion of atheist respondents. Atheists appear aware of the public association between atheism and immorality and may compensate with extra generosity toward outgroup targets who are aware of their atheism (Cowgill et al., 2017). In one study, atheists described Christians as less moral than Christians described atheists (Simpson & Rios, 2016). American atheists often report holding moral codes derived from areas such as science, philosophy, and reason (Pew Research Center, 2014). As such, it may be that awareness of such secular moral codes allow atheist people to view other atheists positively. Consistent with this possibility, some work suggests that religious and nonreligious people express a similar degree of bias against one another (Brandt & van Tongeren, 2017; Kossowska et al., 2016; Uzarevic et al., 2019).

### **The (A)Symmetry of Religious Ingroup Bias**

Although some work suggests that atheists are biased against their own group (e.g., Gervais, et al., 2011; Gervais, 2014), other work suggests this conclusion may be premature (Swan & Heesacker, 2012). Whereas atheists may prefer religious individuals (outgroups) because of their perceived trustworthiness (Gervais, 2013), there are also many reasons to expect ingroup favoritism among atheists (see Tajfel & Turner, 1979). With some exceptions (Kossowska et al., 2016; Simpson & Rios, 2016), most studies do not examine the full crossover of atheist/agnostic and religious targets evaluating both atheist and religious targets; hence, it remains unclear whether the antipathy that religious people express towards atheists is primarily asymmetrical (i.e., whether both atheists and religious people prefer religious targets over atheist targets) or symmetrical (i.e., whether atheists rate other atheists more positively than they rate religious people). Considering the above reasons why people may view the morality of religious and atheist targets both positively and negatively, we anticipated that atheists and religious people would demonstrate largely symmetrical ingroup bias in favor of their own groups when evaluating the morality of atheist and religious targets.

### **Ameliorating Religious Ingroup Bias**

Past findings regarding negative perceptions of atheists could suggest that lay people interpret atheists' absence of religion as clear evidence of immorality; alternatively, such findings could reflect mere uncertainty about whether a given atheist subscribes to a clear moral code. Likewise, negative views of religious peoples' morality appear rooted in concerns that religious people discriminate against and otherwise harm vulnerable people, an act clearly inconsistent with moral codes (e.g., Monroe & Plant, 2019; Mercier et al., 2018). Therefore, bias against the morality of religious outgroup targets may be reduced or eliminated by reassurance that the target in question adheres to secular moral codes—essentially assuring even outgroup

participants that they share moral understanding with the target, despite differences in religious (non)belief. If so, then learning that a religious outgroup member adheres to a systematic secular moral code, such as that derived from philosophy, may improve perceptions of their moral character, reducing ingroup bias. In the current work, we present three studies manipulating information about atheist and non-atheist targets' moral systems to examine whether such information shifts judgments of targets belonging to religious outgroups.

We also considered how lay people might conceptualize morality. Some theorists posit that morality consists primarily of affect-laden intuitive processing, such as emotional concern for others' wellbeing (e.g., Hume, 1751/2006; Haidt, 2001); other theorists describe morality primarily in terms of cognitive operations or heuristic rule-following (Kant, 1785/1959; Kohlberg, 1969; Sunstein, 2005); some describe both (Greene, Sommerville, Nystrom, Darley, & Cohen, 2001; Nichols & Mallon, 2006). Likewise, lay perceivers may conceptualize others' morality in different ways, such as *warm and emotional* or *cold and logical* (e.g., Rom et al., 2017). That is, people intuit that others may act morally due to personally caring about others or because they coldly and methodically follow moral rules. Past work generally suggests that lay people ascribe morality to targets who evince warm emotional concern for individuals, even if abstract logical thinking or strict concern for rules may lead to a different conclusion (e.g., Everett et al., 2016, 2018). However, emotions by themselves may be easily swayed by parochial concerns if not balanced by broader logical considerations (Lowenstein & Small, 2003; Bloom, 2016). Decision-makers most concerned about morality appear to employ a combination of emotional and logical processing (Conway et al., 2018), a fact not lost of lay perceivers (Rom et al., 2017). Therefore, we expected that in the current work, morality ratings would be highest for

targets who communicate a combination of warm concern for others together with careful adherence to moral ideals.

### **The Present Studies**

In the current work, we examined whether information that targets adhere to various moral systems would improve perceptions of those targets, especially among outgroup members. We also examined whether this manipulation would prove equally effective for atheist/agnostic and religious participants evaluating religious outgroup targets, and whether the overall levels of bias each group of participants demonstrated was symmetrical or asymmetrical.<sup>2</sup> In Study 1, we examined whether providing information about a target's approach to morality (warm and moral, cold and moral, control) attenuated perceptions of their immorality, especially among religious outgroup perceivers. In Study 2, we considered whether providing information about a target's specific philosophical moral system strengthened this attenuation effect. Study 2 also assessed perceivers' willingness to help the target. In Study 3, we examined whether moral system information influenced willingness to hire targets, particularly among religious outgroup perceivers.<sup>3</sup> Across all studies, we report how we determined sample size, all data exclusions, all manipulations, and all measures (Simmons, Nelson, & Simonsohn, 2012). Data collection for each study ended prior to data analysis.<sup>4</sup>

For all studies, we first tested higher-order interactions between target religion, target moral system, and participant religion. When these interactions were significant, we conducted

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<sup>2</sup> For sufficient power, we combined participants identifying as atheist and agnostic into a single group.

<sup>3</sup> We collected two additional studies to test hypotheses auxiliary to the main work. These studies are presented in supplemental materials.

<sup>4</sup> Data was collected using Amazon.com's Mechanical Turk. The data were largely collected before the spike in data quality issues in 2018 (the first four studies were all run in September and October, 2017, and the final two studies run in May 2019). However, we took several steps to ensure data quality. In addition to attention checks described in Study 1, we required that all participants complete a minimum of 50 prior HITs with an approval rating of 95% or higher prior to viewing the study and have their server location set to the United States.

tests to clarify the interaction. However, if these interactions were not significant, indicating that the effects did not depend on participant religion, we recoded participant and target religion to a variable tracking ingroup/outgroup evaluations to simplify analyses. Thus, in studies without a significant higher-order interaction, we focused on the interaction between ingroup/outgroup status and moral system information.

### Study 1

In Study 1, atheist/agnostic and religious participants read about either an atheist target or a target described without reference to religious information. We expected patterns consistent with ingroup favoritism: atheist/agnostic participants would rate atheist targets more positively than religious participants, whereas the opposite would occur for religion-unspecified targets (in future studies we included a religious target).<sup>5</sup> We manipulated target moral beliefs by describing the target as either warm and moral, cold and moral, or else did not mention morality. We expected that all participants would rate targets described as warm and moral more positively than targets described as cold and moral, and that both warm-moral and cold-moral targets would be rated more positively than targets described without warmth/morality information. We expected that warm-moral information would attenuate ingroup favoritism effects.

### Method

**Participants.** We recruited 370 U.S. participants from Amazon's Mechanical Turk, as G\*Power suggests that a sample of ~250 provides ~80% power to detect effects of  $\eta_p^2 = .03$ , but we decided to oversample in case of a smaller observed effect size (Faul, Erdfelder, Lang, & Buchner, 2007). We also decided a priori to exclude everyone ( $n = 13$ ) who failed simple

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<sup>5</sup> We coded religious participants viewing a religion-unspecified target as 'ingroup' as religion remains the predominant belief system in North America (Pew Research Center, 2014). Although not ideal, this provides a conservative test of our hypothesis. In future studies we identified targets as clearly atheist or religious.

attention checks (i.e., selecting the correct response option to an item as per instructions; Oppenheimer, Meyvis, & Davidenko, 2009), resulting in a final sample of 357 ( $M_{\text{age}} = 36$ ; 47% female; 83% White). Thirty seven percent of the sample identified as Christian, 24% as Atheist, 28% as agnostic, and the remaining 11 percent identified as Jewish, Muslim, Hindu, Buddhist, or members of other religions.

**Materials and Procedure.** Study 1 employed a 2 (target beliefs: no information vs. atheist)  $\times$  2 (participant beliefs: religious vs. atheist/agnostic)  $\times$  3 (target description: warm-moral vs. cold-moral vs. control) between-subjects design.

**Manipulations.** All participants viewed a photo of a target described as Tom, a White male appearing to be in his twenties. They were randomly assigned to read a description of Tom, all of which shared common text about Tom's job as an accountant, his hobbies, and information that people describe him as intelligent (see supplemental materials). We manipulated whether the text described Tom as an atheist ("Tom is an atheist, meaning he does not believe in the existence of God") or did not mention any religious information. We crossed the target atheism manipulation with a description of Tom's moral behavior and beliefs. Participants in the warm-moral condition read that Tom has many close friends, and that people describe him as kind and loyal and as an excellent, supportive listener—as well as an avid rule follower who doesn't condone cheating and is always truthful when filing his clients' documents (unlike some of his coworkers). Participants in the cold-moral condition read that Tom did not have many close friends, was rigid and unyielding in his opinions, and often got into arguments with those who disagreed with him, but read the same information about Tom following rules, disavowing cheating, and filing truthfully. Participants in the control condition did not receive this information.

**Target trait ratings.** Next, participants rated their perceptions of Tom's traits on a series of scales from 1 (*Tom does not have this trait at all*) to 5 (*Tom completely has this trait*). Based on theoretical work suggesting that warmth, morality, and competence form three distinct facets of person perception (see, Fiske et al., 2002; Brambilla et al., 2011; Goodwin et al., 2014), we originally intended to separately assess perceptions of Tom's morality via the items *sincere*, *honest*, *trustworthy*, and *moral*, Tom's sociability via items *friendly*, *warm*, and *likable*, and competence via the items *intelligent*, *competent*, and *skillful*. However, these items largely cohered into a single global evaluation tracking general positive versus negative impressions (combined  $\alpha = .91$ ), so we took the average across all traits (see supplement for separate analyses on morality, sociability, and competence).<sup>6</sup> This finding is consistent with work showing all three trait ratings tend to correlate positively (e.g., Brambilla et al., 2011; Rom et al., 2017). It may be that features of the current study led participants to view these constructs as more similar than in other contexts. In all cases except some conditions of Study 1, all targets were described as warm, friendly, and loyal, which suggests a degree of competence and morality in addition to warmth, thereby limiting the degree of variance available for distinguishing between these constructs. Indeed, perceivers seem to expect socially skilled and morally upstanding targets to be high in competence (Brannon et al., 2017), and people sometimes use moral information when making judgments regarding competence (Stellar & Willer, 2018).

**Religiosity and demographics.** Participants also completed a measure of religious worldview (Goplen & Plant, 2015).<sup>7</sup> This captures the extent to which people's worldviews are

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<sup>6</sup> We also conducted an exploratory principle components analysis with oblimin rotation to extract all eigenvalues greater than one. This analysis suggested two factors, with all three sociability items loading on one factor and all other items loading on the other factor, but these factors were themselves correlated  $r = .45$ , the alpha for the overall scale was high, and analyses on each individual scale showed a similar pattern (see supplement) so we present the combined analyses.

<sup>7</sup> We re-ran all analyses including religious worldview as a covariate, in every study, to see if effects held above and beyond individual differences in religious worldview, and findings remained very similar, so we did not include it in

shaped by their religion by assessing agreement with items such as “I try hard to live my life the way my religion tells me to live it” on scales from 1 (*Not at all*) to 9 (*Very much*),  $\alpha = .98$ .

Unsurprisingly, religious participants ( $M = 5.00$ ,  $SD = 2.29$ ) scored higher on religious worldview than atheist/agnostic participants ( $M = 1.81$ ,  $SD = 1.09$ ),  $t(243.76) = 16.67$ ,  $p < .001$ ,  $d = 1.78$ .<sup>8</sup> Participants also completed a measure of political ideology on a scale from 1 (*Very liberal*) to 7 (*Very conservative*).<sup>9</sup> Finally, participants reported demographic information, including their religious affiliation (Catholic, Protestant/Other Christian, Jewish, Muslim, Hindu, Buddhist, Atheist, Agnostic, Other – option to specify), age, race, and gender.

We used participants’ reported religious affiliation to classify participants as either atheist/agnostic ( $n = 183$ ) or religious ( $n = 174$ ). We classified all participants who identified with a specific religion or who selected “other” as *religious*; we classified all participants who reported that their religious identity as “atheist” or “agnostic” as *atheist/agnostic*.<sup>10</sup> Based on participants’ religious affiliation (atheist/agnostic or religious) and the target religion condition to which they were assigned, we created a target group variable that indicated whether the target was an ingroup (atheist for atheist/agnostic participants, no mention of religious affiliation for religious targets) or outgroup (atheist for religious participants, no mention of religious affiliation for atheist/agnostic participants).

## Results

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the main analysis. However, we retained it as a manipulation check on the religions vs. atheist categorization variable.

<sup>8</sup> Levene’s test was significant, so we adjusted the degrees of freedom.

<sup>9</sup> We re-ran all analyses including political orientation as a covariate in every study to see if effects held above and beyond individual differences in political orientation. Findings remained very similar, so we did not include it in the main analysis.

<sup>10</sup> We also considered an alternative classification of participants who selected ‘other.’ Those who specified in an open-ended response a particular religious group (e.g., Episcopalian) remained classified as religious, whereas we removed all participants who failed to specify a modern organized religion ( $n = 21$ ), such as those who wrote “spiritual but not religious,” “pagan,” etc. Results using this analysis were similar, so in the reported analysis we retained them in the “religious” category to improve power.

**Preliminary analysis.** We first tested whether effects differed between atheist/agnostic and religious participants. We conducted a 2 (target beliefs: no information vs. atheist)  $\times$  2 (participant beliefs: religious vs. atheist/agnostic)  $\times$  3 (target description: warm-moral vs. cold-moral vs. control) ANOVA on target trait ratings (see supplemental materials for full results). The three-way interaction was not significant,  $F(2, 345) = 1.32, p = .269, \eta_p^2 = .008, CI_{95\%} [.00, .03]$ , indicating that results did not vary as a function of participant religion. Therefore, we simplified analyses by coding whether the target was a member of participants' religious ingroup or outgroup (i.e., whether atheist/agnostic participants viewed an atheist vs unspecified target; same for religious participants).

**Ingroup analysis.** We conducted a 2 (target group: ingroup vs. outgroup)  $\times$  3 (target description: warm-moral vs. cold-moral vs. control) ANOVA on target trait ratings (see Figure 1). As predicted, there was a significant main effect of target description,  $F(2, 351) = 9.60, p < .001, \eta_p^2 = .10, CI_{95\%} [.01, .10]$ , such that participants rated warm-moral targets ( $M = 4.36, SD = .71$ ) higher than both cold-moral targets ( $M = 3.83, SD = .67$ ),  $M_{Diff} = 0.52, SE = .09, p < .001, CI_{95\%} [.35, .70]$ , and control targets ( $M = 3.91, SD = .73$ ),  $M_{Diff} = 0.44, SE = .09, p < .001, 95\% CI [.27, .62]$ , whereas they did not distinguish between cold-moral and control targets,  $M_{Diff} = -0.08, SE = .09, p = .370, CI_{95\%} [-.26, .10]$ . The main effect of target ingroup did not reach significance,  $F(1, 351) = 3.61, p = .058, \eta_p^2 = .01, CI_{95\%} [.00, .04]$ , suggesting that participants rated ingroup ( $M = 4.12, SD = .67$ ) and outgroup ( $M = 3.97, SD = .78$ ) targets similarly. However, the anticipated two-way interaction between target group and target description was not significant,  $F(2, 351) = 1.32, p = .269, \eta_p^2 = .01, CI_{95\%} [.00, .03]$ , suggesting that moral information improved perceptions of both ingroup and outgroup targets. Findings were similar when including religious worldview and political orientation as covariates.

## Discussion

Study 1 demonstrated that a) participants may prefer religious ingroup members, (although we interpret this finding with caution), and b) information about a target's moral beliefs can improve perceptions, even for religious outgroup targets.

As expected, participants rated warm-moral targets significantly more positively than cold-moral targets or control targets, whom they rated similarly. Improved perception of the warm-moral target held regardless of whether the target was atheist or religious, and whether participants identified as atheist/agnostic or as religious. In light of stereotypes regarding the untrustworthiness and immorality of atheist targets (e.g., Gervais, 2013), this finding suggests that directly counteracting such stereotypes may help ameliorate antagonism against religious outgroups.

The fact that cold-moral and control targets did not differ appears inconsistent with work suggesting that trustworthiness is the most important aspect of person perception (e.g., Brambilla & Leach, 2011). Participants did not prefer targets who seemed cold and unsociable but followed moral rules in a trustworthy manner over neutral targets. That is, mere moral rule-following behavior was not sufficient by itself to improve perceptions. Instead, participants preferred the target who combined trustworthy rule-following with warm sociability over the other targets. Such findings resonate with work suggesting that lay perceptions of target morality hinge more on perceptions of warm emotional concern for others rather than of rigid rule-following per se (Everett et al., 2016; Rom et al., 2017). Alternatively, it may be that the phrasing in this vignette communicated a distinct lack of concern for others that undermined morality perceptions.

Finally, the interaction was not significant, suggesting similar levels of ingroup favoritism for both atheist/agnostic and religious participants, but as one target's religion was

unspecified, religious participants did not have a clear ingroup member to evaluate. Therefore, in Studies 2 and 3 we examined whether similar patterns emerge for evaluations of a religious versus atheist target on a wider array of measures.

### **Study 2**

Study 1 showed that both atheist/agnostic and religious participants rated targets—even outgroup targets—more positively when those targets demonstrated a combination of warm sociability and moral behaviors. Importantly, this finding held even for religious participants evaluating atheist targets, suggesting that directly countering negative stereotypes about atheist immorality may be effective at ameliorating negative attitudes towards atheists. However, we did not indicate that the non-atheist target in Study 1 subscribed to a religion, and as such we could not determine whether similar patterns would emerge when atheists assess explicitly religious targets.

In Study 2, we directly manipulated whether the target adhered to atheism or religion, allowing for a stronger test of religious ingroup favoritism than Study 1.

Gervais (2014) suggests that atheists hold more positive stereotypes of religious outgroups than religious people do of atheists, suggesting an asymmetry in the effectiveness of moral system adherence. Yet, ingroup favoritism research (e.g., Brandt et al., 2014) suggests that atheists may be similarly suspicious of religious outgroups. Thus, we included a religious target in Study 2. To limit factors in the design, we described all targets as warm and varied only whether they adhere to a moral code. It is possible that people think that merely engaging in prosocial behavior is insufficient to demonstrate morality, particularly among atheists, as they still reject the coherent moral systems provided by religion. If so, then providing clearer evidence that a target subscribes to a coherent moral system may reduce this bias, leading even religious

people to rate atheist targets more positively. We anticipated finding evidence of ingroup favoritism among both atheist and religious participants, but that such favoritism would be attenuated or eliminated when the target was described as adhering to a warm moral system, which directly counteracts stereotypes about atheists. Hence, consistent with Study 1, we predicted that participants would evaluate targets adhering to a moral system more positively than targets who do not, and that this would hold even when evaluating religious outgroup targets.

In addition, we extended our previous studies by examining measures of behavioral intentions: likelihood of helping the target and how much the target deserved help. We expected that both atheist/agnostic and religious participants would indicate greater willingness and deservingness of help for ingroup targets, but only in the absence of information that the target adheres to a coherent moral system. Conversely, participants would demonstrate more positive evaluations of targets who adhere to a warm moral system—including religious outgroup targets—in terms of trait perceptions, willingness to help, and deservingness of help. Thus, moral system information should attenuate or eliminate ingroup bias. Note that data presented in Study 2 came from two different samples. Participants in both samples completed measures of trait evaluations, but only participants in the second sample completed measures of helping intentions. For trait analyses broken down by sample, see supplemental materials.

## **Method**

### **Participants.**

*Sample 1.* A power analysis suggested we needed a sample of 256 to have ~80% power to detect a medium-small eta squared of .03 for the 3-way interaction. We oversampled, recruiting 309 U.S. participants from MTurk, and hence we retained over 80% power to detect

effects of  $\eta_p^2 = .03$ . Twelve participants failed an attention check, leaving a sample of 297 ( $M_{age} = 36.4$ , 44% female; 78% White). Forty-six percent of the sample identified as Christian, 27% as Atheist, 12% as agnostic, and the remaining 15 percent as a combination of Jewish, Muslim, Hindu, Buddhist, and other religions. We used this information to categorize people as atheist/agnostic ( $n = 118$ ) or as religious ( $n = 179$ ) as in the previous studies.

**Sample 2.** Again, a power analysis suggested we needed a sample of 256<sup>11</sup> to have ~80% power to detect a medium-small eta squared of .03 for the 3-way interaction. We recruited 256 U.S. participants from MTurk. Nine participants failed attention checks, leaving a sample of 247 ( $M_{age} = 35.3$ ; 52% female; 78% White). Again, this sample size provided ~80% power to detect effects of  $\eta_p^2 = .03$ . Forty seven percent of the sample identified as Christian, 24% as Atheist, 19% as agnostic, and the remaining 10 percent identified as Jewish, Muslim, Hindu, Buddhist, or with other religions. We again used this variable to categorize participants as atheist/agnostic ( $n = 107$ ) or religious ( $n = 140$ ).

### **Materials and Procedure.**

**Samples 1 and 2.** We aggregated across the trait rating DV in Samples 1 and 2, using a 2 (participant beliefs: religious vs. atheist/agnostic)  $\times$  2 (target beliefs: religious vs. atheist)  $\times$  2 (target description: moral system vs. no moral system) experimental design. All participants in both samples viewed the same image of Tom and read the same warm sociability information as in Study 1, but we manipulated whether Tom subscribed to a moral system or not. In the “moral system” condition, participants read:<sup>12</sup>

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<sup>11</sup> After analyzing the data from this sample, we discovered that 23 observations came from the same IP address. We reanalyzed the data with these observations removed. All effects remained the same. As such, we retained the observations in the reported analyses to improve power.

<sup>12</sup> Note that this phrasing does not require that participants recognize or understand these arguments or have knowledge of these philosophers, but instead suggests that Tom himself understands these arguments.

“Tom has studied the ethical systems of the ancient philosophers, which has led him to develop a strict moral code. He believes the universe is structured around deep ethical principles that guide human behavior, like the deontological Categorical Imperatives of Immanuel Kant. He strives to live by these principles. For example, he believes that it is always wrong to lie to others and so strives to always tell the truth. Tom also believes in practicing the balanced approach to living advocated by Aristotle. This means he strives every day to put the needs of others ahead of himself and to live virtuously.”

In the non-moral-system condition, participants read:

“Tom has studied the ethical systems of the ancient philosophers, but he has given up on ever developing a moral code. He believes the universe is structured around principles that have nothing to do with ethics or human behavior. This means he just tries to get by every day without worrying about what is right or wrong.”

We also manipulated whether Tom was described as “an atheist” or “religious” (with no reference to denomination), via the following phrasing: *Tom is religious, meaning he believes in the existence of God and prays most days*, or *Tom is an atheist, meaning he does not believe in the existence of God and does not pray*. Participants then rated Tom on the same traits as in Study 1, which we averaged to create composite variables of morality ( $\alpha = .91$ ), warmth ( $\alpha = .93$ ), and competence ( $\alpha = .91$ ), which we again averaged into a single measure of target evaluation ( $\alpha = .95$ ). Participants then completed the religious worldview scale ( $\alpha = .98$ ) and reported the same demographic information as in Study 1. Once again, religious participants ( $M = 5.72, SD = 2.10$ ) scored higher on religious worldview than atheist/agnostic participants ( $M = 2.78, SD = 2.42$ ),  $t(542) = 15.12, p < .001, d = 1.30$ . Participants then completed the same demographic information as in the previous studies.

*Sample 2 only.* After completing the procedure described above, participants in Sample 2 read a series of mundane helping scenarios adapted from Conway and Peetz (2012), each involving an opportunity to provide mundane help to Tom (dropping off Tom's book at the library but adding 10 minutes to your commute; allowing Tom to skip ahead of you in the lunch line due to his hurry; offering to lend Tom an important garden tool; lending Tom 50 cents to cover the tax on his lunch, saving a long walk to the nearest cash machine). For each scenario, participants reported to the likelihood that they would help Tom (1 = *Not at all likely*; 7 = *Very likely*) and the extent to which they believed Tom deserved their help (1 = *Not at all*; 7 = *Very much*). We averaged ratings across scenarios to create composite measures of helping likelihood ( $\alpha = .81$ ) and deservingness ( $\alpha = .94$ ). Finally, participants completed the religious worldview scale and demographics. Once again, religious participants ( $M = 5.87, SD = 2.02$ ) scored higher on religious worldview than atheist/agnostic ( $M = 1.85, SD = 1.16$ ),  $t(229.19) = 19.66, p < .001, d = 2.44$ .<sup>13</sup>

## Results

**Trait evaluations.** Using data aggregated across Samples 1 and 2, we first conducted a 2 (participant beliefs: religious vs. atheist/agnostic)  $\times$  2 (target beliefs: religious vs. atheist)  $\times$  2 (target description: moral system vs. no moral system) ANOVA on target trait ratings (see supplemental materials for full statistics broken down by sample). The 3-way interaction did not reach significance,  $F(1, 536) = 1.59, p = .064, \eta_p^2 = .006, CI_{95\%} [.00, .02]$ .

As the patterns were similar across religion, we coded whether each target was a member of participants' ingroup or outgroup, based on their reported religious affiliation. We then conducted a simplified 2 (target group: ingroup vs. outgroup)  $\times$  2 (target description: moral

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<sup>13</sup> Levene's test was significant, so we adjusted the degrees of freedom.

system vs. no moral system) ANOVA on target trait ratings (see Figure 2). As predicted, overall participants rated targets with a moral system more positively ( $M = 4.41$ ,  $SD = .63$ ) than targets without a moral system ( $M = 3.60$ ,  $SD = .73$ ),  $F(1, 540) = 196.00$ ,  $p < .001$ ,  $\eta_p^2 = .27$ ,  $CI_{95\%} [.21, .32]$ . Participants also rated ingroup targets ( $M = 4.08$ ,  $SD = .76$ ) more positively than outgroup targets overall ( $M = 3.96$ ,  $SD = .82$ ),  $F(1, 540) = 4.52$ ,  $p = .034$ ,  $\eta_p^2 = .01$ ,  $CI_{95\%} [<.001, .02]$ . The interaction between target group and target morality also did not reach significance. Findings were similar when including religiosity as a covariate.

**Helping likelihood.** Using data from Sample 2 only, we conducted a 2 (target beliefs: religious vs. atheist)  $\times$  2 (participant beliefs: religious vs. atheist/agnostic)  $\times$  2 (target description: moral system vs. no moral system) ANOVA on helping intentions (see Figure 3a).<sup>14</sup> There was a significant main effect of target description, such that people reported a significantly higher likelihood of helping targets with moral system ( $M = 5.66$ ,  $SD = 1.16$ ) than without ( $M = 5.32$ ,  $SD = 1.42$ ),  $F(1, 238) = 5.09$ ,  $p = .025$ ,  $\eta_p^2 = .02$ ,  $CI_{95\%} [<.001, .07]$ . There were no significant main effects of target beliefs or participant beliefs. These findings were not qualified by any two-way interactions.

However, the three-way interaction was significant,  $F(1, 238) = 10.26$ ,  $p = .002$ ,  $\eta_p^2 = .04$ ,  $CI_{95\%} [.01, .10]$ . Analyses of simple effects revealed that in the no-moral-system condition, atheist/agnostic participants intended to help atheist targets ( $M = 5.77$ ,  $SD = 1.26$ ) significantly more than religious targets ( $M = 4.83$ ,  $SD = 2.04$ ),  $F(1, 238) = 4.95$ ,  $p = .027$ ,  $\eta_p^2 = .02$ ,  $CI_{95\%} [<.001, .07]$ ; Conversely, religious participants did not significantly differ in their intentions to help religious ( $M = 5.59$ ,  $SD = .88$ ) and atheist ( $M = 5.02$ ,  $SD = 1.39$ ) targets,  $F(1, 238) = 2.66$ ,  $p = .104$ ,  $\eta_p^2 = .01$ ,  $CI_{95\%} [.00, .05]$ . In the moral-system condition, atheist/agnostic participants did

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<sup>14</sup> We conducted analyses on helping likelihood controlling for overall trait evaluations as well. The three-way interaction remained significant and the patterns were similar. See supplemental materials for full results.

not differ in their intentions to help atheist ( $M = 5.51$ ,  $SD = 1.48$ ) and religious ( $M = 5.68$ ,  $SD = 1.19$ ) targets,  $F(1, 23) = 0.42$ ,  $p = .424$ ,  $\eta_p^2 = .003$ ,  $CI_{95\%} [.00, .03]$ . Religious participants also did not differ in their intentions to help atheist ( $M = 5.98$ ,  $SD = .77$ ) and religious ( $M = 5.53$ ,  $SD = 1.11$ ) targets in the moral-system condition, although this effect was trending towards a preference for religious targets,  $F(1, 238) = 2.86$ ,  $p = .092$ ,  $\eta_p^2 = .01$ ,  $CI_{95\%} [.00, .05]$ .

**Deservingness of help.** Using data from Sample 2 only, we conducted a 2 (target beliefs: no information vs. atheist)  $\times$  2 (participant beliefs: religious vs. atheist/agnostic)  $\times$  2 (target description: moral system vs. no moral system) ANOVA on deservingness of help controlling for overall trait evaluations (see Figure 3b).<sup>15</sup> There was a significant main effect of target description, such that participants rated targets with a moral system as more deserving of help ( $M = 5.24$ ,  $SD = 1.52$ ) than targets without ( $M = 4.48$ ,  $SD = 1.87$ ),  $F(1, 239) = 11.11$ ,  $p = .001$ ,  $\eta_p^2 = .02$ ,  $CI_{95\%} [.01, .10]$ . There were no main effects of target or participant religion. However, the two-way interaction between target and participant beliefs did not reach significance,  $F(1, 239) = 2.93$ ,  $p = .088$ ,  $\eta_p^2 = .01$ ,  $CI_{95\%} [<.001, .05]$ . No other main effects or two-way interactions reached significance.

As with helping likelihood, the three-way interaction was significant (see Figure 3b),  $F(1, 239) = 5.41$ ,  $p = .021$ ,  $\eta_p^2 = .02$ ,  $CI_{95\%} [<.001, .07]$ . Tests of simple effects revealed some ingroup favoritism in the no-moral-system condition: atheist/agnostic participants did not rate atheist targets ( $M = 5.17$ ,  $SD = 1.67$ ) as significantly more deserving of help than religious targets ( $M = 4.26$ ,  $SD = 2.35$ ),  $F(1, 239) = 3.41$ ,  $p = .066$ ,  $\eta_p^2 = .01$ ,  $CI_{95\%} [.00, .06]$ , whereas religious participants rated religious targets ( $M = 4.71$ ,  $SD = 1.43$ ) as significantly more deserving of help than atheist targets ( $M = 3.86$ ,  $SD = 1.87$ ),  $F(1, 239) = 4.13$ ,  $p = .043$ ,  $\eta_p^2 = .02$ ,  $CI_{95\%} [.00, .06]$ .

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<sup>15</sup> We conducted analyses on helping deservingness controlling for overall trait evaluations as well. The three-way interaction remained significant and patterns were similar. See supplemental materials for full results.

However, ingroup bias was eliminated when targets adhered to a moral system: atheist/agnostic participants rated atheist ( $M = 5.01$ ,  $SD = 1.73$ ) and religious ( $M = 5.30$ ,  $SD = 1.59$ ) targets as similarly deserving of help,  $F(1, 239) = .46$ ,  $p = .498$ ,  $\eta_p^2 = .00$ ,  $CI_{95\%} [.00, .03]$ , as did religious participants (atheist target:  $M = 5.23$ ,  $SD = 1.53$ ; religious target:  $M = 5.32$ ,  $SD = 1.34$ ),  $F(1, 239) = .01$ ,  $p = .943$ ,  $\eta_p^2 = .00$ ,  $CI_{95\%} [.00, .00]$ .

## Discussion

Study 2 replicated and extended Study 1 in two new samples, examining both trait evaluations and behavioral intentions. This time, we specified whether the target was religious or atheist. Results showed that both religious and atheist/agnostic participants evaluated religious outgroup targets more negatively than ingroup targets, consistent with symmetric bias. However, this pattern only emerged when targets lacked a moral system. As before, negative evaluations of religious outgroups were ameliorated when the outgroup target was described as adhering to a coherent moral worldview (recall that all participants additionally read that the target was warm and sociable).

These findings contrast with other work suggesting atheists hold negative ingroup evaluations (Gervais, 2014); instead, atheists showed ingroup bias much like religious participants did. These findings also corroborate our argument that counteracting stereotypes about atheist immorality improves attitudes towards atheists. Indeed, a similar positive effect emerged when atheists and agnostic participants evaluated religious people who endorsed a coherent moral worldview.

In addition, we extended our findings to the domain of helping intentions and perceived deservingness. Again, there was a significant main effect of moral system endorsement on target evaluation, and this information had a greater impact on religious participants' moral ratings of

atheist targets than atheist/agnostic participants' ratings of religious targets. Findings for deservingness and likelihood of helping clearly corroborated hypotheses: When targets did not adhere to a moral system, atheist/agnostic and religious participants both demonstrated ingroup bias (again, inconsistent with arguments that atheists demonstrate outgroup favoritism, Gervais, 2014). However, when targets adhered to a coherent moral system, not only did participants demonstrate improved trait evaluations, willingness to help, and deservingness ratings, but they did so more or less equally for ingroup and outgroup targets. In other words, target moral system information ameliorated bias against religious outgroups, both for religious people evaluating atheists and atheist/agnostic people evaluating religious targets.

### Study 3

Findings thus far suggest that both atheist/agnostic and religious participants demonstrate religious ingroup bias, but bias is attenuated when targets demonstrate a combination of warm sociability and adherence to a coherent moral system, prompting higher ratings overall. In Study 3, we examined whether a similar pattern would extend to important downstream consequences of character perceptions: social decisions like preferred distance and willingness to hire. We predicted that participants would be less likely to distance themselves from and more likely to hire a religious ingroup than outgroup target, but such ingroup favoritism would be attenuated or eliminated when the target was described as adhering to a warm moral system.

### Method

**Participants.** A power analysis again indicated that we needed a sample of 256 to have ~80% power to detect a medium-small eta squared of .03 for the 3-way interaction. We oversampled, recruiting 530 U.S. participants from Mechanical Turk. Twenty-eight participants failed an attention check, leaving a sample of 502 ( $M_{\text{age}} = 38.18$ ; 57.2% female, 77.1% White).

The sample was 55.6% Christian, 20.1% agnostic, 13.3% atheist, and the remainder was Jewish, Muslim, Hindu, and other religions. As before, we used this belief question to categorize participants as atheist/agnostic or religious.

**Materials and Procedure.** Study 3 again employed a 2 (participant beliefs: religious vs. atheist/agnostic)  $\times$  2 (target beliefs: religious vs. atheist)  $\times$  2 (target description: moral system vs. no moral system) experimental design, using the same manipulations as Study 2. Instead of trait ratings, participants completed a 12 item measure of social distancing with Tom as the target (Skitka, Bauman & Sargis, 2005; e.g., “How happy would you be to have Tom as a roommate?”) on 1 (*Not at all happy*) to 7 (*Very happy*) scales ( $\alpha = .97$ ), and a 10 item hiring decision measure (“How likely would you be to hire Tom to be your lawyer/nurse/child’s teacher/accountant/investment banker/restaurant server/child’s daycare worker/elder care worker/social worker/therapist?”) on 1 (*Extremely unlikely*) to 7 (*Extremely likely*) scales ( $\alpha = .97$ ). Due to the interrelatedness of these scales ( $r = .91$ ), we collapsed across them to form a single measure of social distancing ( $\alpha = .98$ ). Finally, participants completed the same demographic information as in the previous studies, as well as a single item measure of religiosity (“How religious do you consider yourself to be?”) on a 1 (*Not at all religious*) to 7 (*Very religious*) scale.

## Results

We conducted a 2 (participant beliefs: religious vs. atheist/agnostic)  $\times$  2 (target beliefs: religious vs. atheist)  $\times$  2 (target description: moral system vs. no moral system) ANOVA on the combined measure of social distancing (see Figure 4). Importantly, there was a significant main effect of target description, such that people reported more distancing from targets without ( $M = 3.56$ ,  $SD = 1.57$ ) than with a moral system ( $M = 5.02$ ,  $SD = 1.49$ ),  $F(1, 493) = 102.98$ ,  $p < .001$ ,

$\eta_p^2 = .17$ ,  $CI_{95\%} [.12, .23]$ . There was also a significant main effect of target religiosity, such that people interestingly reported more distancing from the religious ( $M = 4.22$ ,  $SD = 1.65$ ) than atheist target overall ( $M = 4.38$ ,  $SD = 1.74$ ),  $F(1, 493) = 9.86$ ,  $p < .001$ ,  $\eta_p^2 = .02$ ,  $CI_{95\%} [.003, .05]$ . The main effect of participant beliefs was not significant,  $F(1, 493) = 2.72$ ,  $p = .100$ ,  $\eta_p^2 = .01$ ,  $CI_{95\%} [<.001, .03]$ .

These main effects were qualified by a significant two-way interaction between participant and target religiosity,  $F(1, 493) = 36.51$ ,  $p < .001$ ,  $\eta_p^2 = .07$ ,  $CI_{95\%} [.03, .12]$ . In line with ingroup favoritism, atheist/agnostic participants reported more distancing from the religious ( $M = 3.82$ ,  $SD = 1.66$ ) than atheist target ( $M = 5.04$ ,  $SD = 1.47$ ),  $F(1, 493) = 31.72$ ,  $p < .001$ ,  $\eta_p^2 = .06$ ,  $CI_{95\%} [.03, .10]$ . Likewise, religious participants reported more distancing from the atheist target ( $M = 4.05$ ,  $SD = 1.78$ ) than the religious target ( $M = 4.41$ ,  $SD = 1.61$ ), although this effect was somewhat weaker,  $F(1, 493) = 6.28$ ,  $p = .013$ ,  $\eta_p^2 = .01$ ,  $CI_{95\%} [.001, .04]$ . Atheist/agnostic participants also reported more distancing from the religious target than did religious participants,  $F(1, 493) = 9.86$ ,  $p = .002$ ,  $\eta_p^2 = .02$ ,  $CI_{95\%} [.003, .05]$ , whereas to a somewhat greater extent, religious participants reported more distancing from the atheist target than did atheist/agnostic participants,  $F(1, 493) = 28.98$ ,  $p < .001$ ,  $\eta_p^2 = .06$ ,  $CI_{95\%} [.02, .10]$ . The interaction between participant beliefs and target description was not significant,  $F(1, 493) = 2.58$ ,  $p = .109$ ,  $\eta_p^2 = .01$ ,  $CI_{95\%} [<.001, .03]$ , nor was the interaction between target description and target beliefs,  $F(1, 493) = 0.09$ ,  $p = .760$ ,  $\eta_p^2 < .001$ ,  $CI_{95\%} [<.001, .001]$ .

However, these effects were qualified by a significant three-way interaction between participant beliefs, target beliefs, and target description,  $F(1, 493) = 4.03$ ,  $p = .045$ ,  $\eta_p^2 = .01$ ,  $CI_{95\%} [<.001, .03]$ . Unlike previous studies, the interaction appeared driven by especially low ratings of the religious target without a moral system by religious people. Atheist/agnostic

participants reported more distancing from atheist targets without ( $M = 4.33$ ,  $SD = 1.56$ ) than with a moral system ( $M = 5.84$ ,  $SD = 0.84$ ),  $F(1, 493) = 21.87$ ,  $p < .001$ ,  $\eta_p^2 = .04$ ,  $CI_{95\%} [.01, .08]$ . Likewise, religious participants also reported more distancing from atheist targets without ( $M = 3.31$ ,  $SD = 1.66$ ) than with a moral system ( $M = 4.71$ ,  $SD = 1.61$ ),  $F(1, 493) = 36.41$ ,  $p < .001$ ,  $\eta_p^2 = .07$ ,  $CI_{95\%} [.03, .12]$ . The same pattern emerged in the religious target condition; atheist/agnostic participants reported more distancing from the target without ( $M = 3.37$ ,  $SD = 1.45$ ) than with a moral system ( $M = 4.24$ ,  $SD = 1.74$ ),  $F(1, 493) = 7.39$ ,  $p = .007$ ,  $\eta_p^2 = .02$ ,  $CI_{95\%} [.001, .04]$ . Finally, religious participants also reported more distancing from the no moral system target ( $M = 3.48$ ,  $SD = 1.46$ ) than the moral system target ( $M = 5.35$ ,  $SD = 1.15$ ), and the effect size was much larger than the other contrasts,  $F(1, 493) = 69.91$ ,  $p < .001$ ,  $\eta_p^2 = .12$ ,  $CI_{95\%} [.07, .18]$ . In fact, religious participants did not differ in their distancing ratings from atheist and religious targets in the no-moral-system condition,  $F(1, 493) = 0.52$ ,  $p = .470$ ,  $\eta_p^2 = .001$ . Conversely, atheist/agnostic participants preferred more distancing from religious than atheist targets in the no-moral-system condition,  $F(1, 493) = 8.99$ ,  $p = .003$ ,  $\eta_p^2 = .02$ ,  $CI_{95\%} [.002, .05]$ , consistent with ingroup favoritism. Unexpectedly, we also found evidence of ingroup favoritism in the moral system condition; atheist/agnostic participants reported more distancing from religious than atheist targets,  $F(1, 493) = 24.53$ ,  $p < .001$ ,  $\eta_p^2 = .05$ ,  $CI_{95\%} [.00, .01]$ , and religious participants reported more distancing from atheist than religious targets,  $F(1, 493) = 8.14$ ,  $p = .005$ ,  $\eta_p^2 = .02$ ,  $CI_{95\%} [.002, .04]$ .

## Discussion

Results largely corroborated Studies 1 and 2, extending findings to important social judgments: social distancing and willingness to hire targets. Results also revealed evidence for ingroup favoritism among both atheist and religious participants. However, participants

evaluated targets—even religious outgroup targets—more favorably when that target adhered to a coherent moral system, attenuating bias. Like Studies 1 and 2, we found evidence of ingroup favoritism when the target was not moral, but unlike Studies 1 and 2, a degree of ingroup favoritism remained even when targets adhered to a moral system. Nonetheless, target moral beliefs substantially improved attitudes towards both ingroup and outgroup targets. Thus, our findings provide support for the claim that contravening stereotypes about atheist immorality can improve behavioral intentions towards atheists and other religious outgroups.

Results also revealed an interesting exception to ingroup favoritism: when religious participants evaluated a fellow religious target described as lacking a moral system, they desired as much social distance as from an atheist target with no moral system. This pattern is consistent with theory suggesting that negative stereotypes about atheists hinge on perceptions of atheist immorality; religious participants appeared to treat a religious target without a moral system as essentially an atheist. This finding resonates with the black sheep effect (Marques et al., 1988), where people evaluate ingroup members who fail to live up to group norms especially harshly. Insofar as morality is perceived as a core aspect of religiosity (Maclean et al., 2004; Sverdlik & Rechter, in press), a religious person lacking a moral system threatens ingroup identity, resulting in negative evaluations and treatment. Conversely, morality is not a core aspect of atheist identity, suggesting a possible reason why atheist participants evaluating an atheist target with no coherent moral worldview still demonstrated some ingroup favoritism.

### **General Discussion**

Across three studies, atheist/agnostic and religious participants evaluated targets who were members of religious ingroups or outgroups—that is, either atheist or religious targets—who either adhered to a coherent (warm) moral system or did not. We examined the two key

questions afforded by this design: first, whether religious people castigate atheist targets more than vice versa (because atheists agree their group is immoral)—or whether religious people and atheists demonstrate symmetrical patterns of ingroup favoritism and outgroup derogation. Second, we examined whether target morality information would attenuate or eliminate such bias by improving perceptions of all targets.

Findings largely supported the conclusion that religious ingroup bias is symmetrical: atheist/agnostic participants largely favored atheist targets, whereas religious participants largely favored religious targets. These findings suggest that atheists sometimes view ingroup members as more moral than religious outgroup members, in contrast to findings suggesting that atheists themselves associate atheism with immorality and untrustworthiness (Gervais, 2014). In the current studies, atheist/agnostic participants generally rated atheist targets as positively or more positively than they rated religious targets, similar to other forms of ingroup bias (cite). However, information that a target rejects a coherent moral system reduced perceptions of all targets—even religious participants evaluated a fellow religious target negatively when that target lacked a moral system.

Moreover, information that a target adheres to a coherent moral belief system improved perceptions of all targets—not only ingroup targets, but outgroup targets as well, such that ingroup bias was partially or completely attenuated when targets adhered to a coherent moral system (especially combined with a warm concern for others). We obtained this pattern not only for perceptions of traits, but also for behavioral intentions such as social distancing, willingness to hire, willingness to help, and deservingness of help.

Improved perceptions of religious outgroup targets who endorsed morality emerged even for religious participants evaluating atheist targets. In contrast to previous work unsuccessfully

attempting to improve perceptions of atheists by manipulating beliefs about the innateness of morality (e.g., Mudd et al., 2015), individuating information that a religious outgroup target adheres to a clear moral system does appear effective at improving perceptions of atheist morality. Thus, associations between atheism and immorality may not reflect the belief that atheists are *incapable* of morality, but rather *uncertainty* over whether atheists indeed ascribe to a moral system. People may hold a heuristic association between religiosity and morality (Gervais, 2014), but lack a heuristic association between atheism and a moral system. When individuating moral system information clarifies this uncertainty, reducing reliance on heuristic association, perceptions of atheist morality improves. Such findings suggest an effective avenue for improving attitudes towards atheists, a much-maligned group, and may extend to other groups perceived as morally suspect.

### **Implications for Inferences of Religious and Atheist Morality**

Some have argued that religion serves as a heuristic allowing for inferences of morality (e.g., Gervais, 2014). If so, then learning that a target is religious (vs. atheist) should improve perceptions of target morality among both atheist and religious participants. Yet, we did not see consistent evidence of this in our studies—instead, atheists generally showed ingroup favoritism, evaluating atheist targets more positively than religious targets when neither reported adhering to a moral system. Religiosity failed to compensate for an avowed lack of morals. However, it remains possible that people still rely on religiosity as a heuristic for morality in the absence of clear individuating information. In other words, the specific information about a given targets' moral beliefs may have swamped the impact of religion as a general heuristic for morality in the current work.

We found evidence of ingroup favoritism, such that atheist/agnostic participants rated atheists targets as more moral than religious targets in the absence of clear evidence of target moral beliefs. Such findings mesh with a wide body of work demonstrating numerous reasons why less-religious people remain skeptical about the moral motivations of religious targets—religiosity can increase conflict, discrimination, and other immoral outcomes (e.g., Monroe & Plant, 2019; Sagioglou & Forstmann, 2013; Rowatt et al, 2002; Graham & Haidt, 2010). Moreover, religious morality often incorporates elements of the ‘binding’ moral foundations—concerns about authority, loyalty, and purity—that are less universally endorsed than ‘individualizing’ moral concerns centered on harm and fairness, which may comprise the moral focus of non-religious participants (Levine et al., 2021). Hence, it may make sense that atheist/agnostic participants demonstrate ingroup bias in assessing the morality of religious targets if they are concerned about use religious as a cover for immoral action or believe that religious targets focus on the ‘wrong kind’ of morality. The current work suggests that such inferences can be ameliorated by assuring atheist/agnostic participants that a religious target adheres to a warm, coherent moral system, suggesting similarity in moral views.

However, our findings that atheists demonstrate ingroup favoritism are somewhat inconsistent with a body of work suggesting that atheists view other atheists as immoral (e.g., Gervais, 2014), although it remains possible that both effects may occur simultaneously. Research suggesting that atheists associate atheism with immorality typically employs subtle, indirect measures assessing perceptions of an entire group (i.e., responses to the conjunction fallacy; Gervais, 2014), whereas we employed direct measures assessing self-reported perceptions of a single person (target perceptions and behavioral intentions). It is also possible that learning about a specific atheist targets’ moral beliefs improves perceptions of that target,

while people nonetheless continue to heuristically associate atheists as a group with immorality. Such findings raise the question of tipping points: how many encounters with moral atheist targets does it take to impact perceptions of the group as a whole? One possibility is a linear improvement in perceptions of atheists as a whole with each encounter with a moral atheist; another possibility is a quadratic function where one must encounter a sufficient threshold of moral atheists to improve general attitudes, and a third possibility is that no encounters with moral atheists will be sufficient to improve attitudes towards the general group due to uncertainty about unmet group member's moral systems. Future work might profitably examine this question.

The current work clarifies the mechanism behind perceptions of atheist immorality. It is possible that anti-atheist prejudice stems in part from belief in morality as founded on divine authority, as suggested by Dembski (see Piazza & Landy, 2013). However, our results are inconsistent with this view. In the current work, atheist targets both with and without coherent moral systems disputed the existence of God, yet religious people rated the second target higher in morality. Thus, religious individuals do not appear to believe that morality hinges upon belief in God, but rather view a target more positively when the target subscribes to even a secular moral system.

Moreover, our results are inconsistent with the view that people believe atheists are incapable of morality. Negative perceptions of atheists likely reflect mere ambiguity regarding their moral system adherence rather than certainty of their immorality. These findings suggest a potential avenue for improving attitudes toward atheists. Building on the work of Simpson and colleagues (2017; 2019), who found that highlighting atheists' concern for caring-based morality attenuated anti-atheist prejudice, we demonstrated that when a religious outgroup target

expresses a coherent moral system, people report improved perceptions of religious outgroups more broadly. Importantly, our findings held even for religious participants evaluating atheist targets, suggesting that directly countering negative stereotypes about atheist immorality may be effective at ameliorating negative attitudes towards atheists. These findings could suggest that, in the absence of target moral system information, people draw ingroup boundaries along belief-membership lines, but learning moral system information enlarges their perception of ingroup boundaries. Alternatively, these findings could reflect an increase in respect for the religious outgroup upon meeting morally-motivated outgroup targets, even if people's group categorization boundaries remain fairly stable. Future work might disentangle these possibilities.

Finally, we note that we originally expected manipulations to differentially impact perceptions of warmth, competence, and morality, given research suggesting these constructs reflect three distinct dimensions of person perception (e.g., Fiske et al., 2002; Brambilla & Leach, 2011; Goodwin et al., 2014) that sometimes trade-off (e.g., Rom et al., 2017). However, in the current work, factor and reliability analyses demonstrated that warmth, competence, and morality ratings largely cohered into a single global evaluation, and manipulations similarly impacted each rating. Although this correspondence was not perfect, and occasionally manipulations affected one perception more than another (see supplemental material) no systematic pattern stood out across studies, suggesting these differences were either small or unreliable. Such findings may seem at odds with work dissociating these perceptions, but in the current context there need be no implied trade-off between (for example) warmth and competence, so people may have used information about one trait to surmise others. Such findings are consistent with work on 'halo effects' where people assume one positive trait implies others (Nisbett & Wilson, 1977), and findings suggesting that people interpret moral

maturity as evidence of competence (Stellar & Willer, 2018). Even in cases in which warmth, competence, and morality perceptions diverge, these ratings still tend to correlate positively—for example, in studies demonstrating warmth and competence trade-offs across condition, warmth and competence nonetheless correlate  $\sim r = .40$ , and warmth and morality correlate  $\sim r = .70$  (e.g., Rom et al., 2017, 2018). Thus, in the current work, participants appeared to consider targets in terms of global evaluations rather than individual traits. Future work might distinguish between trait perceptions by more clearly implying trade-offs between these traits.

### **Limitations and Future Directions**

Although these studies provide valuable insight into the conditions influencing perceptions of atheist morality, they are not without limitations. For one, we examined perceptions of only a single White male target in a U.S. context. Although this demographic profile aligns with the majority of atheists (Lipka, 2016), it remains to be seen whether the patterns demonstrated here would hold for other atheist targets. For example, because women tend to be more religious than men (e.g., Francis & Penny, 2013) and atheists are typically male (Cragun, 2015), a female atheist target may violate expectations and thus moral system information may not improve perceptions of them to the same extent. Likewise, we did not directly assess or manipulate perceptions of which religion the religious targets adhered to. It is likely that participants inferred that religious targets adhered to a version of Christianity, which is the most common religion in North America (Pew Research Center, 2014). It remains unclear whether these results would hold for perceptions of targets belonging to other religious groups (e.g., Muslim), though some work suggests that perceptions of members of other faith groups may parallel perceptions of Christians (Gervais, 2014; Hall et al., 2015). However, other work suggests that some religious groups moralize their beliefs differently than others, raising the

possibility of differences in moral concerns of people belonging to different religious groups (Levine et al., 2020).

Moreover, Christianity was the most common religion among our participants. We did not have sufficient statistical power to distinguish between patterns of different faith groups or different versions of Christianity. It remains possible that people who identify with more conservative or orthodox faith communities retain higher degrees of bias against atheists than people who identify with more liberal faith communities may show less bias, although there is some evidence that people from various faith groups similarly value harm and fairness (Levine et al., 2021). Similarly, our religious participants were largely theistic, and it remains possible that nontheistic religious individuals, such as Buddhists, may hold different perceptions of atheists.

In addition, our samples were comprised of participants from the United States, a somewhat religious country (Pew Research Center, 2018). It remains possible that perceptions of atheists differ in countries where atheism is more widespread, as context can influence perceptions of and morals subscribed by different religions (Levine et al., 2021; Gervais, 2011). Moreover, we employed measures of religious identity to categorize people into atheist/agnostic versus religious groups. This operationalization is imperfect, but any method used to operationalize such things raises some issues. For example, different phrasings of such questions provide wildly different estimates of atheism (Gervais & Najle, 2018). Future work should consider more direct questions about theistic beliefs to categorize people in a more fine-grained manner.

Another limitation of the current work involves the measures. We examined perceptions of morality generally, but it is possible that there might be more nuance when examining perceptions of particular domains of morality (e.g., moral foundations; Graham et al., 2009). For

example, perceiving atheists as lower in endorsement of the “binding” foundations might relate to factors such as not wanting atheists as cooperative partners. Future work should examine this possibility. Likewise, if atheists prioritize the individualizing moral foundations but perceive religious targets as prioritizing the binding moral foundations (Graham et al., 2009), they could be suspicious of religious people’s morals. Future research should examine the role of perceptions of moral content among religious outgroups. Relatedly, morality is particularly central to religious identities, but it is an important trait in social perception more broadly (Brambilla et al., 2011). Thus, although effects might be strongest when evaluating religious outgroups, it is possible that providing moral information about any outgroup member (e.g., a racial outgroup) could attenuate prejudice. Future research should explore these possibilities.

Our manipulations were also not without limitations. Because we manipulated target morality information at the end of the target descriptions, it is possible that this information loomed larger than target religious identity information, (i.e., a recency effect). Because the descriptions were relatively short, we think this is unlikely, but future research should examine potential order effects of disclosing moral and social identity information. In addition, although we manipulated morality both in terms of person-level traits (Study 1) and adhering to a coherent moral system (Studies 2 & 3), we did not directly compare which type of moral information improved perceptions to a greater extent. Future research should examine whether moral systems are more effective at improving religious outgroup perceptions than moral information about a person’s character.

Finally, although we assessed perceptions and behavioral intentions, we did not examine actual behavior. It could be that more subtle measures find different patterns than those obtained here (e.g., responses to conjunction fallacy problems). Additionally, we examined only one

source of a coherent moral worldview outside of religion—philosophy—but it remains an open question whether other sources of a moral worldview work as well (e.g., general spirituality, psychedelic experiences). These questions are ripe for further research to clarify.

### **Conclusion**

Across three studies, both atheist/agnostic and religious participants expressed ingroup bias against religious outgroup members on moral evaluations—but this bias was ameliorated by learning that the target in question adheres to a warm moral code, such as that derived from philosophy. This effect emerged both when religious people evaluated atheist targets, and when atheist/agnostic people evaluated religious targets. Thus, demonstrating that one cares about morality may be an effective technique for improving attitudes, especially in the eyes of religious outgroup members who might be wondering about your moral *bona fides*. When critics like William Dembski worry that atheists do not believe in God, they should remind them that atheists nonetheless believe in Aristotle.

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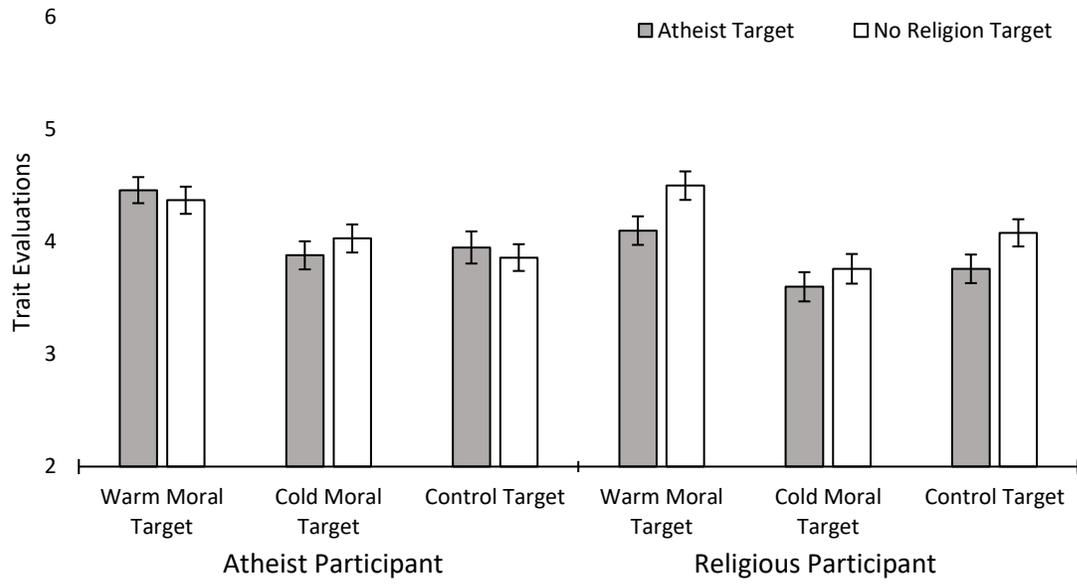
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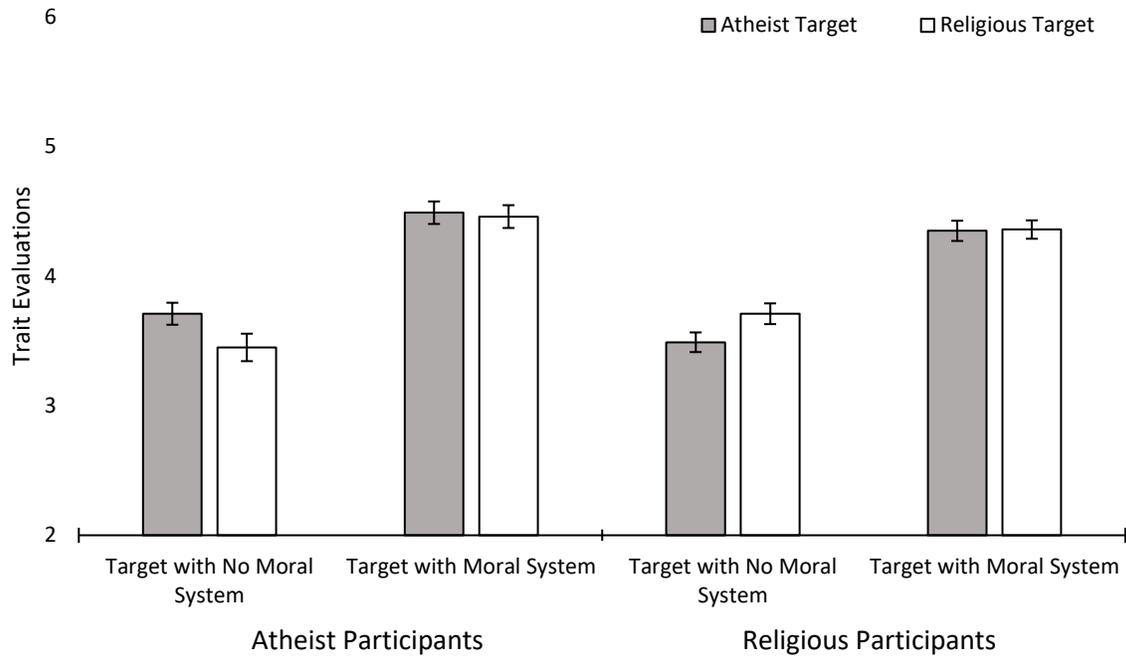
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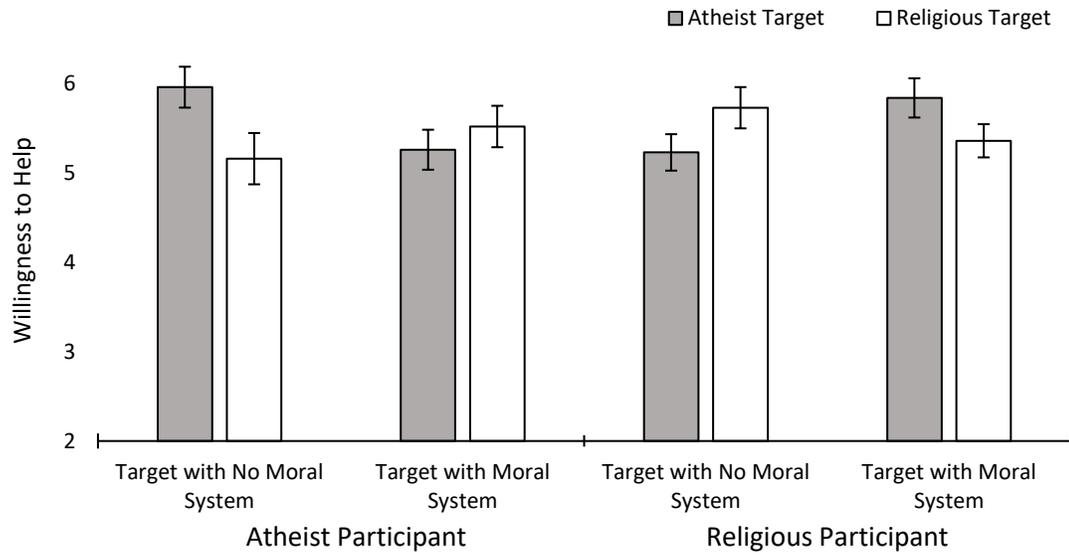
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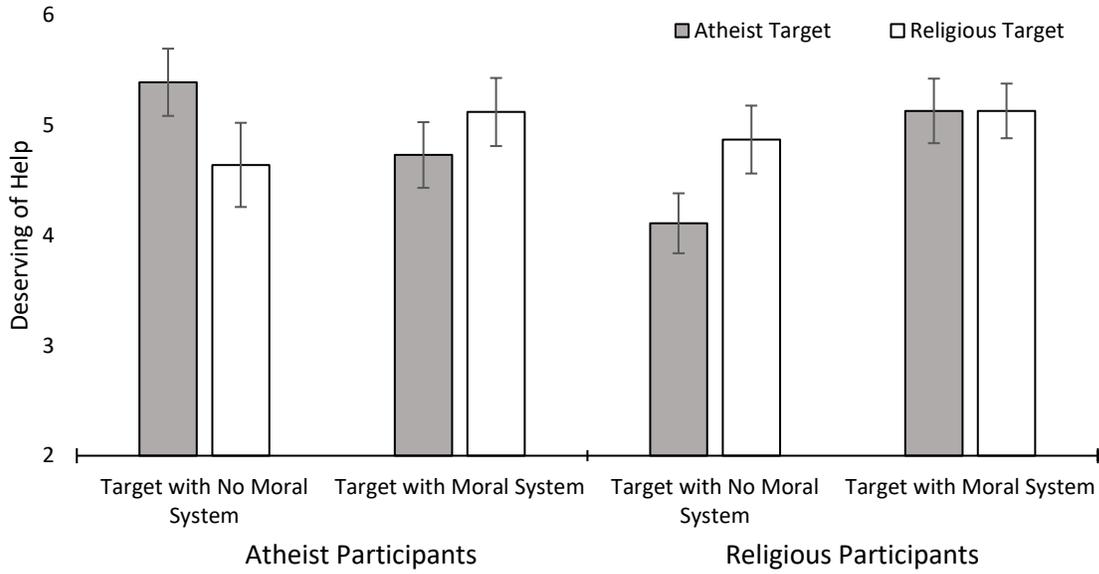
*Figure 1.* Trait evaluations of targets described as having or lacking a moral system in a warm or cold fashion, and who were described as atheists or religious, by participants who identified as either atheists/agnostics or as members of a religious group, Study 1. Error bars depict standard error.



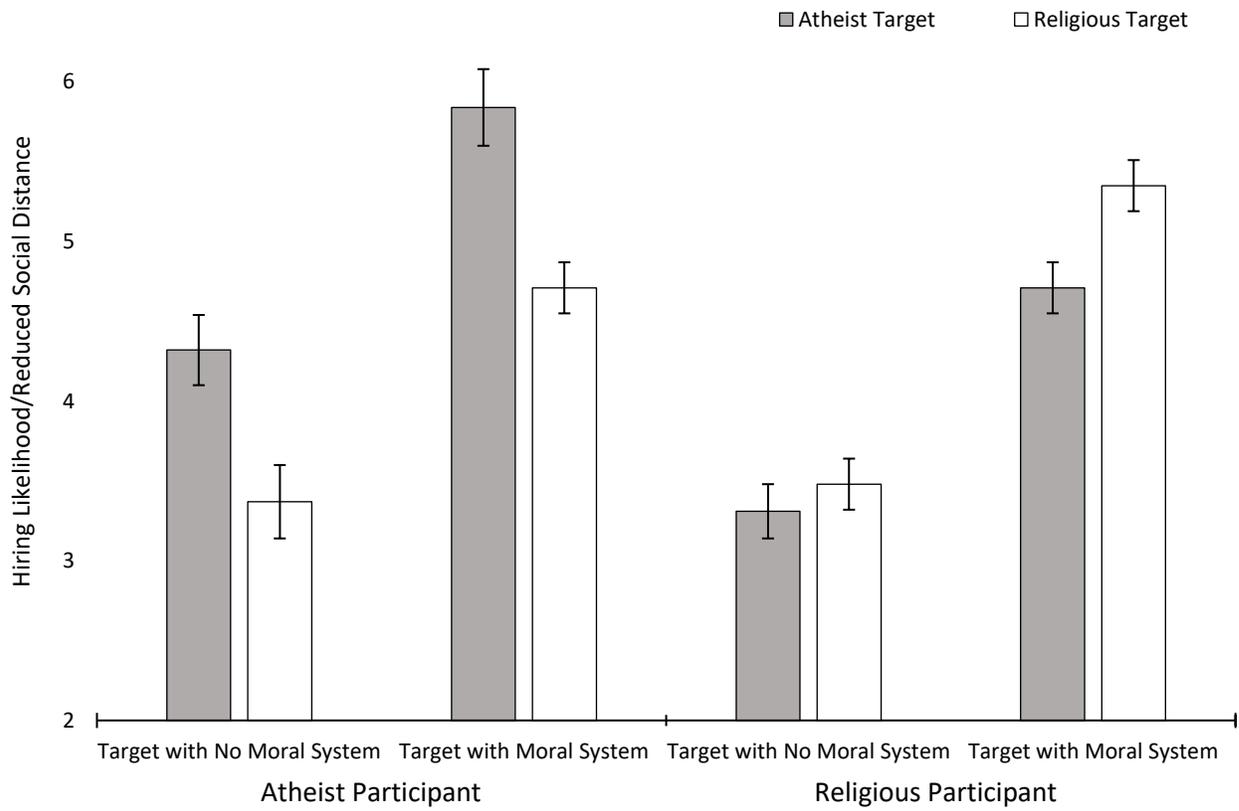
*Figure 2.* Trait evaluations of targets described as having or lacking a moral system, and who were either described as atheists or religious, by participants who identified as either atheists/agnostics or as members of a religious group, Study 2. Errors bars depict standard error.



*Figure 3a.* Willingness to help targets described as either atheists or religious and having or lacking a moral system, by participants who identified as either atheists/agnostics or as members of a religious group, Study 2. Errors bars depict standard error.



*Figure 3b.* Ratings of deservingness of help for targets described as either atheists or religious and having or lacking a moral system, by participants who identified as either atheists/agnostics or as members of a religious group, Study 2. Errors bars depict standard error.



*Figure 4.* Social distance ratings of targets described as having or lacking a moral system, and who were either described as atheists or religious, by participants who identified as either atheists/agnostics or as members of a religious group, Study 3. Errors bars depict standard error.