Is there anything good about atheists?

Exploring positive and negative stereotypes of the religious and nonreligious

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Abstract

Negative stereotypes about atheists are widespread, robust, rooted in distrust, and linked to discrimination. Here, we examine whether social perceivers in the US might additionally hold any positive stereotypes about atheists (and corresponding negative stereotypes of the religious). Experiments 1 ($N = 401$) and 2 ($N = 398$, preregistered) used methods of intuitive stereotypes (the conjunction fallacy). People tended to stereotype atheists as fun, open-minded, and scientific—even as they harbor extreme intuitive anti-atheist prejudice in Experiment 2. Experiment 3 ($N = 382$) used a quasi-behavioral partner-choice paradigm, finding that most people choose atheist (versus religious) partners in stereotype-relevant domains. Overall, results suggest that people simultaneously possess negative and also positive stereotypes about atheists, but that corresponding negative stereotypes of the religious may be even stronger. These effects are robust among the nonreligious and somewhat religious, but evidence is mixed about whether the highly religious harbor these positive stereotypes.

Keywords: atheism, intergroup, prejudice, religion, stereotypes

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Untrustworthy. Immoral. Rebellious. Evidence suggests that people hold several strong, negative stereotypes about atheists (Gervais, 2014; Grove et al., 2019; Harper, 2007), leading to anti-atheist discrimination. For example, atheists are viewed as less trustworthy and moral (Cook et al., 2015), and thus as less desirable daycare workers (Gervais et al., 2011) and politicians (Franks & Scherr, 2014). Even secular people—in more secular countries—intuitively associate serial murder (as well as more mundane immoral acts) with atheism (Gervais et al., 2017). But are atheists always viewed negatively, or might people also hold certain positive stereotypes about atheists and perhaps even engage in positive discrimination toward them? In our discussion of positive stereotypes of atheists, we are also able to examine whether people harbor corresponding negative stereotypes about the religious. If people associate disbelief with a desirable quality, for example, they might also stereotype religious people negatively in that domain.

In investigating these questions, we take an affordance management approach. This view holds that stereotypes, prejudice, and discrimination result, in part, from social perceptual systems attuned to the potential threats and opportunities (affordances) that others might pose (McArthur & Baron, 1983; Neuberg et al., 2010). On this view, stereotypes are highly textured; people likely hold both positive and negative stereotypes about a single group (i.e., they might view members of a group as an opportunity in one domain but a threat in another). For example, people negatively stereotype Asian Americans as being bad drivers and positively stereotype them as being highly success-driven (e.g., Lee & Zhou, 2014; Mukkamala & Suyemoto, 2018); to fearful drivers, then, Asian Americans might be viewed as potential threats, whereas for CEOs

seeking to hire high-achievers, Asian Americans might be viewed as potential opportunities. People use these stereotypes to guide their behavior in ways intended to avoid people who pose threats, but approach those perceived to afford benefits (Cottrell & Neuberg, 2005).

We apply this same affordance-management logic to social perceptions of atheists and the religious, drawing on several lines of work to derive hypotheses about the positive stereotypes people might hold about atheists, and corresponding negative stereotypes about the religious. Although there are often mixed stereotypes about groups, research has overwhelmingly focused on negative stereotypes about atheists. Our goal is not to catalog universals in stereotypes about atheists (although prejudice seems very consistent globally; Gervais et al., 2017). Rather, we point out that people may, at times, might feel positively toward a group which they simultaneously associate with murder, incest, cannibalism, sex with dead chickens, etc. (see Gervais, 2014).

Positive Stereotypes about Atheists (and Negative Stereotypes about the Religious)?

Research on negative stereotypes about atheists hints at potential positive stereotypes people might also hold (e.g., Grove et al., 2019; Harper, 2007). First, Gervais et al. (2011) found that people expressed a slight preference for an atheist waitress, which they speculated to reflect a stereotype about atheists being fun and uninhibited. Several social perceptions might bolster this claim. People seem to stereotype atheists as rebellious, independent, and impulsive while stereotyping religious people as conservative, tradition-loving, and future-oriented (Grove et al., 2019; Moon et al., 2018). Might these qualities—although perhaps linked to widespread distrust of atheists—lead people to find atheists desirable partner for in certain social situations that call for, for example, being “fun” (i.e., uninhibited, nonjudgmental, unconcerned about following rules)? We predict that people will positively stereotype atheists as being fun (and religious

individuals as relatively prudish), and that people will positively discriminate in favor of atheists (versus religious targets) as partners for stereotype-relevant opportunities (e.g., as a party host).

Another potential positive stereotype about atheists is *open-mindedness*—a willingness to accept people different from them and to consider opposing opinions¹. Certain dimensions of religiosity is associated with closed-mindedness and prejudice toward a variety of groups, including different races and sexual minorities (Johnson et al., 2012; Rowatt & Al-Kire, 2021), implying unwillingness to accept dissimilar others. Indeed, religiosity is often associated with closed-mindedness and animosity toward a variety of different groups (Rowatt & Al-Kire, 2021), most notably gays and lesbians (Johnson et al., 2012). In contrast, atheists tend to score higher on the Actively Open-Minded Thinking Scale than religious individuals (Pennycook et al., 2014), suggesting that they are relatively more willing to objectively evaluate arguments and perhaps consider diverse, opposing opinions. Thus, we predict that people will positively stereotype atheists as being open-minded (and religious people as closed-minded), and that people will positively discriminate in favor of atheists (versus religious targets) as partners for stereotype-relevant opportunities (e.g., for having an unbiased, broad-minded conversation).

A third stream of evidence suggests people might positively stereotype atheists as scientific—interested in learning about the physical world. There is evidence that, at least in the US, religious people report more negative attitudes toward science and show lower levels of scientific literacy (McPhetres et al., 2020). Rios et al. (2015) found some evidence that people

¹ These are two somewhat distinct definitions of open-mindedness. Experiment 1 focuses on the social dimension (i.e., appreciating diversity), whereas Experiment 2 focuses on the cognitive aspect (i.e., changing one's mind in light of new evidence).

perceive Christians as less competent in science than other groups. We similarly predict that people will positively stereotype atheists as being especially interested in and trusting toward science, and that people will positively discriminate in favor of atheists (versus religious targets) when seeking partners for a stereotype-relevant task (e.g., choosing a science tutor).

Overview

We present data from three experiments (as well as a pilot study in the Supplemental Materials) showing that people simultaneously hold certain novel positive and previously-studied negative about atheists, hold those positive stereotypes both explicitly and intuitively (while also viewing religious targets negatively in the same domains), and that people positively discriminate in favor of atheist partners in these domains—although evidence is mixed about whether these effects hold among the highly religious. We also find evidence for similarly strong—if not stronger—negative stereotypes of religious people in these same domains.

All data, stimuli, and code for analysis are available via <https://osf.io/yxznb/>.

Experiment 1

Experiment 1 tested the hypothesis that people intuitively stereotype atheists as fun, open-minded, and scientific—and also stereotype the religious as not fun, closed-minded, and non-scientific using the conjunction fallacy. Notably, this method has consistently produced robust evidence for extreme anti-atheist bias, even by atheists and even cross-culturally (Gervais et al., 2017).

Method

Participants

We recruited 401 participants to complete a study on attitudes (see Table 1 for demographic information). No participants were excluded. We expected effect sizes similar to

past work utilizing the conjunction fallacy, which are often quite large (Gervais et al., 2017) and sought to maximize power given our resources. A sensitivity power analysis (Erdfelder et al., 2009) suggested that we were sufficiently powered (.80) to detect an odds ratio of 1.37 using a logistic regression, well below what we expected.

Table 1: Demographic Information for Participants across Experiments.

	<i>N</i>	Mean age (SD)	Religiosity (SD)	Religious Affiliations
Experiment 1 (Prolific Academic)	401 (219 F)	34.99 (13.00)	2.82 (1.92)	49 Catholic, 50 Protestant, 36 Christian (other), 1 Mormon, 10 Jewish, 6 Muslim, 1 Hindu, 10 Buddhist, 55 SBNR, 85 Atheist, 76 Agnostic, 21 other
Experiment 2 (Prolific Academic)	398 (208 F)	29.50 (10.58)	2.88 (1.88)	51 Catholic, 48 Protestant, 36 Christian (other), 3 Mormon, 12 Jewish, 8 Muslim, 4 Hindu, 8 Buddhist, 39 Spiritual But Not Religious, 83 Atheist, 87 Agnostic, 19 Other
Experiment 3 (MTurk)	382 (169 F, 3 other)	37.95 (11.72)	3.07 (2.18)	56 Catholic, 86 Protestant, 27 Christian (other), 1 Mormon, 7 Jewish, 1 Muslim, 1 Hindu, 5 Buddhist, 33 SBNR, 78 Atheist, 77 Agnostic, 10 other

Note: Religiosity across studies measured on a 1 to 7 scale. Density distributions for participant religiosity are displayed in Figure S5 in the Supplemental Materials. SBNR = Spiritual But Not Religious.

Procedure

Following Gervais (2014; Gervais et al., 2011, 2017), we utilized the conjunction fallacy to examine stereotypes about both atheists and religious targets. The conjunction fallacy takes advantage of the representativeness heuristic (Tversky & Kahneman, 1983)—people are somewhat likely to judge the conjunction of two probabilities (e.g., “Linda is both a bank teller and a feminist”) as more likely than a single probability (e.g., “Linda is a bank teller”) if they see

the second option as being representative of the original description of the target (e.g., “Linda is educated and participates in anti-nuclear rallies”). Thus, when people assume that Linda is bank teller and a feminist, it suggests that people stereotype feminists as being educated and participating in nuclear rallies.

Participants were randomly assigned to see three vignettes in random order (fun vs. open-minded vs. scientific). All vignettes for Experiments 1 and 2 are displayed in the Appendix. For each vignette, they were randomly assigned to two between-subjects factors: Target Religion (atheist vs. religious) and Valence (positive vs. negative). Given the relative non-impact of target gender from the Pilot Study, we used only male targets in the vignettes. The positive valence vignettes described a person who exemplifies the trait (e.g., very open-minded), while the negative valence vignette described someone who exemplifies the opposite traits (e.g., very closed-minded). The target was also randomly assigned for each vignette—participants were asked “Which is more probable?” The response options were (a) “Henry is a teacher” or (b) “Henry is a teacher, and ____.” For the atheist condition, the blank was “is an atheist,” for the religious condition it was “believes in God. We treated each domain as a separate analysis, with two between-subjects factors (Target Religion and Valence).

Varying the targets allows us to assess whether certain traits are viewed as representative of atheists, relative to religious individuals (i.e., whether these traits represent a stereotype). For example, if people read a vignette about immoral behavior and are presented with these conjunction options, a higher conjunction rate for the atheist target than for the religious target suggests people stereotype atheists as immoral (Gervais et al., 2017). Due to experimenter error, we note that the two negative scientific vignettes (both with religious and nonreligious targets)

did not include the phrase “Which is more probable?”, but did include the correct response options.

Other measures. Following the conjunction scenarios, participants completed several measures for an unrelated project, followed by demographic information (age, gender, sexual orientation, relationship status, and religious affiliation), including a 3-item measure of religiosity ($\alpha = .95$) based on Cohen et al. (2006), on a 1 (*not at all*) to 7 (*deeply or extremely*) scale: “How much do you believe in the teachings of your religion?” “How religious are you?” and “If someone wanted to understand who you are as a person, how important would your religion or faith be?”

Results

As shown in Figure 1, people tended to view the positively valenced traits as representative of atheists, and to view the negatively valenced traits as representative of religious individuals. Below, we report logistic regressions for each trait to examine how scenario valence and target (ir)religion interact to predict conjunction rates. We focus our analysis on the Target Religion $\times$ Valence interaction. A positive (and significant) interaction between these two factors suggests that stereotypes of atheists are *relatively* positive, compared to stereotypes of religious individuals. Of course, this interaction can be driven by positive stereotypes of atheists, negative stereotypes of the religious, or both. We describe exploratory analyses which probed both of these effects, and report them fully in the Supplemental Materials.

Recall that all participants saw three vignettes—one from each domain. To ensure that findings were not an artifact of ordering, we also analyzed responses to only the first presented vignette. Doing so did not alter conclusions (see Supplemental Material).

Fig. 1. Conjunction rates in each domain as a function of vignette valence (positive vs. negative) and conjunction target (religious vs. atheist) in Experiment 1. Horizontal lines represent conjunction rate (percentage of participants that committed the conjunction fallacy) and boxes represent 95% confidence intervals.

Logistic regression analyses are displayed in Table 2. The significant Target Religion $\times$ Valence interactions suggest that people stereotype atheists (vs. religious people) relatively positively in each domain (all $ps < .001$). As an exploratory analysis, we further examined the simple effects of target religion within negatively and positively valenced vignettes. These analyses suggested that there were both positive stereotypes of atheists (i.e., as fun, open-minded, and scientific; $p < .001$, $p = .003$, and $p < .001$, respectively) as well as negative stereotypes of the religious (as not fun, closed-minded, and non-scientific; all $ps < .001$). The effects were somewhat larger and perhaps even more consistent for negative stereotypes of the religious. Full results of these simple effects are available in the Supplemental Materials.

Table 2. Logistic Regression Results Predicting Conjunction Rates as a Function of Valence, Target, and their Interaction in Experiment 1.

	Fun					Open-Minded					Scientific				
	<i>B</i>	<i>SE</i>	<i>Z</i>	<i>p</i>	OR [95% CI]	<i>B</i>	<i>SE</i>	<i>Z</i>	<i>p</i>	OR [95% CI]	<i>B</i>	<i>SE</i>	<i>Z</i>	<i>p</i>	OR [95% CI]
Valence	−2.10	0.33	−6.31	<.001	0.12 [0.06, 0.23]	−2.11	0.34	−6.15	<.001	0.12 [0.06, 0.23]	−2.25	0.41	−5.52	< .001	0.11 [0.04, 0.23]
Target	−1.92	0.36	−5.32	<.001	0.15 [0.07, 0.29]	−2.21	0.34	−6.58	<.001	0.11 [0.06, 0.21]	−2.29	0.39	−5.87	< .001	0.10 [0.04, 0.21]
Valence × Target	3.03	0.50	6.06	<.001	20.70 [7.93, 56.59]	3.16	0.47	6.77	<.001	23.56 [9.58, 59.89]	3.86	0.56	6.88	< .001	47.60 [16.48, 150.27]

Do these stereotypes hold across differing levels of participant religiosity?

We conducted exploratory moderation analyses to examine whether religiosity moderates these effects. Specifically, we examined three-way (Religiosity $\times$ Target Religion $\times$ Valence) interactions for each vignette. We report results in full in the Supplemental Material (Table S3 and visualized in Fig. S2).

To summarize, religiosity did not significantly moderate effects for the fun vignettes ($p = .105$), suggesting that people both low and high religiosity similarly stereotype atheists as fun, uninhibited, and carefree. Religiosity did significantly moderate the effects for the open-minded and scientific vignettes ($ps < .001$), and we probed these interactions at low (-1 SD) and high ($+1$ SD) levels of religiosity using simple slopes analysis. Results suggest that the positive stereotype of atheists as open-minded (i.e., the positive Target Religion $\times$ Valence interaction) exists but is no longer statistically significant among those high in religiosity ($p = .158$). The positive stereotype of atheists as scientific exists and does seem to hold among those high in religiosity ($p = .008$).

Experiment 2

Experiment 2 was a preregistered replication of Experiment 1, with two differences. First, we altered the vignettes to match more closely the stereotypes we wish to assess. Most importantly, the “fun” vignette in Study 1 included aspects of being non-judgmental and open-minded. Second, we added a moral vignette to examine whether people simultaneously show negative and positive stereotypes of atheists and religious people.

Method***Participants***

We recruited 400 participants from Prolific Academic, and received 398 complete responses. See Table 1 for demographic information. We chose this sample size to match Experiment 1. Following our preregistration, no participants were excluded.

Procedure

The procedure was identical to Experiment 1, but with the following changes. First, we crafted the open-mindedness vignettes around the willingness to evaluate evidence rather than having diverse groups of friends, and the fun vignettes to more tightly represent fun, rather than including elements of being non-judgmental or open-minded.

Second, we also added moral vignettes—the serial killer vignette used by Gervais et al. (2017), as well as a positive version that mirrored it (e.g., feeding the homeless instead of killing them). This allowed us to examine whether participants simultaneously harbor these extreme negative and positive stereotypes. We used the same religiosity measure as Experiment 1 ($\alpha = .94$).

Results

As preregistered, our analytic plan mirrored Experiment 1: a logistic regression for each vignette, with conjunction rates predicted by valence, target religion, and their interaction. Figure 2 shows conjunction rates across domain, target religion, and valence. Notably, we also expected a significant *negative* interaction for the moral vignettes, suggesting a negative stereotype of atheists as immoral (and positive stereotype of religious individuals as moral).

As shown in Table 3, we did not find significant evidence for the stereotype of atheists as fun, operationalized as a significant Target Religion $\times$ Valence interaction ($p = .094$), but these analyses suggest positive stereotypes of atheists as open-minded ($p < .001$) and scientific ($p <$

.001), as well as a negative stereotype of atheists as immoral ($p < .001$), which replicates past research ($p < .001$).

To examine whether effects are driven by positive stereotypes of atheists or by negative stereotypes of the religious, we again obtained the simple effects of Target Religion when Valence is positive and negative (see Supplemental Materials for full results). To summarize, the effect of target religion was again stronger in the negatively (vs. positively) valenced scenarios for the fun, open-minded, and scientific scenarios. In fact, for the fun scenario, although the hypothesized interaction was not significant ($p = .094$), our simple slope analysis suggested that there is indeed a negative stereotype of the religious as not fun ($Z = -2.65, p = .008$), even as there is no corresponding stereotype of atheists as fun ($Z = -0.31, p = .755$). The stereotype of the religious was also stronger for the moral vignettes, but in this case it was the positively valenced vignette that had a stronger effects.

Fig. 2. Conjunction rates in each domain as a function of vignette valance (positive vs. negative) and conjunction target (religious vs. atheist) in Experiment 2. Horizontal lines represent conjunction rate (percentage of participants that committed the conjunction fallacy) and boxes represent 95% confidence intervals.

Do these stereotypes hold across differing levels of participant religiosity?

As in Experiment 1, and for exploratory purposes, we examined the potential moderating role of participant religiosity and tested whether these stereotypes hold at high and low levels of religiosity. Again, we report these results in full in the Supplementary Material (model results are available in Table S4 and Fig. S3.). To summarize, religiosity significantly moderated the effects across each domain (i.e., there was a significant Target Religion $\times$ Valence $\times$ Religiosity

interaction; $ps \leq .004$). Simple slopes analysis suggested that participants low in religiosity endorsed the three positive stereotypes of atheists as fun ($p = .002$), open-minded ($p < .001$), and scientific ($p < .001$), and also tended somewhat to endorse the negative stereotype of atheists as immoral, although this did not reach statistical significance, $p = .051$). Participants high in religiosity did not endorse the positive stereotypes of atheists as fun ($p = .614$) or open-minded ($p = .180$), but did associate atheism with an interest in science ($p < .001$). The highly religious participants also endorsed the negative stereotype of atheists as immoral ($p < .001$). In sum, Experiment 2 results suggest that highly religious participants endorse the positives stereotype of atheists as scientific, but not as fun or open-minded.

Table 3: Logistic Regression Results from Experiment 2.

	Fun					Open-Minded				
	<i>B</i>	<i>SE</i>	<i>Z</i>	<i>p</i>	OR [95% CI]	<i>B</i>	<i>SE</i>	<i>Z</i>	<i>p</i>	OR [95% CI]
Valence	−0.53	0.36	−1.47	.141	0.59 [0.28, 1.18]	−1.52	0.30	−5.02	<.001	0.22 [0.12, 0.39]
Target	−1.03	0.39	−2.65	.008	0.36 [0.16, 0.75]	−1.58	0.32	−5.00	<.001	0.21 [0.11, 0.38]
Valence x Target	0.92	0.55	1.67	.094	2.50 [0.87, 7.47]	2.17	0.43	5.02	<.001	8.80 [3.80, 20.76]
	Scientific					Moral				
	<i>B</i>	<i>SE</i>	<i>Z</i>	<i>p</i>	OR [95% CI]	<i>B</i>	<i>SE</i>	<i>Z</i>	<i>p</i>	OR [95% CI]
Valence	−3.35	0.44	−7.60	<.001	0.03 [0.01, 0.08]	1.80	0.44	4.04	<.001	4.87 [2.60, 9.41]
Target	−2.59	0.36	−7.09	<.001	0.07 [0.04, 0.15]	1.20	0.45	2.68	.007	2.50 [1.31, 4.85]
Valence x Target	4.69	0.55	8.47	<.001	109.23 [38.29, 339.66]	−3.88	0.68	−5.73	<.001	0.06 [0.02, 0.14]

Note: OR = odds ratio; CI = confidence interval

Experiment 3

Stereotypes guide behavior, including discriminatory behavior. For example, atheists are considered untrustworthy, leading to discrimination in stereotype-relevant arenas (e.g., childcare; Edgell et al., 2016; Franks & Scherr, 2014; Gervais et al., 2011). Using a quasi-behavioral partner choice task similar to those used in these studies, we test whether social perceivers prefer atheist partners in stereotype-relevant arenas.

Method

Participants

We recruited 382 using TurkPrime (Litman et al., 2017). See Table 1 for demographic information. Seven additional participants were excluded for failing a simple attention check instructing them to leave a question on the next page blank (Oppenheimer et al., 2009). We expected medium effect sizes, but to increase power we recruited the largest sample size possible given our budget and the length of our survey. A sensitivity power analysis (Erdfelder et al., 2009) suggested that we were sufficiently powered (.80) to detect an effect size (d) of approximately 0.13 in a one-sample t -test, which is below the effect size we expected.

Procedure and measures

After providing informed consent, participants were presented with a series of hypothetical decisions regarding partner choice; specifically, participants were asked to choose between two possible partners on an 8-point bipolar scale, with each possible partner being one of the anchors (1 = *definitely the person on the left*, 8 = *definitely the person on the right*). Bipolar scales were each eight-points so that participants were forced to indicate some degree of preference for one partner over the other.

Our focal tasks asked participants to choose between atheist and religious partners (embedded in items assessing several other types of partners), and presented the following choices that track the positive stereotypes from Experiments 1 and 2: “Which would you choose if you wanted to attend a fun party: one thrown by an atheist, or by a religious person?” (Fun); “Which would you choose if you wanted to have an open-minded political conversation with someone: an atheist, or a religious person?” (Open-minded); and “Which would you choose if you wanted a tutor for a high-level college course in the physical sciences: an atheist, or a religious person?” (Scientific).

As noted above, to disguise the purpose of the study, we also included five distractor scenarios (e.g., hiring an artist; a competent mechanic) with different targets (e.g., a Mac user vs. PC user; a coffee drinker vs. a tea drinker). All partner choice questions were presented in random order and can be found in the Supplemental Materials.

Next, participants completed an unrelated study, followed by the same 3-item measure of religiosity as Experiment 1 and 2 ($\alpha = .95$) and demographic information (e.g., age, gender, religious affiliation, sexual orientation).

Results

We first conducted a series of one-sample *t*-tests, comparing means for each partner choice dilemma with the scale midpoint of 4.5. Doing so allowed us to assess whether preferences were biased toward atheist or religious partners. If the confidence interval does not overlap with 4.5, this suggests that, on average, participants were more likely to choose one target over the other.

As shown in Figure 3, there was significant bias in all three relevant scenarios: Participants were significantly biased toward atheist partners when choosing fun hosts of

enjoyable parties, $t(381) = -10.94, p < .001$, partners for open-minded political conversations, $t(381) = -9.37, p < .001$, and science tutors, $t(381) = -8.70, p < .001$, supporting predictions.

Fig. 3. Desire for atheist (lower numbers) vs. religious (higher numbers). A horizontal line represents the scale midpoint (4.5), which would represent indifference between atheist and religious partners. Error bars represent 95% confidence intervals. Points are jittered to avoid overplotting.

How does religiosity influence partner choice decisions?

We also examined whether partner choices depend on participants' own religious beliefs. We regressed partner choice (i.e., preference for religious partners) on participant religion (standardized). Religiosity was highly associated with preference for religious partners for that

are fun, $\beta = .76$, $t(380) = 22.71$, $p < .001$, open-minded, $\beta = .63$, $t(380) = 15.65$, $p < .001$, and scientific, $\beta = .69$, $t(380) = 18.54$, $p < .001$.

We again sought to examine whether there was significant bias toward atheists at low (-1 SD) and high ($+1$ SD) levels of religiosity. To do so, we computed prediction intervals for these values from the regression models. We report all these estimates and confidence intervals in Table S5 in the Supplementary Material (see also Fig. S4 for a visualization). To summarize, for those at low and mean levels of religiosity, there was a clear bias in favor of atheists for each of these three domains (whereas 4.5 would signify indifference, the highest confidence interval for those at the mean of religiosity was 3.64), providing evidence for positive discrimination toward atheist partners in relevant domains.

Among highly religious participants, however, there was no clear bias toward religious or atheist party hosts, as the confidence interval straddled 4.5 (estimate = 4.63, 95% CI = 4.38, 4.88], and highly religious participants were instead biased toward religious partners for an open-minded conversation partner (4.83, 95% CI = [4.58, 5.08]) and for science tutors (5.06, 95% CI = [4.82, 5.30]).

Discussion

Existing research on perceptions of atheists has near-exclusively focused on negative stereotypes and consequent discrimination. Spurred by a theoretical perspective that expects social perceivers to hold more nuanced views of targets, we find some of the first evidence that people simultaneously hold positive stereotypes about atheists and engage in consequent positive discrimination toward them, specifically in stereotype-relevant domains. Using the methods of intuitive stereotypes that have traditionally revealed some of the most extreme anti-atheist prejudice (Gervais et al., 2017), Experiments 1 and 2 suggested that people intuitively associate

being fun (although not in Experiment 2), open-minded, and scientific with atheism (and associate being *not* fun, *closed*-minded, and *non*-scientific with religious belief), while simultaneously stereotyping atheists as immoral (and religious people as moral). While our results demonstrated evidence for positive stereotypes of atheists, they also provided evidence for negative stereotypes of the religious. Indeed, these negative stereotypes seem to be robust, and are perhaps even stronger than the positive stereotypes of atheists. Experiment 3 suggests that people positively discriminate toward atheists in relevant domains—preferring atheist partners as party hosts, open-minded conversation partners, and science tutors.

Given the intriguing finding that even atheists tend to harbor anti-atheist prejudice (Gervais et al., 2017), we also examined whether these positive atheist stereotypes are held even by the religious. Whereas findings largely hold among religious individuals, findings for *highly* religious individuals are equivocal. In Experiment 1, participants high in religiosity endorsed the fun and scientific stereotypes, but not the open-minded stereotypes. In Experiment 2, they only endorsed the scientific stereotype. In Experiment 3, those high in religiosity seemed ambivalent about whether to choose an atheist or a religious partner. Evidence was thus mixed on whether even the *highly* religious favor atheists over fellow ingroup members in certain domains. This is still a striking finding in light of most work on ingroup favoritism.

Limitations and Future Directions

Although stereotyping a group as fun, open-minded, and scientific might seem unambiguously positive to most people, others might disagree. Indeed, evidence suggests that the same stereotype can have difference implications for different perceivers (Cook et al., 2018; Neuberg et al., 2020). Thus, targets perceived as being fun, open-minded, and/or scientific might be considered opportunities by most social perceivers, even as they are considered threats by

others. This might be the case here, to the extent that fun is associated with short-term mating and religious people might avoid such individuals (Hone et al., 2020; Moon et al., 2019).

Similarly, other work has shown that some religious individuals view open-mindedness unfavorably when choosing a mate (Jackson et al., 2015), and some religious individuals might view scientific thinking as threatening to their worldviews (Rios et al., 2015).

Intuitively, it seems obvious that positive stereotypes are desirable and negative stereotypes are not. However, stereotypes can often have counterintuitive effects. For example, positive stereotypes can cause negative outcomes for group members by, for example, pressuring individuals to act in stereotype-consistent ways, or by leading stereotyped individuals to show less interest in non-stereotypical behavior (Czopp et al., 2015). It is unclear whether these positive stereotypes are beneficial to atheists, or whether these negative stereotypes are detrimental to religious individuals.

Here, we focused on social perceptions (the “perceiver side”). Future work should be conducted on the “target side” as well, exploring whether atheists are aware of the positive and negative stereotypes others hold about them (i.e., metastereotypes; Vorauer et al., 1998), and whether these metastereotypes influence how atheists present themselves. Atheists are often reluctant to disclose their identities, perhaps especially atheists who are baby boomers, political independents, women, and/or live in the Southern US (Mackey et al., 2020). This suggests that, not only are atheists aware of the stigma they face, but they also might adjust their willingness to disclose their identities based on the context. If atheists are aware of the positive stereotypes examined here, they might be more willing to disclose their disbelief when trying to enhance their scientific credibility or to attract short-term mates. However, when it comes to domains of

trust, such as employment in childcare, they may downplay their atheism and/or otherwise attempt to counter stereotypes of distrust (cf. Neel et al., 2013).

We also note that social perceivers are often assailed with myriad cues when encountering targets—not simply cues to religious belief or disbelief. Evidence suggests that how one perceives atheists can depend on the combination of cues, such as whether atheists are family-oriented and/or educated (e.g., Moon et al., 2018). Just as people exhibit increased trust of atheists when they are explicitly described as family-oriented, people might also view atheists described as family-oriented as less fun. Future work might thus benefit from examining cue constellations in addition to individual cues.

Some Constraints on Generality

Our goal was not to document cross-cultural universals, but to show that a stigmatized group—even one associated with heinous crimes and distrust—can also be viewed positively. The US is an outlier among developed nations, in that religion plays a large role in public discourse (Norris & Inglehart, 2004). Thus, we consider that the stereotypes examined here might vary across societies. For example, people in less religious nations (e.g., Iceland) might show stronger and more numerous positive stereotypes of atheists and/or more negative stereotypes about the religious. In countries like Iran however, there might be little positive stereotyping of atheists.

We also suggest that cultural variation in real-world features could play a role here. For example, religiosity and proscriptions against sexual behavior reliably covary across cultures (Moon, 2021; Weeden & Kurzban, 2013), implying that—to the extent that this link underlies positive stereotyping of atheists specifically as fun—people might so stereotype atheists across cultures. By contrast, religiosity and skepticism of science might *not* reliably covary across

cultures (McPhetres et al., 2020); people in cultures where religiosity and science skepticism do not covary might not stereotype atheists as scientifically-minded.

Conclusion

In sum, we demonstrated that, despite widespread and persistent anti-atheist bias, atheists—who represent an increasing swath of the global population—are at least sometimes viewed positively, and that religious people are often viewed negatively in these same domains. In a way, the elusiveness of positive perceptions and discrimination in favor of atheists in previous research speaks to the strength of anti-atheist prejudice. Still, our results suggest that, although people harbor extreme negative intuitions about atheists, many people may harbor similarly extreme positive stereotypes about them in relevant domains.

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Appendix

Table A1. Vignettes Used in Experiments 1 and 2.

Domain	Experiment 1		Experiment 2	
	Negative Valence	Positive Valence	Negative Valence	Positive Valence
Fun	“Since childhood, Henry has always been considered no fun, rigid, serious, a real rule-follower. He was probably the most judgmental guy you'd meet about the hijinks that everyone else got up to, so no one felt comfortable having fun around him. Because of this, whenever there was a party there, no one was particularly sad if Henry wasn't there.”	“Since childhood, Henry has always been considered fun, loose, carefree, the life of the party. He was probably the least judgmental guy you'd meet about the hijinks that everyone else got up to, so everyone felt comfortable having fun around him. Because of this, whenever there was a party on campus when he was in college, everyone wanted Henry to attend.”	“Henry's friends would describe him with one word: boring. People rarely have a good time around Henry, and he rarely laughs, jokes, or plays around.”	“Henry's friends would describe him with one word: fun. People always have a great time around Henry, laughing, joking, and playing around.”
Open-Minded	“Henry has never been open-minded. He is a white heterosexual and has an array of friends who are all similar to one another, and usually makes friends with people who share his beliefs about the world, people who look like him, and people who have the same sexual orientation as he does.”	“Henry has always been open-minded. Although he is a white heterosexual, he has a diverse array of friends, and frequently makes friends with people who don't share his beliefs about the world, people who don't look like him, and people who have different sexual orientations from his own.”	“Henry has never been open-minded. He can hold strong beliefs, and all of his friends know he is not likely to change his mind; in fact, he barely ever revises even his more weakly-held beliefs in response to contradictor evidence.”	“Henry has always been open-minded. He can hold strong beliefs, but all of his friends know he is not afraid to change his mind; in fact, he frequently revises even his more strongly-held his beliefs in response to contradictory evidence.”
Scientific	“Henry has had a strong dislike of science since childhood--he always hated school experiments and learning facts about the physical world, the solar system, the universe, and how it all worked. In college, he avoided every science class he could, especially those on topics like astronomy, physics, and chemistry.”	“Henry has had a strong interest in science since childhood--he always loved school experiments and learning facts about the physical world, the solar system, the universe, and how it all worked. In college, he took every science class he could, especially those on astronomy, physics, and chemistry.”	“Henry has had a strong dislike of science since childhood--he avoid reading about science as much as he can, and he always tries to change the subject when people try to talk to him about recent scientific developments, especially in the areas of animal biology and physics.”	“Henry has had a strong interest in science since childhood--whenever he gets the chance, he can be found reading science books or talking to friends and family about recent scientific developments, especially in the areas of animal biology and physics.”

Moral

“When a man was young, he began inflicting harm on animals. It started with just pulling the wings off flies, but eventually progressed to torturing stray cats and other animals in the neighborhood. As an adult, the man found that he did not get much thrill from harming animals, so he began hurting people instead. He has killed 5 homeless people that he abducted from poor neighborhoods in his home city. Their dismembered bodies are currently buried in his basement.”

“When a man was young, he developed a fondness for helping animals. It started with caring for his neighbor's pets, but eventually progressed into rescuing stray cats and other animals in his neighborhood. As an adult, the man began to find even more satisfaction in helping people. He often volunteers at food kitchens and homeless shelters in poor neighborhoods in his home city, and has gained respect from many of the people he serves.”

Note: The negative moral vignette was adapted from Gervais et al. (2017).