

RUNNING HEADER: SECULAR AUTHORITY REDUCES ATHEIST DISTRUST

Reminders of Secular Authority Reduce Believers' Distrust of Atheists

Will M. Gervais & Ara Norenzayan

University of British Columbia

Department of Psychology

2136 West Mall

Vancouver, BC, Canada V6T 1N4

will@psych.ubc.ca ara@psych.ubc.ca

WORD COUNT: 3981

ABSTRACT: 142

40 REFERENCES

Address correspondence to:

Will Gervais

Department of Psychology

University of British Columbia

2136 West Mall

Vancouver, BC, V6T 1N4, Canada

Email: will@psych.ubc.ca

*****Unedited proofs of manuscript in press at *Psychological Science******

Abstract

Atheists have long been distrusted, in part because they do not believe that a watchful, judging god monitors their behavior. However, secular institutions such as police, judges, and courts are also potent sources of social monitoring and prosocial behavior in large parts of the world. Reminders of such secular authority therefore could reduce believers' distrust of atheists. As hypothesized, both watching a video about police effectiveness (Experiment 1) and subtly primed secular authority concepts (Experiments 2-3) reduced believers' distrust of atheists. In addition, we tested three distinct alternative explanations. Secular authority primes did not reduce general prejudice against outgroups (Experiment 1), specific functionally-relevant prejudice reactions such as viewing gays with disgust (Experiment 2), or general distrust of outgroups (Experiment 3). These studies contribute to theory regarding both the psychological bases of different prejudices and the psychological functions served by gods and governments.

Keywords: prejudice/stereotyping; trust; religious beliefs; God; government; atheism

Reminders of Secular Authority Reduce Believers' Distrust of Atheists

His eyes are on the ways of men; He sees their every step.

Job 34:21, *NIV*

Big Brother is watching you.

George Orwell, *1984*

Throughout history, people who deny the existence of gods have been targets of scorn and suspicion (Jacoby, 2004). Even today, with a great degree of secularism present in the postindustrial world (Norris & Inglehart, 2004), atheists remain among the most distrusted groups of people worldwide (Edgell, Gerteis, & Hartmann, 2006; Gervais, 2011; Gervais, Shariff, & Norenzayan, in press). Only 45% of American respondents recently reported a willingness to vote for a qualified atheist presidential candidate of their own party—the lowest percentage of several hypothetical minority candidates and the only who could not garner a majority vote (Jones, 2007). Similarly, Americans rated atheists as the group that least agrees with their vision of America, and the group that they would most disapprove of their children marrying (Edgell, Gerteis, & Hartmann, 2006). Despite the prevalence of negative attitudes towards atheists, the prevalence of atheists worldwide (numbering in the hundreds of millions: Zuckerman, 2007), and the recent popular attention garnered by atheism (e.g., Dawkins, 2006), atheist distrust remains an understudied topic. Building on recent work (Gervais, 2011; Gervais et al., in press; Norenzayan & Shariff, 2008), we tested the hypothesis that reminders of effective secular authority reduce distrust of atheists among believers. This hypothesis has important implications for the psychological study of the functional bases of diverse prejudices (e.g., Cottrell & Neuberg, 2005; Kurzban & Leary, 2001) as well as the social, cultural, and

psychological functions of both gods and governments (e.g., Kay, Gaucher, Napier, Callan, & Laurin, 2008; Norris & Inglehart, 2004).

The Centrality of Trust to Social Life

To effectively navigate a complex social landscape, people need to figure out when others can be trusted. Indeed, distinguishing cooperators from freeriders represents a central adaptive challenge in human evolution (e.g., Henrich & Henrich, 2007), and trustworthiness is the single most valued trait in other people (Cottrell, Neuberg, & Li, 2007). However, trustworthiness is difficult to assess outside of specific “strain-test” situations (Simpson, 2007). Therefore people must rely largely on indirect cues to determine when other individuals can be trusted.

One powerful mechanism stems from peoples’ hypersensitivity to reputational cues that others are watching. When people feel that their behavior is being monitored, they put their best foot forward. Even subtle cues that one is being watched, such as stylized eyespots or pictures of peoples’ eyes, increase prosocial behavior in both anonymous laboratory contexts (Haley & Fessler, 2005) and naturalistic settings (Bateson, Nettle, & Roberts, 2006). Conversely, anonymity reduces prosocial behaviour (Hoffman, McCabe, Shachat, & Smith, 1994). This is even the case for subtle cues to anonymity such as ambient darkness or wearing dark glasses (Zhong, Lake, & Gino, 2010). To the extent that an actor feels watched, an observer may infer that the actor will be on her best behavior, and may therefore be trusted.

Religious Prosociality: In (Belief in) Gods We Trust

People cannot watch each other all of the time. However, people perceive gods as mindful and watchful agents (e.g., Norenzayan & Gervais, in press; Waytz, Gray, Epley, &

Wegner, 2010). Reminders of supernatural agents therefore trigger the same suite of psychological responses triggered by reminders that other people are watching. Thinking of God, like thinking of social surveillance by one's peers, increases both public self-awareness and socially desirable responding among believers (Gervais & Norenzayan, in press). Furthermore, subtle reminders of God and religion promote prosocial behavior (e.g., Pichon, Boccato, & Saroglou, 2007; Randolph-Seng & Nielsen, 2007; Shariff & Norenzayan, 2007; see also McKay, Efferson, Whitehouse, & Fehr, 2011). By making people feel that their behavior is being monitored, belief in watchful gods may increase cooperative behavior (Johnson & Bering, 2006; Johnson & Kruger, 2004; Norenzayan & Gervais, in press; Norenzayan & Shariff, 2008). As a result, religious people may use belief in watchful gods as a cue that others can be trusted. Consistent with this, Tan and Vogel (2008) found that people (especially strongly religious people) were more likely to transfer money in an anonymous "trust" game to more religious partners.

If believers treat belief in God as a cue of trustworthiness, then believers should distrust atheists. Indeed, religious participants view criminal untrustworthiness (e.g., committing theft or insurance fraud) as comparably representative of atheists and rapists, but not of Christians, gays, Jewish people, Muslims, or feminists; furthermore, the belief that people behave better when they feel that God is watching uniquely predicts atheist distrust (Gervais, et al., in press). Thus, one key consequence of religious prosociality is distrust of atheists.

From Watchful Gods to Watchful Governments

Religious prosociality is far from the only source of prosociality in the world, and secular authorities have joined (and perhaps supplanted) watchful gods as guarantors of cooperation in some places, with interesting psychological consequences. In the lab, priming secular concepts

(e.g., civic, jury) is as effective as reminders of a watchful God in promoting prosocial behavior (Shariff & Norenzayan, 2007). The interchangeable psychological functions of gods and governments are also illustrated by recent work showing that both can give people a sense of psychological control in the world (e.g., Kay, et al., 2008; Kay, Moscovich, & Laurin, 2010; Kay, Shepherd, Blatz, Chua, & Galinsky, 2010).

Secular and sacred authority may also serve interchangeable functions in encouraging prosocial behavior, albeit with different implications for distrust of atheists. The view that atheists are untrustworthy because they do not believe that their behavior is monitored by a divine power may erode to the extent that people are aware of effective monitoring by other “higher” (though not supernatural) powers. If true, then reminders of secular authorities that enforce prosocial behaviour should reduce distrust of atheists. Furthermore, this effect should be specific to atheist distrust, and not a general feature of prejudice.

Present Research

Across three experiments, we tested whether people expressed reduced atheist distrust when reminded of secular authority by either watching a video about police effectiveness (Experiment 1), or by implicitly primed secular authority concepts (Experiments 2-3). In addition, we explored whether any reduction in distrust was, as predicted, specific to atheists and not generalized to other forms of prejudice. To this end, we tested our prediction against three additional theoretically-driven alternative explanations. We tested whether reminders of secular authority, in addition to reducing distrust of atheists, also make people feel generally more warmly towards outgroups (Experiment 1), reduce specific functionally-relevant reactions to outgroups (Experiment 2), or reduce distrust of any outgroup (Experiment 3). To rule out

ingroup bias, we excluded atheists from the samples in all studies, and also assessed whether any effects were moderated by religiosity.

Experiment 1: Priming Police Effectiveness

Experiment 1 tested whether watching a video that primed effective secular authority reduced distrust of atheists. In addition, we considered the possibility that any reduction in atheist distrust might merely be the result of secular authority making people feel more warmly towards outgroups in general. Therefore, Experiment 1 included a measure of general prejudice to test the alternative hypothesis that secular authority reduces general prejudice against outgroups, rather than specific atheist distrust.

Method

Participants. Sixty-five undergraduates (demographics in Table 1) participated for extra credit. To eliminate possible ingroup biases, we excluded self-identified atheists. Two participants (one in each condition) were excluded from further analyses for failure to follow instructions while watching the videos.

Procedure. Participants viewed a video as a priming task. Then, in an ostensibly separate task, participants completed measures of both atheist distrust and general prejudice. No participants indicated suspicion regarding the connection between these tasks on a standard “funnel debriefing” following the dependent variables.

Primes. Participants watched a movie that detailed either a traveler’s impression of visiting Vancouver for the first time (Control: <http://www2.psych.ubc.ca/~will/MovieC.html>; $N=32$), or the Vancouver police chief’s year-end report, which detailed the many successes of the Vancouver Police Department in 2010 (Police: <http://www2.psych.ubc.ca/~will/MovieG.html>; $N=31$)¹.

Atheist Distrust. We used, to our knowledge, the only previously validated atheist distrust scale available in the literature (Gervais, 2011). This scale includes seven items ($\alpha = .81$) that closely tap distrust of atheists (e.g., “In times of crisis, I am more inclined to trust people who are religious.” “I would be uncomfortable with an atheist teaching my child.”). We recorded each participant’s average score (from 0-6) for all items in the scale.

General Prejudice. We measured general prejudice with three separate “feeling thermometers.” Participants rated how warmly they felt (from 0-100) towards three targets: gays, Muslims, and Jewish people. Responses across targets were averaged ($\alpha = .85$). For ease of comparison, we linearly re-scaled this average score (multiplied by .06) and reverse scored the resulting variable. Thus, both the atheist distrust measure and the general prejudice measure had minimum prejudice values of 0, maximum prejudice values of 6, and midpoint values of 3. This linear transformation strategy is inferentially identical to standardizing variables, but leaves both variables scaled in a similar metric, facilitating graphical comparison of atheist distrust and general prejudice.

Results & Discussion

Individual differences in religious identity (comparing agnostics and “nones” with all other religious individuals) did not moderate any reported effects, so we collapsed across religious identity for all analyses. A 2 (Condition: Control vs. Police, between subjects) by 2 (Target: Atheist vs. General, within subject) mixed factorial ANOVA revealed a significant Condition by Target interaction, $F(1, 61) = 5.01, p = .03, \eta_G^2 = .03^2$, which we decomposed using planned t -tests. Relative to viewing the control video, viewing the police effectiveness video significantly reduced atheist distrust, but did not significantly affect general prejudice, $t(61) = 2.85, p = .006$, Cohen’s $d = .73$ and $t(61) = .01, p = .99$, Cohen’s $d = .004$, respectively, Fig. 1. As

hypothesized, thinking about an effective local secular authority reduced distrust of atheists, but did not affect prejudice in general.

Experiment 2: Atheist Distrust vs. Gay Disgust

Experiment 1 demonstrated a causal relationship between awareness of effective secular authority and reduced distrust of atheists, though not reduced feelings of warmth towards outgroups in general. Experiment 2 replicated and extended these findings in two primary ways.

First, although participants did not report awareness of any connection between the videos and the dependent measures in Experiment 1, it might nonetheless be argued that the results were influenced by experimental demand. Thus Experiment 2 utilized instead a classic, and more subtle, method for implicitly priming concepts (Srull & Wyer, 1979). This priming technique—though supraliminal in nature—typically influences subsequent judgments without participants' awareness of a connection between the two (e.g., Bargh, Chen, & Burrows, 1996).

Second, Experiment 1 demonstrated that reminders of secular authority did not make people feel generally more warmly towards outgroups. However, different prejudices are characterized by different reactions to the distinct functional threats that different groups are seen to pose; for example, white heterosexual participants tend to view black men with fear, but gay men with disgust (e.g., Cottrell & Neuberg, 2005; Kurzban & Leary, 2001). Thus, although secular authority did not reduce general prejudice (Experiment 1), it may nonetheless inhibit the specific functionally-relevant reactions that characterize individual prejudices. Thus, Experiment 2 compared distrust of atheists with disgust-based anti-gay prejudice. Anti-gay prejudice serves as an ideal contrast to atheist distrust because both involve outgroups with concealable identities that are viewed as threats in some religious traditions, but nonetheless have different psychological characteristics (e.g., disgust vs. distrust, see Gervais, et al., in press). Our

theoretical model predicts that awareness of secular authority should reduce distrust of atheists, but not disgust-based anti-gay prejudice. Moreover, in Experiment 1, we compared a validated multiple-item measure of atheist distrust to a (potentially less sensitive) composite of single-item feeling thermometers. To address this potential problem, Experiment 2 used a validated multiple-item measure of disgust-based anti-gay prejudice. In sum, Experiment 2 tested the hypothesis that implicitly priming secular authority concepts would reduce atheist distrust, but not disgust reactions towards gays.

Method

Participants. Fifty-one undergraduates (demographics in Table 1) participated for extra course credit. To eliminate possible ingroup biases, we again excluded self-identified atheists.

Procedure. Participants completed a “verbal fluency task” that served as an implicit prime. In an ostensibly separate task, participants completed measures of atheist distrust and anti-gay prejudice. The primes were presented as unrelated to the subsequent questionnaire, and no participants indicated suspicion or conscious awareness of the primes’ influence on a standard “funnel debriefing” following the dependent variables.

Primes. We primed secular authority with a scrambled sentence paradigm (Srull & Wyer, 1979), and both the secular authority prime and the control prime were identical to those used by Shariff and Norenzayan (2007), who found that this secular authority prime increased generosity in an anonymous economic game. Participants unscrambled ten sets of five words by dropping a single word and rearranging the others to create a grammatical phrase. In the secular prime condition ($N= 25$), five of the rearranged sentences contained target secular authority concept words (civic, contract, jury, court, police), whereas in the control prime condition ($N= 26$) the words were unrelated to government and did not have a coherent theme.

Atheist Distrust. Experiment 2 used the same atheist distrust scale used in Study 2 ($\alpha = .75$). We averaged responses to each question (from 0-6).

Anti-gay prejudice. We used a validated 6-item scale that measures disgust-based anti-gay prejudice ($\alpha = .91$; Herek & Capitano, 1995; samples: “I think male [female] homosexuals are disgusting.” “Sex between two men [women] is just plain wrong.”). We averaged responses to each question (from 0-6).

Results and Discussion

Individual differences in religious identity (comparing agnostics and “nones” with all other religious individuals) did not moderate any reported effects, so we collapsed across religious identity for all analyses. A 2 (Condition: Control vs. Secular Authority, between subjects) by 2 (Target: Atheist vs. Gay, within subject) mixed factorial ANOVA revealed the hypothesized Condition by Target interaction, $F(1, 49) = 4.26, p = .04, \eta_G^2 = .03$. As hypothesized, priming secular authority concepts reduced atheist distrust, but did not affect anti-gay prejudice, $t(33.58) = 2.67, p = .01, \text{Cohen's } d = .77$ and $t(49) = .15, p = .88, \text{Cohen's } d = .04$, respectively, Fig. 2. In sum, implicitly primed secular authority concepts reduced distrust of atheists, but not disgust-based anti-gay prejudice.

Experiment 3: Distrust of Atheists and Gays Among American Adults

Experiments 1 and 2 revealed that reminders of secular authority reduce distrust of atheists, but not general prejudice against outgroups or specific functionally-relevant reactions to outgroups. Although both studies tested viable alternative hypotheses derived from extant prejudice literatures, neither tested the alternative explanation that reminders of secular authority reduce *distrust* of any outgroup. Thus Experiment 3 tested whether secular authority reduces distrust of both atheists and gays. In addition, the first two experiments relied on religiously

diverse student samples in Vancouver, Canada; therefore Experiment 3 utilized a broad sample of American adults, with much higher overall levels of Christian identification (see Table 1).

Method

Participants. We drew a sample of 65 American adults (demographics in Table 1) using Mechanical Turk, a commonly used online data collection service (see Buhrmester, Kwang, & Gosling, 2011). Our participants hailed from 31 different states. To eliminate possible ingroup biases, we again excluded self-identified atheists.

Procedure. The priming procedure was administered exactly as in Experiment 2. Once again, participants were randomly assigned to complete either the control prime ($N=32$) or the secular authority prime ($N=33$) before rating—in an ostensibly separate task—distrust of atheists and gays. No participants indicated suspicion or conscious awareness of the primes' influence on a standard “funnel debriefing” following the dependent variables.

Distrust Measures. To create compatible multiple-item measures of distrust of atheists and gays, respectively, we lightly altered the items from the atheist distrust measure used in previous experiments to refer to differences in sexual orientation, rather than belief in God. We dropped two items from the initial scale because they were difficult to alter in this manner. As a result, each distrust scale included five items ($\alpha_{Atheist}=.87$, $\alpha_{Gay}=.86$; sample items: “In times of crisis, I am more inclined to trust people who are [religious/heterosexual].” “I would be uncomfortable with [an atheist/a homosexual] teaching my child.”). For each distrust scale, we averaged responses (from 0-6).

Results and Discussion

Individual differences in religious identity (comparing agnostics and “nones” with all other religious individuals) did not moderate any reported effects, so we collapsed across

religious identity for all analyses. A 2 (Condition: Control vs. Secular Authority, between subjects) by 2 (Target: Atheist vs. Gay, within subject) mixed factorial ANOVA revealed the hypothesized Condition by Target interaction, $F(1, 62) = 4.09, p = .047, \eta_G^2 = .02$. As hypothesized, priming secular authority concepts reduced distrust of atheists, but did not affect distrust of gays, $t(62) = 2.66, p = .01$, Cohen's $d = .67$ and $t(63) = .66, p = .51$, Cohen's $d = .17$, respectively, Fig. 3. In sum, implicitly primed secular authority concepts reduced distrust of atheists, but not distrust of gays.

General Discussion

Atheists are among the least trusted people where there are religious majorities: that is, in most of the world. Three experiments demonstrated that subtle reminders of effective secular authority—secular institutions that help secure cooperation among individuals—reduce distrust of atheists among religious believers. In addition, we tested—and found no support for—three theoretically plausible alternative explanations. First, it is possible that reminders of secular authority make people feel generally more warmly towards outgroups; in this view reduced distrust of atheists would be merely one indication that secular authority reduces prejudice in general. To the contrary, reminders of secular authority did not reduce prejudice in general (Experiment 1). Second, prejudice against different outgroups is expressed differently depending on the functional threat a given outgroup is perceived to pose (e.g., Cottrell & Neuberg, 2005; Kurzban & Leary, 2001), and reminders of secular authority might inhibit functionally-relevant reactions to different outgroups (reducing, for example, *both* distrust of atheists and disgust towards gays). To the contrary, reminders of secular authority did not reduce disgust-based anti-gay prejudice (Experiment 2). Finally, it is possible that reminders of secular authority do not reduce prejudice reactions—defined broadly or narrowly—but they instead increase the degree

to which all outgroups are perceived as trustworthy. To the contrary, reminders of secular authority did not reduce distrust of gay people (Experiment 3). Although the pattern of results supported our theoretical predictions, three different alternative explanations silent about the functional bases of different prejudices and/or the cooperative functions served by religious beliefs and secular authority did not receive empirical support.

Across studies, effects were not moderated by individual religiosity, and were robust across both samples drawn from both an ethnically and religiously diverse Canadian student population (Experiments 1-2), as well as a broad sample of American adults with a much wider age range and high levels of Christian identification (Experiment 3). Alternative explanations centering on diverse methodological (e.g., experimental demand, other forms of prejudice) possibilities were considered, and received no empirical support. Both watchful gods and watchful governments can keep people honest, but watchful governments do so without engendering distrust of atheists. These findings have implications for both the psychological study of the diversity of prejudice, as well as the social and psychological functions served by both religious and secular beliefs and institutions.

The Diversity of Prejudice(s)

Although prejudice was long viewed as a simple unidimensional construct (e.g., “like” vs. “dislike” of different groups), researchers have increasingly emphasized the multidimensionality of prejudice (e.g., Fiske, Cuddy, Glick, & Xu, 2002), and that different outgroups trigger distinct prejudices (e.g., Cottrell & Neuberg, 2005; Kurzban & Leary, 2001). Rather than treating all forms of prejudice identically, it is important to understand the specific threats that different groups are perceived to pose, as well as the nuanced reactions that characterize different prejudices (Cottrell & Neuberg, 2005). One important, yet currently

understudied, implication of this latter perspective is that different prejudices might be affected by different contextual factors, commensurate with the particular threats that various groups that are perceived to pose.

Some prejudice reduction interventions, such as intergroup contact, alleviate prejudice against a wide variety of outgroups (Pettigrew & Tropp, 2006). Nonetheless, many prejudice reduction interventions might only work for some specific outgroups, and in the present studies, awareness of secular institutions reduced distrust of atheists, but had no measurable effect on attitudes towards Jewish people, Muslims, or gays. A prejudice intervention that reduces distrust of one outgroup might be wholly useless or even counterproductive for addressing prejudice against groups viewed with fear or disgust (e.g., Gervais, 2011). It is therefore important for researchers and policy makers alike to consider the specific functional threats different groups are perceived to pose, and tailor specific prejudice reduction interventions accordingly.

The Psychological Functions of Gods and Governments

The present results join previous findings demonstrating that gods and governments can serve similar psychological and social functions. Among other things, both gods and governments help relieve peoples' existential concerns. As a result, for example, awareness of one's own mortality makes people reluctant to desecrate symbols of both their gods and their governments (Greenberg, Porteus, Simon, Pyszczynski, & Solomon, 1995). Furthermore, both gods and governments give people a sense of control in an unpredictable world (Kay, et al., 2008; Kay, et al., 2010).

Above and beyond their useful palliative existential functions, the present studies demonstrate an additional, distinct function served by both gods and governments: gods and governments function as social monitors to encourage cooperation among individuals. Belief in

watchful, moralizing gods may have served a vital function in the cultural evolution of large, cooperative groups (e.g., Norenzayan & Gervais, in press; Norenzayan & Shariff, 2008; Roes & Raymond, 2003). Although religious prosociality may have served as an initial mechanism that enabled the bootstrapping of large-scale cooperation in some cultures, cooperative groups may create a variety of additional secular institutions that can also promote cooperation. As reliance on these secular institutions waxes in many societies, the influence of religion wanes (e.g., Norris & Inglehart, 2004). As a result, places in the world that tend to have effective governments also have much less religious belief (e.g., Scandinavia; Zuckerman, 2008). Consistent with the present theory and experimental results, cross-cultural data indicate that religious believers from countries with strong secular institutions that effectively guarantee cooperation are more accepting of atheists than are religious believers from otherwise similar countries that lack effective secular authority (Norenzayan & Gervais, 2011). Not only does religious belief decline as human misery is alleviated and existential security is established (Gray & Wegner, 2010; Norris & Inglehart, 2004), but so does atheist distrust among believers, provided that reliable secular institutions emerge that can offer alternatives to religious prosociality.

The present experiments demonstrated that reminders of secular authority increase the perceived trustworthiness of atheists. Our theoretical analysis implies that this effect should be moderated by the degree to which people actually find their government socially effective and therefore worthy of trust. Had the present experiments been conducted in a country where people have little trust in their government (say, Nicaragua or Nigeria), reminders of an inept government might instead have *increased* atheist distrust, a hypothesis that we leave for future research.

Coda

Both watchful gods and watchful governments can encourage prosocial behavior. Given that religious prosociality leads to atheist distrust (Gervais, et al., in press), and also the compensatory relationship between religious prosociality and prosociality derived from secular institutions (e.g., Norris & Inglehart, 2004), secular authority decreases distrust of atheists. The present experiments bolster and integrate existing literatures exploring both the implications of the different psychological profiles of distinct prejudices, and also those drawing psychological parallels between gods and governments.

Footnotes

¹Participants rated their agreement with two statements ($r = .48, p < .001$): “The Vancouver government can effectively enforce and police its laws,” “Vancouver’s government cannot protect its citizens from each other” (reversed). As expected, the police effectiveness video significantly increased participants’ confidence in the government, $t(61) = 2.05, p < .05$.

²Generalized eta squared (η_G^2) facilitates comparisons of between- and within- subject effects. All statistical analyses and figures were produced using R (2011).

References

- Bargh, J. A., Chen, M., & Burrows, L. (1996). Automaticity of social behavior: Direct effects of trait construct and stereotype activation on action. *Journal of Personality and Social Psychology, 71*, 230-244.
- Bateson, M. Nettle, D. Roberts, G. (2006). Cues of being watched enhance cooperation in a real-world setting. *Biology Letters, 2*, 412-414.
- Cottrell, C. A. & Neuberg, S. L. (2005). Different emotional reactions to different groups: A sociofunctional threat-based approach to “prejudice.” *Journal of Personality and Social Psychology, 88*, 770-789.
- Cottrell, C. A., Neuberg, S. L., & Li, N. P. (2007). What do people desire in others? A sociofunctional perspective on the importance of different valued characteristics. *Journal of Personality and Social Psychology, 92*, 208-231.
- Edgell, P., Gerteis, J., & Hartmann, D. (2006). Atheists as “other”: Moral boundaries and cultural membership in American society. *American Sociological Review, 71*, 211–234.
- Fiske, S. T., Cuddy, A. J. C., Glick, P., and Xu, J. (2002). A model of (often mixed) stereotype content: Competence and warmth respectively follow from status and competition. *Journal of Personality and Social Psychology, 6*, 878-902.
- Gervais, W. M. (2011). Finding the faithless: Perceived atheist prevalence reduces anti-atheist prejudice. *Personality and Social Psychology Bulletin, 37*, 543-556.
- Gervais, W. M. & Norenzayan, A. (2011). Like a camera in the sky? Thinking of God makes believers feel watched. Manuscript under review, University of British Columbia.
- Gervais, W. M., Shariff, A. F., & Norenzayan, A. (in press). Do you believe in atheists? Distrust is central to anti-atheist prejudice. *Journal of Personality and Social Psychology*.

- Gray, K. & Wegner, D. M. (2010). Blaming God for our pain: Human suffering and the divine mind. *Personality and Social Psychology Review, 14*, 7-16.
- Greenberg, J., Porteus, J. Simon, L., Pyszczynski, T., & Solomon, S. (1995). Evidence of a terror management function of cultural icons: The effects of mortality salience on the inappropriate use of cherished cultural symbols. *Personality and Social Psychology Bulletin, 21*, 1221-1228.
- Haley, K. J. & Fessler, D. M. T. (2005). Nobody's watching? Subtle cues affect generosity in an anonymous economic game. *Evolution and Human Behavior, 26*, 245–256.
- Henrich, N. & Henrich, J. (2007). *Why humans cooperate*. Oxford University Press.
- Herek, G. M. & Capitanio, J. P. (1995). Black heterosexuals' attitudes toward lesbians and gay men in the United States. *Journal of Sex Research, 32*, 95-105.
- Hoffman, E., McCabe, K., Shachat, K., & Smith, V. (1994). Preferences, property rights, and anonymity in bargaining games. *Games and Economic Behavior, 7*, 346-380.
- Jacoby, S. (2004). *Freethinkers: A history of American secularism*. New York: Metropolitan.
- Johnson, D. D. P. & Bering, J. M. (2006). Hand of God, mind of man: Punishment and cognition in the evolution of cooperation. *Evolutionary Psychology, 4*, 219-233.
- Johnson, D. D. P. & Krueger, O. (2004). Supernatural punishment and the evolution of cooperation. *Political Theology, 5*, 159-176.
- Kay, A. C., Gaucher, D., Napier, J. L., Callan, M. J., & Laurin, K. (2008). God and the government: Testing a compensatory control mechanism for the support of external systems. *Journal of Personality and Social Psychology, 95*, 18-35.
- Kay, A. C., Moscovich, D. A., & Laurin, K. (2010). Randomness, attributions of arousal, and belief in God. *Psychological Science, 21*, 216-218.

- Kay, A. C., Shepherd, S., Blatz, C. W., & Chua, S. N. (2010). For God (or) country: The hydraulic relation between government instability and belief in religious sources of control. *Journal of Personality and Social Psychology*, *5*, 725-739.
- Kurzban, R. & Leary, M. R. (2001). Evolutionary origins of stigmatization: The functions of social exclusion. *Psychological Bulletin*, *127*, 187-208.
- McKay, R., Efferson, C., Whitehouse, H. & Fehr, E. (in press). Wrath of God: Religious primes and punishment. *Proceedings of the Royal Society B: Biological Sciences*.
- Norenzayan, A. & Gervais, W. M. (in press). The cultural evolution of religion. Chapter to appear in Slingerland, T. & Collard, M. (eds.) *Creating consilience: Integrating science and the humanities*, Oxford University Press.
- Norenzayan, A. & Gervais, W. M. (2011). Secular rule of law predicts political tolerance of atheism. Unpublished raw data.
- Norenzayan, A. & Shariff, A. F. (2008). The origin and evolution of religious prosociality. *Science*, *322*, 58-62.
- Norris, P. & Inglehart, R. (2004). *Sacred and secular: Religion and politics worldwide*. Cambridge: Cambridge University Press.
- Pettigrew, T. F., & Tropp, L. R. (2006). A meta-analytic test of intergroup contact theory. *Journal of Personality and Social Psychology*, *90*, 751-783.
- Pichon, I., Boccato, G., & Saroglou, V. (2007). Nonconscious influences of religion on prosociality: A priming study. *European Journal of Social Psychology*, *37*, 1032-1045.
- R Development Core Team (2011). R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. ISBN 3-900051-07-0, URL <http://www.R-project.org/>.

- Randolph-Seng, B. & Nielsen, M. E. (2007) Honesty: One effect of primed religious representations. *The International Journal for the Psychology of Religion* 17, 303–15.
- Roes, F. L. & Raymond, M. (2003). Belief in moralizing gods. *Evolution and Human Behavior*, 24, 126–35.
- Shariff, A. F. & Norenzayan, A. (2007) God is watching you: Priming God concepts increases prosocial behavior in an anonymous economic game. *Psychological Science*, 18, 803–809.
- Simpson, J. A. (2007). Psychological foundations of trust. *Current Directions in Psychological Science*, 16, 264-268.
- Strull, T. K., & Wyer, R. S. (1979). Category accessibility and social perception: Some implications for the study of person memory and interpersonal judgment. *Journal of Personality & Social Psychology*, 38, 841-856.
- Tan, J. H. W. & Vogel, C. (2008). Religion and trust: An experimental study. *The Journal of Economic Psychology*, 29, 832-848.
- Waytz, A., Gray, K., Epley, N., & Wegner, D.M. (2010). The causes and consequences of mind perception. *Trends in Cognitive Sciences*, 14, 383-388.
- Zhong, C., Bohns, V. K., & Gino, F. (2010). Good lamps are the best police: Darkness increases dishonesty and self-interested behavior. *Psychological Science*, 21, 311-314.
- Zuckerman, P. (2007). Atheism: Contemporary numbers and patterns. In M. Martin (Ed.), *The Cambridge Companion to Atheism* (pp. 47-65). Cambridge: Cambridge University Press.
- Zuckerman, P. (2008). *Society without God*. New York: New York University Press.

Table 1. Participant Demographics (Experiments 1-3).

Demographics		Experiment 1	Experiment 2	Experiment 3
Age	Minimum	18	18	18
	Maximum	29	23	81
	Mean	20.22	19.81	35.00
Gender	% Female	86	73	72
	% Male	14	27	28
Religion	% Christian	31	29	69
	% Sikh	6	6	--
	% Muslim	5	2	2
	% Jewish	2	2	2
	% Buddhist	2	2	2
	% None	31	37	11
	% Agnostic	14	6	9
	% Other	6	16	6
Ethnicity	% East Asian	46	49	0
	% White/Caucasian	28	22	80
	% South Asian	13	18	2
	% African Am.	--	--	6
	% Native Am.	--	--	2
	% Mixed/Other	14	12	8

Note: -- indicates that this demographic option was not given in a particular experiment

Figure Captions

Figure 1. Police primes reduced atheist distrust, but not prejudice in general (Experiment 1).

Error bars reflect 95% confidence intervals.

Figure 2. Implicit secular authority primes reduced atheist distrust, but not disgust-based anti-gay prejudice (Experiment 2). Error bars reflect 95% confidence intervals.

Figure 3. Implicit secular authority primes reduced atheist distrust, but not distrust of gays (Experiment 3). Error bars reflect 95% confidence intervals.





