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The Negative Association between Religiousness and Children's Altruism across the World

Highlights

- Family religious identification decreases children's altruistic behaviors
- Religiousness predicts parent-reported child sensitivity to injustices and empathy
- Children from religious households are harsher in their punitive tendencies

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In Brief

Decety and colleagues assessed altruism and moral cognition in six countries. Parents in religious households reported that their children expressed more empathy and sensitivity for justice in everyday life. However, religiousness was inversely predictive of children's altruism and positively correlated with their punitive tendencies.

The Negative Association between Religiousness and Children's Altruism across the World

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SUMMARY

Prosocial behaviors are ubiquitous across societies. They emerge early in ontogeny [1] and are shaped by interactions between genes and culture [2, 3]. Over the course of middle childhood, sharing approaches equality in distribution [4]. Since 5.8 billion humans, representing 84% of the worldwide population, identify as religious [5], religion is arguably one prevalent facet of culture that influences the development and expression of prosociality. While it is generally accepted that religion contours people's moral judgments and prosocial behavior, the relation between religiosity and morality is a contentious one. Here, we assessed altruism and third-party evaluation of scenarios depicting interpersonal harm in 1,170 children aged between 5 and 12 years in six countries (Canada, China, Jordan, Turkey, USA, and South Africa), the religiousness of their household, and parent-reported child empathy and sensitivity to justice. Across all countries, parents in religious households reported that their children expressed more empathy and sensitivity for justice in everyday life than non-religious parents. However, religiousness was inversely predictive of children's altruism and positively correlated with their punitive tendencies. Together these results reveal the similarity across countries in how religion negatively influences children's altruism, challenging the view that religiosity facilitates prosocial behavior.

RESULTS

Humans have evolved as highly cooperative species, and many forms of prosocial behavior emerge early in ontogeny, reflecting a biological predisposition [1]. Altruism (cost for the donor and benefit for the recipient) is particularly interesting because it is costly to the self. Studies of altruistic behavior have documented

that children in preschool tend to share less than a third of their resources and by late childhood share nearly half [6].

Globally, children have been and continue to be predominantly raised in households where religion is discussed, and oftentimes it provides fundamental guidance for everyday living and moral behavior. Yet, little is known about how children's altruistic tendencies are influenced by the religiousness of their households and how parents perceive their children's moral dispositions. Religious values and beliefs are transmitted to children through repeated rituals and practices in their communities. If religion promotes prosociality, children reared in religious families should show stronger altruistic behavior. Importantly, most research on the link between religion and morality has focused on convenience populations: college students from western, industrial, educated, rich, and democratic societies. The early experience of religion and variations in the nature of the rearing environment critically influence children's moral development from the standpoint of both psychology and economics [7]. Understanding the impact of religiosity on children's altruism provides insights about how prosocial behavior is shaped by gene-culture coevolution.

To examine the influence of religion on the expression of altruism, we used a resource allocation task, the dictator game, in a large, diverse, and cross-cultural sample of children ($n = 1,170$, ages 5–12) from Chicago (USA), Toronto (Canada), Amman (Jordan), Izmir and Istanbul (Turkey), Cape Town (South Africa), and Guangzhou (China). Consistent with literature in the development of generosity, age in years was predictive of the total resources shared ($r = 0.408$, $p < 0.001$) [4, 6], but the religious rearing environment fundamentally shaped how their altruism was expressed.

In our sample, 23.9% of households identified as Christian ($n = 280$), 43% as Muslim ($n = 510$), 27.6% as not religious ($n = 323$), 2.5% as Jewish ($n = 29$), 1.6% as Buddhist ($n = 18$), 0.4% as Hindu ($n = 5$), 0.2% as agnostic ($n = 3$), and 0.5% as other ($n = 6$). Results from an independent samples t test, comparing altruism in children from religiously identifying ($M_{\text{sharing}} = 3.25$, $SD = 2.46$) and non-religiously identifying ($M_{\text{sharing}} = 4.11$, $SD = 2.48$) households indicated significantly less sharing in the former than the latter ($p < 0.001$). To further investigate these effects within specific religions, three large groupings were

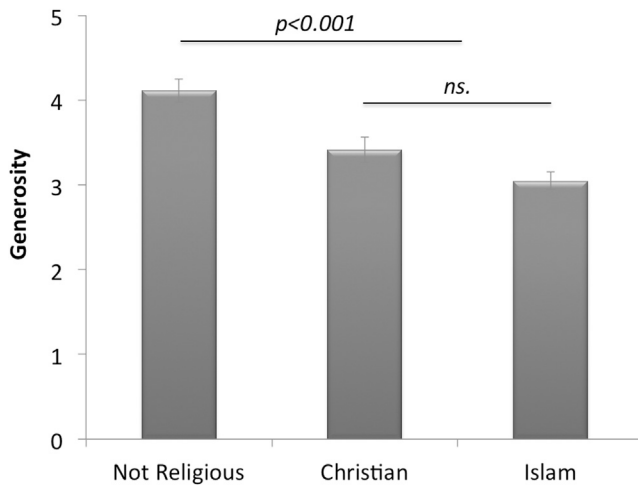


Figure 1. Altruism Is Negatively Influenced by the Religiosity of Children' Households

Children from non-religious households ($n = 323$) are more altruistic with an anonymous beneficiary than children from religious families ($n = 280$ Christians; $n = 510$ Muslims). Bars represent SEs.

established: Christian, Muslim, and not religious; children from other religious households did not reach a large enough sample size to be included in additional analyses. Results from a linear regression with number of stickers shared as the dependent variable and age (1-year bins), country of origin, socioeconomic status (SES), and religious identification of the household (dummy coded) suggest that age ($\beta_{\text{standardized}} = 0.39$, $p < 0.001$), SES ($\beta_{\text{standardized}} = 0.16$, $p < 0.001$), country ($\beta_{\text{standardized}} = 0.1$, $p < 0.01$), and religious identification ($\beta_{\text{standardized}} = -0.132$, $p < 0.001$) are significant predictors of sharing, (model $r^2_{\text{adjusted}} = 0.184$). Paired comparisons (corrected for family-wise error) showed that Christian children ($M_{\text{sharing}} = 3.33$, $SD = 2.46$) did not differ in their altruism from Muslims ($M_{\text{sharing}} = 3.20$, $SD = 2.24$); however, both were significantly less altruistic than non-religious children ($M_{\text{sharing}} = 4.09$, $SD = 2.52$, both $p < 0.001$; [Figure 1](#)).

Regardless of religious identification, frequency of religious practice, household spirituality, and overall religiosity were inversely predictive of children's altruism ($r = -0.161$, $p < 0.001$; $r = -0.179$, $p < 0.001$; $r = -0.173$, $p < 0.001$, respectively; [Figure 2](#)). Results from a linear regression with number of stickers shared as the dependent variable and age (1-year bins), country of origin, socioeconomic status (1–6 scale) and overall religiosity of the household (aggregate score) suggest that age ($\beta_{\text{standardized}} = 0.410$, $p < 0.001$), SES ($\beta_{\text{standardized}} = 0.13$, $p < 0.001$), and religiosity ($\beta_{\text{standardized}} = -0.150$, $p < 0.001$) are all significant predictors of sharing (model $r^2_{\text{adjusted}} = 0.194$). Importantly, the relations between altruism and the three aspects of religiosity were strongest in older children ($n = 533$, ages 8–12 years; $r = -0.187$, $p < 0.001$; $r = -0.211$, $p < 0.001$; $r = -0.202$, $p < 0.001$, respectively).

Results from a univariate analysis of covariance (ANCOVA), with judgments of meanness of harmful actions as the dependent variable, religious identification as the independent variable, and age, SES, and country of origin (to account for known influences) as the covariates, revealed a significant main effect of

religious identification on meanness rating ($F(2, 767) = 6.521$, $p = 0.002$, $\eta^2 = 0.017$; [Figure 3](#)). Post hoc Bonferroni-corrected paired comparisons showed that children in Muslim households judged interpersonal harm as more mean than children from Christian ($p < 0.005$) and non-religious ($p < 0.001$) households, and children from Christian households judged interpersonal harm as more mean than children from non-religious households ($p < 0.01$). Moreover, children from religious households also differ in their ratings of deserved punishment for interpersonal harm ($F(2, 847) = 5.80$, $p < 0.01$, $\eta^2 = 0.014$); this was qualified by significantly harsher ratings of punishment by children from Muslim households than children from non-religious households ($p < 0.01$). There were no significant differences between children from Christian households and non-religious households.

Religiosity positively predicted parent-reported child sensitivity to injustice and child empathy, even after accounting for age, SES, and country of origin ($\beta_{\text{standardized}} = 0.194$, $p < 0.001$; $\beta_{\text{standardized}} = 0.89$, $p < 0.01$, respectively). Results from a univariate analysis of variance, with parent-reported justice sensitivity as the dependent variable and religious identification as the independent variable and age, SES, and country of origin as the covariates, revealed a significant main effect of religious identification on children's justice sensitivity ($F(2, 795) = 15.44$, $p < 0.001$, $\eta^2 = 0.04$; [Figure 4](#)). Children from Christian households were significantly higher in parent-rated justice sensitivity than children from Muslim households ($p < 0.001$) and non-religious households ($p < 0.001$).

DISCUSSION

A common sense notion and a theoretical assertion from religious metaphysics is that religiosity has a causal connection and a positive association with moral behaviors [8]. This view is so deeply embedded that individuals who are not religious can be considered morally suspect [9, 10]. In religious households, children receive a basic form of moral training and, over middle childhood, are expected to begin to be more sensitive to the plight of others as well as to express greater prosociality and less antisocial behavior [11]. Several mechanisms for this translation of moral values have been hypothesized, including basic socialization, co-regulation leading to better self-regulation, or a domain-specific increase in mental models of sensitivity to morality [12, 13]. These notions have been forwarded by recent publications as well, mostly using self-reports of hypothetical giving and charity, documenting that religious people are more likely to report higher rates of intended giving, but in fact, a careful meta-examination of the studies measuring actual behavior shows that there is little evidence for such a positive relation [14].

Here, we show that religiosity, as indexed by three different measures, is not associated with increased altruism in young children. Our findings robustly demonstrate that children from households identifying as either of the two major world religions (Christianity and Islam) were less altruistic than children from non-religious households. Moreover, the negative relation between religiosity and spirituality and altruism changes across age, with those children with longer experience of religion in the household exhibiting the greatest negative relations. Of additional note is that the sharing of resources was with an anonymous child beneficiary from the same school and similar ethnic

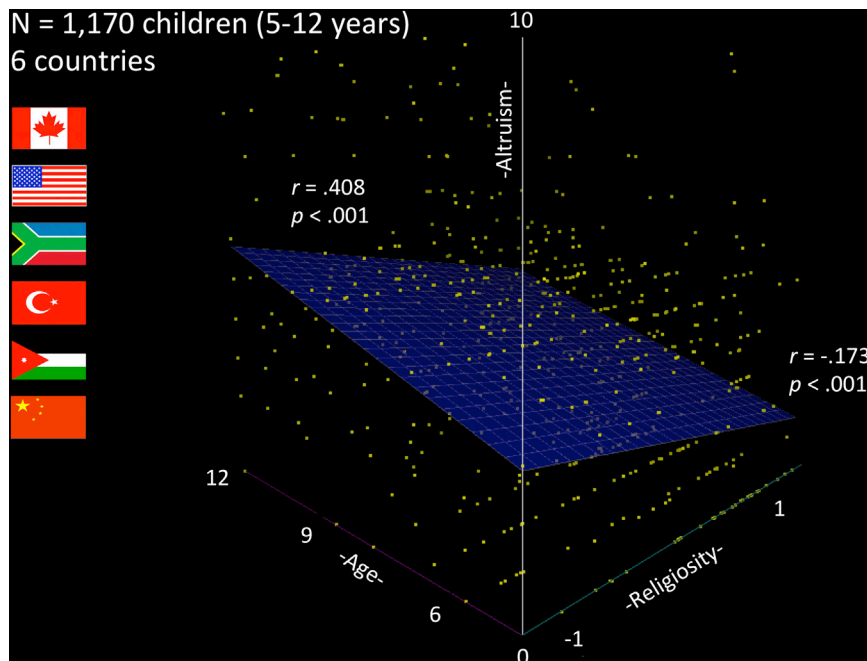


Figure 2. Relation between Overall Religiousness, Altruism, and Age in 1,151 Children across Six Countries

Three-dimensional scatterplot of generosity (y axis) as predicted by overall religiousness of children's rearing environments (x axis) and age (Z axis). Dots represent individual data points, and the grid represents best-fit slope for altruism, religiousness, and age.

to justice). Religious individuals consistently score higher than non-religious ones on self-reported measures of socially desirable responding [26]. This previous literature, coupled with the current findings, supports an internal consistency in adults' self-assessments of their moral dispositions and extends to their beliefs about their children. Children from religious households are more likely to be identified by their parents as more empathic and more sensitive to the plight of others. They also believe that interpersonal harm is more "mean" and

deserving of harsher punishment than non-religious children. Thus, children who are raised in religious households frequently appear to be more judgmental of others' actions, while being less altruistic toward another child from the same social environment, at least when generosity is spontaneously directed to an ambiguous beneficiary. While there is a gap between children's knowledge of fairness and their actual behavior between 3 and 8 years of age [27], it cannot explain the negative impact of religiosity on altruism. The phenomenon of moral licensing is well established in a variety of domains including prosocial behavior. It can disinhibit selfish behavior and reduce prosocial behavior [28] and may account in explaining how children raised in religious households, who are perceived to be more empathetic and sensitive to justice, are in fact less altruistic to their own class mates.

Overall, our findings cast light on the cultural input of religion on prosocial behavior and contradict the common-sense and popular assumption that children from religious households are more altruistic and kind toward others. More generally, they call into question whether religion is vital for moral development, supporting the idea that the secularization of moral discourse will not reduce human kindness—in fact, it will do just the opposite [29].

group. Therefore, this result cannot be simply explained by in-group versus out-group biases that are known to change children's cooperative behaviors from an early age [15], nor by the known fact that religious people tend to be more altruistic toward individuals from their in-group [8, 16].

A second major finding from these data is that religiosity affects children's punitive tendencies when evaluating interpersonal harm. Interestingly, this result is in sharp contrast with reports that patterns of moral judgments made by subjects with a religious background do not differ from those who are atheists [17]. Of note, most of these studies relied on moral dilemmas that have poor ecological validity, as the situations they depict are unlikely to happen, and thus tell us little about moral decision making in everyday life [18]. Here, we employed ecologically valid depictions of everyday mundane interpersonal harm that occur in schools, from a task previously used in neurodevelopmental investigations of moral sensitivity [19–21]. Research indicates that religiousness is directly related to increased intolerance for and punitive attitudes toward interpersonal offenses, including the probability of supporting harsh penalties [22]. For instance, within Christianity, fundamentalists tend to be more punitive and advocate for harsher corrections than non-fundamentalists [23]. Moreover, Christians are also argued to view the moral wrongness of an action as a dichotomy and are less likely to discriminate between gradients of wrongness, yielding equal ratings for a variety of transgressions [24]. While this association is documented in adults of the major world religions, here the relation between greater religiousness and preference for more severe punishment is observed in development, when morality is in a sensitive and fragile period, subject to social learning and cultural practices [25].

Consistent with research linking religiousness and adult self-reports of moral behavior, frequency of religious attendance, spirituality, and overall religiousness predicted parent-reported child sensitivity to the plight of others (empathy and sensitivity

deserving of harsher punishment than non-religious children. Thus, children who are raised in religious households frequently appear to be more judgmental of others' actions, while being less altruistic toward another child from the same social environment, at least when generosity is spontaneously directed to an ambiguous beneficiary. While there is a gap between children's knowledge of fairness and their actual behavior between 3 and 8 years of age [27], it cannot explain the negative impact of religiosity on altruism. The phenomenon of moral licensing is well established in a variety of domains including prosocial behavior. It can disinhibit selfish behavior and reduce prosocial behavior [28] and may account in explaining how children raised in religious households, who are perceived to be more empathetic and sensitive to justice, are in fact less altruistic to their own class mates.

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EXPERIMENTAL PROCEDURES

Participants

5- to 12-year-old children ($n = 1,151$, mean (M) age = 8.29 years, $SD = 2.17$ years, $n = 559$ females) were recruited from local schools in six countries around the world: Chicago (USA), Toronto (Canada), Cape Town (South Africa), Istanbul and Izmir (Turkey), Amman (Jordan), and Guangzhou (China) (Table S1).

Procedure

Children completed a moral sensitivity task programmed in E-prime 2.0 and presented on ASUS T101MT Touchscreen computers and administered in their native language by trained researchers, as well as a dictator game, in the laboratory of each local university or in small rooms adjoining classrooms

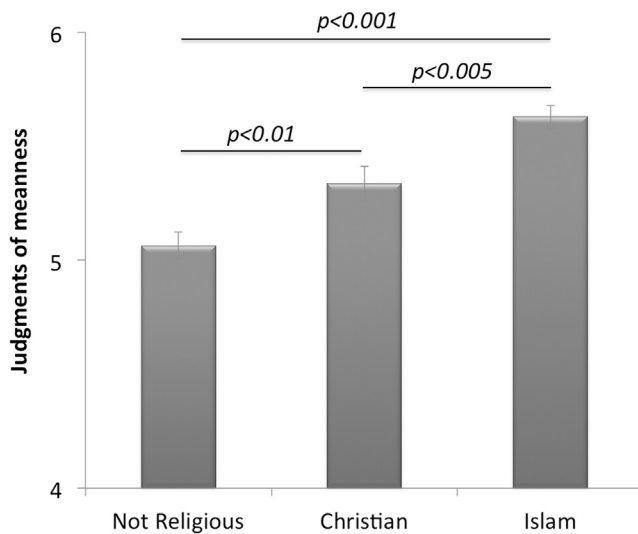


Figure 3. Children from Religious Households Judge Interpersonal Harm More Severely Than Children from Non-religious Households
Bars represent SEs.

in each school. Parents completed religiosity measures, a sensitivity to justice measure [30] and an empathy measure [31] for their child, as well as demographic information. Written informed consent was obtained from all parents, and verbal assent was given by all children. All procedures were approved by each local Institutional Review Board.

Religiosity Measures

Religiosity was assessed in three ways. First, parents of participants were asked their religious identification (e.g., Christianity, Islam, Judaism, etc.) in a free response question. Parental religious identification was then coded into Christianity, Islam, Judaism, Hinduism, Buddhism, atheism, agnostic, spiritual, multi-theistic, other, and no answer. From the frequency distributions, three large groupings were established: Christians, Muslims, and not religious. Beyond parental identification, caregivers also completed the Duke Religiosity Questionnaire (DRQ) [32], which assesses the frequency of religious attendance rated on a 1–6 scale from never to several times per week (frequency of service attendance and at other religious events), and questions regarding the spirituality of the household (1–5 scale; see DRQ). Average religious frequency and religious spirituality composites were created, standardized, and combined for an average overall religiosity composite.

Dictator Game

In this task, children were shown a set of 30 stickers and were told to choose their ten favorite [6]. They were then told “these stickers are yours to keep.” Children were instructed that the experimenter did not have the time to play this game with all of the children in their school, so not everyone would be able to receive stickers.

Moral Sensitivity Task

In this computerized task, used previously with children in both behavioral and functional neuroimaging studies [19], a series of short dynamic visual scenarios depicting interpersonal harm (e.g., pushing, bumping) was presented.

Maternal Education

As a metric for socioeconomic status, parents were asked to specify the level of education of the mother.

Child Dispositional Measures

The Questionnaire of Cognitive and Affective Empathy (QCAE) [31] to assess children's empathy and the justice sensitivity inventory [30] to measure children's sensitivity to injustice were reported by parents.

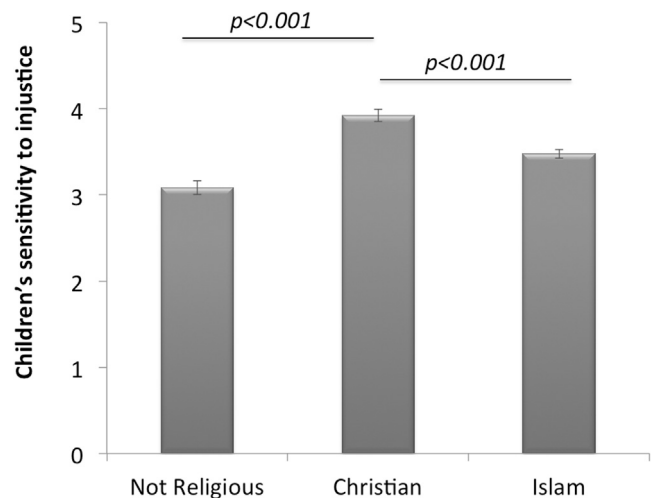


Figure 4. Parents of Children from Christian Households View Their Children as More Sensitive to Injustices toward Others
Bars represent SEs.

SUPPLEMENTAL INFORMATION

Supplemental Information includes Supplemental Experimental Procedures and one table and can be found with this article online at <http://dx.doi.org/10.1016/j.cub.2015.09.056>.

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