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Religious Moral Righteousness Over Care: A Review and a Meta-Analysis

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Abstract

Does religion enhance an "extended" morality? We review research on religiousness and Schwartz's values, Haidt's moral foundations (through a meta-analysis of 45 studies), and deontology versus consequentialism. Instead of equally encompassing prosocial (care for others) and other values (duties to the self, the community, and the sacred), religiosity implies a restrictive morality: endorsement of values denoting social order (conservation, loyalty, authority), self-control (low autonomy and self-expansion), and purity more strongly than care; and, furthermore, a deontological, non-consequentialist, righteous orientation, that could result in harm to (significant) others. Religious moral righteousness is highest in fundamentalism and weakens in secular countries. Only spirituality reflects an extended morality (care, fairness, and the binding foundations). Evolutionarily, religious morality seems to be more coalitional and "hygienic" than caring.

Keywords: moral foundations, values, deontological ethics, consequentialism, religion

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Religion does *not create* morality: children's development of a moral sense is in part independent of religious, parental, and other authorities [1], and adults' moral conviction is partly independent from religious conviction [2]. However, religion *orients* morality by extending the moral sphere to many issues and domains, including ones that are not universally considered moral, and by promoting a certain meta-ethical perspective that implies specific moral preferences.

We will demonstrate the above by reviewing recent research relative to three major models in moral psychology: Schwartz's values, Haidt's moral foundations, and the deontological versus consequentialist moral orientation. We will show first that religiousness appears to extend morality beyond interpersonal care (duties to others), to duties to the self, the group, and God, through values that are restrictive of personal autonomy. Second, we will show that, instead of simply extending morality, religiousness over-emphasizes righteous morality over the care for others. Third, when the two moralities are in conflict, religion often privileges a deontological, rule-based, righteous morality at the detriment of a consequentialist and interpersonal care-oriented morality. Note that, for the purpose of this article, we consider "morality", "values", "moral foundations", and "moral orientation" as overlapping concepts: they all denote long-term, broad principles that guide people's evaluation of what is right, and thus desirable, or the opposite.

1. Religious extended but restrictive morality

Major theorists (Kohlberg, Gilligan, Turiel, Haidt) and related research in moral psychology posit that prosocial values and behavior (i.e. no harm, care for others and justice among equals) are considered universally moral across individuals and cultures. Other values and norms are more variable across individuals and cultures: they can be seen as moral, irrelevant to moral judgment, or even immoral.

Religiousness, across cultures, is positively associated with *prosocial values* and, when results are significant, prosocial behavior. In traditional religiosity, these tendencies most often apply to the ingroup—only spirituality involves extended prosociality [3]. However, religiousness also implies the endorsement of additional values [4,5] and moral foundations [6,7]. These denote first *duties to the self*, in terms of self-restriction rather than self-enhancement: high security, low autonomy, stimulation, and hedonism, and not highly valuing power and achievement. Second, religiousness implies the endorsement of values and moral foundations that reflect *duties to the community*, the latter being the ingroup rather than the world: high loyalty, conformity, and respect for authority and tradition—but not high universalism. Finally, religiousness entails *duties to the sacred* and the natural order of the world, i.e. endorsement of the moral foundation of purity/sanctity.

This research appears to confirm the idea that religion endorses an *extended* morality: it encompasses both (a) prosocial, interpersonal other-oriented, morality and (b) the righteous morality that implies duties to the self, the community, and the sacred [8]. However, as shown by the studies using Schwartz's model of values, the qualification of "extended" seems misleading. Religious morality is rather *restrictive* of the self: it focuses on moral concerns for self-control, the preservation of social order, and the respect of religious norms—not on autonomy and self-expansion. Similarly, religious morality restricts care and benevolence to targets that are proximal and does not necessarily extends these values to the whole world. Finally, a question arises concerning prosocial and righteous moralities: does religion promote a preference for one of these moralities over the other?

2. Religious predominance of righteous morality over care

One way to answer this question is to compare, in terms of effect sizes, the associations of religiousness (a) with prosocial morality and (b) with righteous morality. We

will do so through research on religiousness, Schwartz's values, and Haidt's moral foundations.

2.1. Values and religiousness: Trends consistent across cultures

As far as Schwartz's model of values is concerned, a meta-analysis [4] and two large multi-country studies [5,9] totaling 42 independent samples and more than 22000 participants allow us to observe a striking difference, consistent across these studies. Religiousness' positive associations with conservation values, in particular tradition and conformity, and negative associations with autonomy, stimulation, and hedonism, are much greater (double in magnitude if not higher) than the weak association of religiousness with—the limited—self-transcendence, i.e. valuing benevolence, but not universalism (see Figure 1).

The strong negative link between religiousness and valuing hedonism, which is second in magnitude only to the positive association between religion and tradition, points to other research showing that moral concerns regarding sex, mating, and marriage are much stronger than prosocial concerns (Moon, this volume). This denotes a religious preference for "hygienic" over prosocial morality [10], possibly resulting from evolutionary concerns related to the need to avoid pathogens and diseases [11].

2.2. Moral foundations and religiousness: A meta-analysis

As far as Haidt's model of moral foundations is concerned, we carried out, for the purposes of the present article, a meta-analysis of studies having investigated in the 2010s the links between individual religiousness and the endorsement of the five moral foundations. We included 45 published studies, mostly from the US, but also from some other Western countries and Turkey [7,13-41]. The list of studies and more information on methodology are provided in the Supplementary Material. In line with [42], we computed three series of meta-analyses, respectively for general religiosity, fundamentalism, and spirituality. For each set of associations, we computed the mean effects and the confidence intervals (see Table 1),

heterogeneity statistics, and, for the associations of religiosity, prediction intervals and moderation analyses for age and gender (see Supplementary Material). Given previous evidence for differences in the size of the associations of religiosity with psychological constructs between the US and Europe [42], and between religious and secular countries (Gebauer & Sedikides, this volume), we also compared the US studies with the other Western studies (see Table 1 for the mean effects and the confidence intervals, and Supplementary Material for the comparisons).

As detailed in Table 1 (see also Figure 2), in contrast to the idea of extended religious morality, but in line with studies having used Schwartz's model of values, the mean association between religiosity and the moral foundation of *care* was positive, but weak in size (.09). The association was even, albeit non-significantly, negative in five out of the 44 studies. The association between care and religious fundamentalism was null (.00) but became positive, and of non-negligible size, as a function of spirituality (.30).

Furthermore, the mean association between religiosity and the moral foundation of *fairness* was null (-.02); it became clearly negative as a function of fundamentalism (-.13) but turned out to be positive as a function of spirituality (.19). The above results strictly parallel research on religion and Schwartz's values (section 2.1) showing that religiosity has a weak relationship with benevolence and no relationship at all to universalism, whereas fundamentalism versus spirituality denote respectively low versus high universalism—a value that includes justice for all people.

In contrast, the mean associations of religiosity with the three binding foundations, in particular purity, were, consistently across studies, positive and of much greater magnitude--from two to five times as high as religiosity's mean association with care. The mean effects were stronger for fundamentalism than religiosity, but were clearly attenuated as a function of spirituality, becoming comparable to the associations of religiosity with care and fairness. The

mean associations of religiosity with the three conservative foundations were stronger in the more religious US compared to the more secular Europe, and in samples with a greater ratio of men to women; and the associations of religiosity with care increased in more predominantly female samples (see Supplementary Material for the analyses).

Note that the religiosity-purity link is amplified by, but not due to, one item referring to God in the 30-item Moral Foundations Questionnaire. In our own studies, when this item is excluded, the association, r = .45 [16] decreases but remains non-negligible, r = .32 [15,17]; see also [4], for a similar observation on the item "devout" included in Schwartz's value of tradition. Moreover, at least in our own studies, the low consideration by religious people—possibly due to their high anthropocentrism—of hurting a defenseless animal as "one of the worst things", undermines but does not explain the link between religiousness and care. Without this item, religiosity's association with care is still much weaker (.09 or .20) than its association with purity.

In sum, general religiosity primarily denotes righteous—coalitional and "hygienic", purity-oriented—morality, and only secondarily and weakly denotes a morality of care oriented to proximal others. Fundamentalism reflects exclusively righteous morality. Only spirituality implies an extended morality, equally encompassing both the binding and the individualizing foundations, with care being extended to the concern for justice for all people.

3. Religion and non-consequentialist, non-caring, deontology

Going further, one may wonder what religious people do in situations of conflict between meta-ethical ways of considering values, or when the conflict opposes the two moralities of righteousness and care. To address this, research in the 2010s investigated religion's role in: (a) self-reported meta-ethical style, i.e. rule-based absolutist morality versus outcome-based contextual morality; (b) moral conflict between deontology and consequentialism in studies focused on instrumental harm (harming one person to save

many); and (c) moral conflict between righteous deontology and care (harmless moral transgressions to protect and save concrete others). We identified 27 studies [16,35,43-57]; see the list in Supplementary Material Table S3), conducted half in the US and half in other, Western and non-Western, contexts, providing findings consistent across studies, methods, and countries.

3.1. Self-reported meta-ethical orientation

Research based on explicit self-assessments of moral styles shows that religious people tend to highly endorse absolutist, rule-based, normative morality and/or to not endorse relativist, outcome-based, contextual, and practical, morality. This is the case in Anglo-Saxon countries of Christian tradition [44,47,50,51,53], two countries of Islamic tradition, Indonesia and Turkey [44,57] and among US Hindus but not Jews—possibly because Jewish affiliation may primarily denote ethnicity rather than high religiosity [51]. In the former moral orientation, values and principles are an end themselves and have to be followed independently of the specific context and outcomes. The distinction between right and wrong looks clear. In the latter moral orientation, values and principles take into account the context and possible outcomes, may be a means to a greater end, and may be transgressed to achieve a more important good. The distinction between right and wrong is more complex.

3.2. Conflict between deontology and instrumental harm

To investigate in a less explicit way the above link between religion and non-consequentialist deontology, several studies have used moral dilemmas similar to the well-known “trolley dilemma” which exemplifies the instrumental harm problem: is it allowed, or even should I, harm or kill one person for a greater good such as saving more people? Consistently across these studies, religiosity was associated with more deontological choices. This was the case when the deontology versus consequentialism conflict was measured as a

bipolar continuum [43,46,55], but also when the two were dissociated: religiosity was associated with both high deontology (49) and low consequentialism [47,52].

The deontological orientation of religious people implies an opposition to instrumental harm, be it directly (killing a person) or indirectly (having the person be killed) [46], and neglects, as outcomes, both the hope of a greater good and the risk of more extended immorality [54]. This role of religiosity seems unique, not able to be reduced to cognitive inflexibility or sociomoral conservatism [35,53]. Experimental evidence suggests bidirectional links, with religious priming increasing deontological responses, and with activation of moral subjectivity diminishing one's belief in God [57]. Other research suggests that the deontological responses of religious people may result from reflection rather than being the result of automatic intuitive responses [52]. There is even neuropsychological evidence that religionists (Catholics), but not atheists, experience the activation of different brain areas when dealing with deontological scenarios versus utilitarian scenarios [48].

Across these studies, religion's opposition to instrumental harm seems to apply to all monotheistic traditions: Judaism, Western and Eastern Christianity, and Islam. Nevertheless, the trolley-like dilemmas of instrumental harm have some limitations: they have weak ecological validity and create conflict between aspects of the same value, i.e. care, no harm, not killing. The above results can be interpreted as reflecting religious people's higher empathy and epistemic need for order. Deontological choices reflect empathy and perspective-taking [49,52], typically present among the religious, whereas utilitarian choices reflect the need for cognition [49]—usually unrelated to religiosity.

3.3. Conflict between righteous deontology and caring morality

An alternative examination of religious deontological morality shifts the focus to the conflict between righteous deontology and caring morality: Can I lie in order to not cause irreparable harm to a terminally ill old acquaintance? May I make an exception to an

engagement made in order to help a desperate mother? Should I betray my citizen's loyalty and respect of authority to hide a good friend?

In the late 2000s we created nine dilemmas, like the above, which illustrated conflicts between the care for (significant) others (to avoid them being seriously harmed or killed) and the transgressions of values and principles such as honesty/not lying, loyalty in engagements, respect of the authority, and strict, without exception, respect of equity. In a series of studies in (the secularized) Belgium, we found that (a) rather than religiosity in general, it was authoritarianism among the religious, a proxy of fundamentalism, that was related to harmful, righteous deontological choices (Saroglou et al., 2010, unpublished), and that (b) religious priming increased such choices among authoritarians [56]. Moreover, (c) religiosity predicted these deontological choices when the harmful outcomes were not severe, but not when they were severe; valuing care was a suppressor of the religiosity-deontology link [16]. Thus, non-caring righteous deontology may not be at the very heart of religion in secular contexts, but still reflects the dark side of it, i.e. authoritarian religion.

In parallel, work by Piazza in the US [35,54; see also 47] focused on similar kinds of moral decisions that were harmful to others if principles and values other than care were not transgressed. Consistently across these studies, in the context of the more religious US, general religiosity uniquely predicted the moral orientation for increased righteous deontology *and* decreased consideration of obvious prosocial outcomes. This was, importantly, due to considering God as the unique and exclusive source of normativity and morality.

4. Conclusion

On the basis of the findings of the various research areas examined in this article, we think it is reasonable to infer that the role of religious (ingroup) prosociality in forming and consolidating large coalitions involving reciprocal interpersonal helping may have been overestimated in the contemporary evolutionary psychology of religion. This role may not

reflect the very center of religious morality. Rather, the results of the present review suggest that the evolutionary perspectives of religion focusing on the importance of hygienic and righteous/coalitional morality (avoidance of pathogens, loyalty, group conformity, preservation of personal and social order) may be more central in explaining, from a moral perspective, religions' origin and maintenance. Religious morality seems to imply, above all, ostensible behavior and practices that are self-restrictive, dutiful, and not highly costly (at least less costly than strong prosocial behavior), signaling that a given individual is a safe and devoted, and thus trustworthy, group member.

In conclusion, religious morality appears to be more coalitional than caring. This may help to explain why religionists may accept (non-antireligious) authoritarian regimes, why fundamentalist or simply religious parents may kick their offspring out of the house for being gay or falling in love with a follower of another religion, and why religious converts may commit suicidal attacks to defend the honor of the community.

Conflict of interest statement

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Highlights

- We meta-analyzed 45 studies on religion and Haidt's five moral foundations
- Religiosity implies high purity, authority, and loyalty; care is involved only weakly
- Only spirituality reflects extended morality: care, fairness, and the binding values
- Results parallel findings on religion and Schwartz's values across the world
- Religious morality is primarily deontological, non-consequentialist, and righteous

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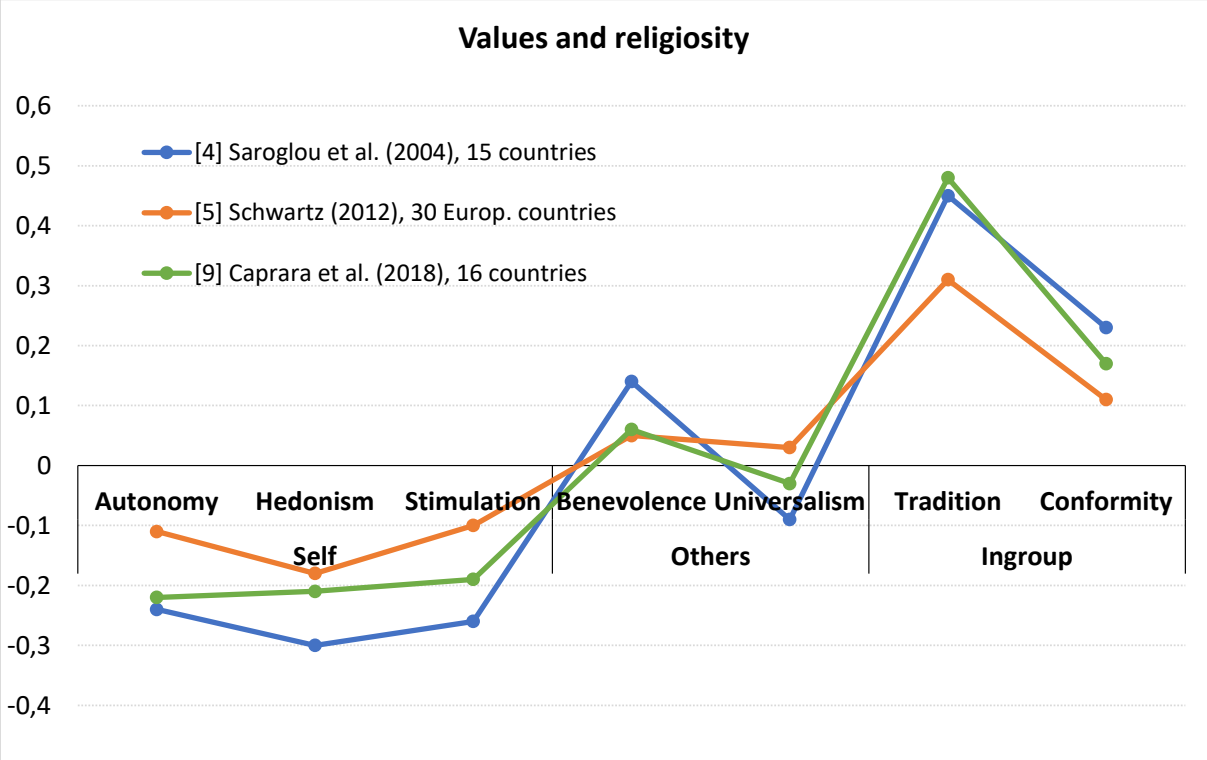
Figure 1

Mean correlations between religiousness and Schwartz's values, after three large multi-country studies



Notes. For [4], [5], and [9], respectively: total *Ns* = 85551, 5940, and 7760; and statistic indicators = weighted mean *r* (meta-analysis) for 21 samples, unweighted mean *r* for five religious groups (adolescents) across 30 European countries, and unweighted mean *r* for 16 countries from five continents (computed here, after *z*-transformations of the *rs*). Data are independent across the three multi-country studies.

Figure 2

Mean correlations between religiousness and moral foundations (meta-analysis of 45 studies)

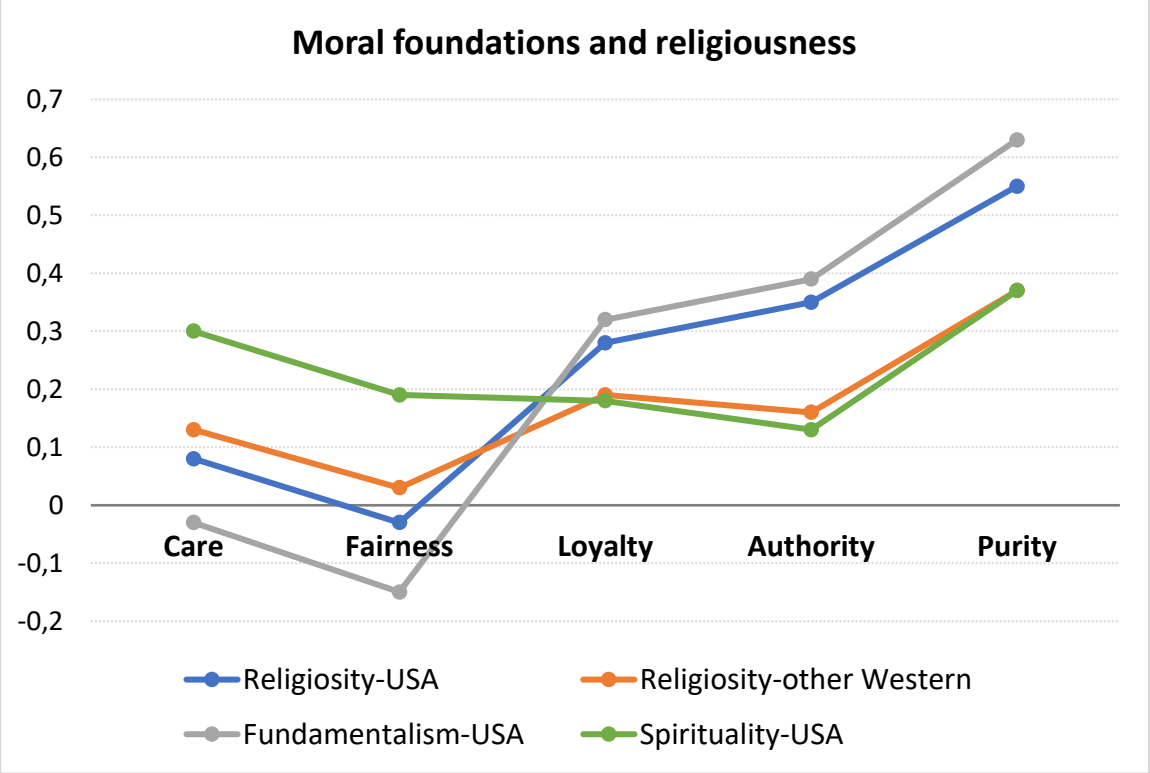


Table 1

Meta-analysis of 45 studies on religiousness and moral foundations

			Mean *r* [95% CI]				
Religiousness	*k*	Total *N*	Care	Fairness	Loyalty	Authority	Purity
Religiosity	44	41023	**.09** [.06, .12]	**-.02** [-.05, .01]	**.26** [.22, .31]	**.31** [.27, .36]	**.51** [.46, .55]
USA	32	37476	.08 [.04, .12]	-.03 [-.07, .01]	.28 [.22, .33]	.35 [.30, .39]	.55 [.49, .60]
Other Western	11	3054	.13 [.06, .19]	.03 [-.04, .11]	.19 [.12, .26]	.16 *[.09, .23]*	.37 *[.31, .42]*
Turkey	1	493	.10 [.01, .19]	-.08 [-.17, .01]	.47 *[.40, .54]*	.58 *[.52, .64]*	.62 [.56, .67]
Fundamentalism (10 USA + 2 NL)	12	4453	**.00** [-.12, .11]	**-.13** [-.21, -.04]	**.29** [.18, .41]	**.38** [.28, .48]	**.62** [.50, .71]
Spirituality (USA)	3	1855	**.30** [.17, .42]	**.19** [.01, .35]	**.18** [.04, .31]	**.13** [-.16, .41]	**.37** [-.02, .66]

Note. *k* = number of studies. Mean *rs* for religiosity, fundamentalism, and spirituality (all relevant studies) are in bold. Confidence intervals (CI) are in italics when the differences are clear for one cultural group with respect to the others because of fully distinct CIs.

Supplementary Material

to Saroglou & Craninx, *Current Opinion in Psychology*, 2021, *40* (special issue on *Religion*)

Meta-analysis of studies on religiousness and moral foundations: Complementary information

and

Review of studies on religion and deontology vs. consequentialism: List of studies and main findings (Table S3)

Method

Studies included

We searched, up until the end of July 2020, for published studies in PsycINFO by using the formula <(relig* or spiritual* or God) and moral* and (foundations or intuitions)> in the Abstract. We also integrated other studies we were aware of. We retained studies with data on religiousness and endorsement of moral foundations (self-reports). We were unable to include: (a) two studies that measured moral foundations as an outcome of experimental manipulation, (b) one study having measured only globally the individualizing and the binding foundations and not distinctly the five foundations, (c) one study, for which we did not receive the correlations (not reported in their paper) we requested from the authors, and (d) four studies including non-Western samples with reliabilities of the moral foundations scales being low and thus correlational analyses being not reported or computed. We also did not include one study with too few (49) participants. Finally, in order not to code multiple effects from the same data, we did not include three studies in which the data overlapped with another publication by the same authors.

Variables and effects coded

In the studies included (in total, 45 studies; see Table S1), we distinguished between effects with measures of (a) religiosity (44 studies), (b) fundamentalism (12 studies), and (c) spirituality (three studies). For religiosity, when more than one religious measure was used in a given study, we coded as the effect the association of the religious construct that was closest to general religiosity, i.e. by order, intrinsic religiosity, religious commitment, self-identification as religious, religious belief, and religious practice/attendance. For fundamentalism, we included measures of religious fundamentalism, religious orthodoxy, and biblical literalism. We did not meta-analyze results with religious quest or existential quest (four studies) since this orientation is often confounded with low religiosity.

The vast majority of studies used the Moral Foundations Questionnaire-30 [6]. Very few others used shorter versions of it or the authors' own items, but the associations in these studies were not different from the majority of studies.

We identified no outlier study; thus, all 45 studies were retained for the analyses. For each study, we coded the bivariate correlations provided in the paper (or sent to us by the corresponding author when in the paper results were summarized at the level of individualizing and binding foundations) between the religious measure and each of the five foundations. For one study providing *t*-tests comparing believers and non-believers, we transformed *t*-tests to *r*. Given the studies' countries, we also categorized the studies as coming from the US, other Western countries (of Christian tradition), or other (only one, i.e. Turkey). We also coded the mean age and the gender ratio (women's percentage) of participants for each study.

Statistical analyses

For the statistical analyses, we used *Meta-Essentials* [58]. For each of the five associations between religiousness and moral foundations, we computed, distinctly for general religiosity, fundamentalism, and spirituality, the mean effect size (r) and the respective 95% confidence intervals (CI). We gave equal weight to each study since we (a) did not include the study with too few *Ns*, (b) wanted to avoid allowing a study with a too large *N* to enormously impact the findings, and (c) considered that each study provided an equal to the other studies part of information—almost all, in addition, using the same measure of moral foundations. We adopted a random effects model: the size of the associations might vary across studies given recent accumulated evidence on cultural and other contextual variability in the way religiousness relates to morality [10,59].

The associations of moral foundations with fundamentalism and spirituality were based on a limited number of studies. We thus did not carry out additional analyses. For the associations of moral foundations with religiosity, which were based on a large number of studies, we also computed, for each of the five mean effects, the heterogeneity statistics (Q, I^2) and the prediction intervals. We used the trim-and-fill method to address the file drawer issue. We finally computed comparisons of groups of studies to test the cultural differences between the US and the other Western studies and conducted moderation analyses of the role of the sample's mean age and gender ratio (regressions). The publication year was not relevant to be examined as a moderator since all studies were carried out in the last 10 years.

Results

The main results, i.e. distinct by religious orientation mean effect sizes and CIs, are provided in the main article, in Table 1. Additional results are provided below.

Heterogeneity and prediction intervals

For all five meta-analytic effects of the association between religiosity and the five moral foundations, the heterogeneity (Q) was high and significant. The five I^2s were all high (> 85%), indicating that almost all the variance was due to true variance between studies. Inspection of the prediction intervals, which in case of high heterogeneity typically give a large range of possible effects for future findings, indicated that, for the individualizing foundations, the variability referred not only to the size of the mean associations with religiosity, but also to the direction of these mean effects: [-

.08, .26] for care, and [-.23, .19] for fairness. However, the direction was clear for the positive associations between religiosity and loyalty [.04, .47], authority [.07, .52], and purity [.25, .70].

Differences between religious dimensions

The differences between religiosity, fundamentalism, and spirituality in their associations with the five moral foundations can be observed in terms of different mean effect sizes. Some of them can been more reliably concluded by comparing the CIs. In certain cases, the highest end of the CI of one effect was not included in the CI of the other effect—and thus was lower than the low end of the CI of that other effect. Indeed, spirituality's positive associations with care and fairness were clearly higher than the associations of these two foundations not only with fundamentalism, but also with religiosity. There was, on the contrary, substantial overlap in the CIs between religiosity, fundamentalism, and spirituality in their associations with the binding values.

Cultural differences

The visually observable differences in the mean effect sizes of religiosity's associations with the binding foundations between the US studies and the studies from other Western countries of Christian tradition (Table 1) turned out to be significant for all three binding foundations (Table S2). The differences regarding authority and purity, as related to religiosity, are robust: the higher end of the CI for the other Western studies is not included in the CI of the respective US studies (Table 1). However, the two sets of studies did not differ with regard to religiosity's associations with care and fairness. Furthermore, in Turkey, i.e. the only country of Muslim tradition, religiosity's associations with loyalty and authority, the two clearly collectivistic foundations, were higher in size compared to the same associations coming from data from the US and the other Western countries (clearly distinct CIs), but prudence is needed since only one study is compared here with the others.

Mean age and gender ratio as moderators

The mean age of the sample showed some variation: it ranged across studies from 19-yrs to 58-yrs. The last value was an outlier; we thus did not retain that study and the range of mean age ended at 52, with a mean of 32.05 and *SD* of 8.91. Computing the moderation analyses (Table S2) showed that there was no moderating effect of mean sample age on the associations of religiosity with any of the five foundations. The gender (women) ratio also showed variability ranging from 38% to 83%, with a mean of 60.24% (*SD* = 11.38). Computing the moderation analyses (Table S2) revealed that the more a sample was predominantly female, the stronger the association of religiosity with care became. On the contrary, the less the sample was predominantly female (or the more it was predominantly male), the stronger the associations of religiosity with loyalty and authority became.

File drawer issue

Applying the trim-and-fill method identified no "missing" studies for four out of the five associations of religiosity with the moral foundations. Only for authority did the procedure suggest that two studies be trimmed off, but the adjusted mean effect size, after fictitious replacement of these studies, remained identical, i.e. .31. In principle, the above suggests no publication bias. It may also be that this method is not powerful enough to detect publication bias when high heterogeneity exists across studies. Nevertheless, given the particularly strong association of religiosity with the binding

foundations, and especially purity, across all studies, it is reasonable to consider that it is unlikely that many unpublished studies with null findings exist.

Discussion

The main results are summarized and commented in the main text. We provide below additional considerations.

Religion and fairness

The somehow surprising null, instead of positive, mean association of general religiosity with the moral foundation of fairness can be understood in two complementary ways. First, this null association may parallel Schwartz's universalism, which is unrelated to religiosity but may be negatively or positively related to it, depending on the cultural and the specific religious context [4]. Indeed, we found that rigid religion, i.e. fundamentalism, implies low endorsement of universal justice, whereas flexible faith, i.e. spirituality, implies the opposite. This kind of dualism is less present in care: in almost all contexts, religion implies some prosocial tendencies, which however may either be very weak or more pronounced. Second, overall, religion implies an implicit or explicit moral, social, and ontological order between the various kinds of beings, including ingroups and outgroups, men and women, and humans and animals [60,61,62]. Thus, the ideal of total equality between all people may not be welcomed with enthusiasm within a religious context: across the world, there is empirical evidence in favor of some discomfort of religiosity with democratic ideals [10].

Moderators: culture, gender, and age

The differences found between the US studies and the other Western studies, mostly carried out in more secular contexts than the US, with religiosity being more strongly related to loyalty, authority, and purity in the US, are in line with, consolidate, and extend previous research. This research suggests more conservative and traditionalist features in US religiosity compared to other Western contexts [63]. As it can be seen in Figure 2 of the main article, religiosity in the other Western countries behaves similarly to spirituality in the US (less conservative than religiosity), regarding the associations with the binding foundations.

The moderating role of the gender ratio on all five religiosity-moral foundations associations is highly informative of how gender differences are expressed in religion and to satisfy one's own needs. The results are in line with traditional research on the psychology of religion suggesting that women's religiosity is more relational and men's religiosity more order-oriented [64]. Finally, there was no evidence for a moderating role of age, possibly suggesting that the overall links between religiosity and the moral foundations are similarly present across ages, at least from young adulthood to the age of 50-yrs.

Limitations

Results regarding fundamentalism and spirituality should interpreted with caution and be considered only as preliminary information. They, especially the results regarding spirituality, are based on a limited number of studies that were almost all conducted in the same country (US). Moreover, in three out of the 10 mean associations (2 religious orientations × five foundations), i.e. care with fundamentalism, and authority and loyalty with spirituality, the CIs included zero, suggesting instability

of these effects possibly due to important moderators having to do with the specific form of spirituality (less or more connected to traditional religion) and fundamentalism (less or more prosocial) across contexts.

On the contrary, results regarding religiosity should be seen with some confidence. They came from a large number of studies, parallel in several aspects the associations of religiosity with values, and as being rather consistent--with differences being in the size of effects rather than the directions of the associations--between the US, European countries of Christian tradition, and Turkey, a country of Muslim tradition. Nevertheless, all studies came from countries of monotheistic traditions and thus generalizability to other religious cultural contexts is not guaranteed. This is especially the case given non-negligible reliability issues of the measure of the moral foundations as found in a recent large cross-cultural study [65].

Nevertheless, the similarities and consistencies across studies and cultures in the way religiousness across orientations--certainly religiosity, most importantly fundamentalism, and, even if more weakly, spirituality--is associated with the endorsement of loyalty, authority, and purity (the three mentioned here by ascending order) are astonishing. Furthermore, these similarities concern, for religiosity and fundamentalism, a considerable prioritization of these values compared to those that are oriented to interpersonal others.

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Supplementary Material Table S1

Studies on religiousness and moral foundations included in the meta-analysis

	Study	Country	*N*	Religious Indicator	MF Measure
[12]	Bulbulia et al. (2013)	N. Zealand	1188	Intrinsic religiosity	MFQ-30
[13]	Clark et al. (2020), Study 1	USA	284	Relig. attendance	MFQ-30
	Study 3	USA	461	Intrinsic religiosity	MFQ-30
[14]	Davis et al. (2016), Study 2	USA	490	Rel. commitment	MFQ-2009
[15]	Deak & Saroglou (2015)	Belgium	230	Religiousness	MFQ-20
[16]	Deak & Saroglou (2016)	Belgium	177	Religiousness	MFQ-30
[17]	Deak & Saroglou (2017)	Belgium	213	Religiousness	MFQ-20
[18]	Di Battista et al. (2018)	Italy	248	Religious believer	Own items
[19]	Franks & Scherr (2015), Study 1	USA	144	Religiosity	MFQ-30
	Study 3	USA	200	Religiosity	MFQ-30
[20]	Greenway et al. (2019)	USA	313	Traditional God Fundamentalism [a]	MFQ-30
[21]	Harnish et al. (2018)	USA	132	Fundamentalism [a]	MFQ-30
[22]	Hodge et al. (2019), Study 2	USA	202	Relig. commitment	MFQ-30
[23]	Johnson et al. (2016)	USA	450	Relig. commitment Biblical literalism [a] Outreaching faith [b]	MFQ-30
[24]	Kang et al. (2016, Study 1)	USA	577	Religiosity	MFQ-30
[7]	Koleva et al. (2012), Study 1	USA	10222	Relig. attendance	MFQ-30
	Study 2	USA	14517	Relig. attendance	MFQ-30
[25]	Krull (2016), Study 1	USA	616	Intrinsic religiosity Fundamentalism [a]	Own items
	Study 2	USA	773	Intrinsic religiosity Fundamentalism [a]	Own items
[26]	Labouff et al. (2017), Study 1	USA	134	Religiosity	MFQ-30
	Study 2	USA	1870	Religiosity	MFQ-30
[27]	Meagher (2019)	USA	578	Relig. attendance Fundamentalism [a]	MFQ-30
[28]	Métayer & Pahlavan (2014)	France	538	Religious believer	MFQ-30
[29]	Minton et al. (2019), Study 2	USA	197	Religiosity	MFQ-30
	Study 3	USA	391	Religiosity	MFQ-30
[30]	Mooijman et al. (2018), Study 4	USA	313	Religiosity	MFQ-30
[31]	Niemi & Young (2016), Study 1	USA	228	Religiosity	MFQ-30
	Study 2	USA	254	Religiosity	MFQ-30
	Study 3	USA	343	Religiosity	MFQ-30
[32]	Nilsson et al. (2016), Study 2a	Sweden	126	Being religious	MFQ-2009
	Study 2b	Sweden	200	Being religious	MFQ-2009

[33]	Nilsson et al. (2020)	Sweden	985	Religious practice Spirituality [b]	MFQ-2009
[34]	Njus & Okerstrom (2016)	USA	306	Proximity w. God	MFQ-30
[35]	Piazza & Landy (2013), Study 2	USA	211	Being religious	MFQ-30
[36]	Reynolds et al. (2020), Study 1	USA	139	Intrinsic religiosity	MFQ-30
	Study 3	USA	183	Theism	MFQ-30
[37]	Rutjens et al. (2018), Study 1	Netherlands	173	Belief in God Relig. orthodoxy [a]	MFQ-15
	Study 3	Netherlands	167	Belief in God Relig. orthodoxy [a]	MFQ-15
[38]	Rosik et al. (2013)	USA	183	Intrinsic religiosity	MFQ-30
[39]	Simpson et al. (2016, Study 1a)	USA	293	Belief in God Biblical literalism [a]	MFQ-30
[40]	Yalçındağ et al. (2019, Study 2)	Turkey	493	Being religious	MFQ-30
[41]	Yi & Tsang (2020), Study 1	USA	420	Intrinsic religiosity Fundamentalism [a] Spirituality [c]	MFQ-30
	Study 2	USA	268	Intrinsic religiosity Fundamentalism [a]	MFQ-30
	Study 3	USA	270	Intrinsic religiosity Fundamentalism [a]	MFQ-30
	Study 4	USA	455	Theism	MFQ-30

Notes. [a] = measures categorized as indicators of fundamentalism. [b] = measures of spirituality. All other religious measures were considered as indicators of general religiosity.

Supplementary Material Table S2

Moderators of the associations between religiosity and moral foundations

Moderator and statistic used	Care	Fairness	Loyalty	Authority	Purity
US vs. Other Western: *Q*(1)	1.67	2.29	5.74*	31.83***	39.30***
Sample's Mean Age: *b*	-0.22	0.06	0.08	0.07	-0.06
Gender (Women) Ratio: *b*	0.30*	0.22	-0.37**	-0.34**	-0.15

* $p < .05$. ** $p < .01$. *** $p < .001$.

Supplementary Material Table S3

Studies on religion and deontological versus consequentialist morality

	Studies	*N*, country	Moral orientation measure	Results
[43]	Antonenko et al. (2013)	119, US	5 moral dilemmas: instrumental harm (IH) [a]	Fundamentalism: *r* w. deontological choices
[44]	Arli & Pekerti (2017)	669, Australia 451, Indonesia	Forsyth's Questionnaire: Idealism *and* Relativism [c]	Intrinsic religiosity: *r* w. high idealism, not w. relativism, in both samples
[45]	Banerjee et al. (2010)	8900, US	Evaluation of permissiveness of 145 counter-normative acts	Religious: more deontology-, rule-based judgments; extended moralism
[46]	Barak-Corren & Bazerman (2017), Studies 1 & 2	489, US 330, Israel	Variants of the trolley dilemma [a]	Religious: more deontological, by inaction or indirectness
[47]	Baron et al. (2015), Study 4	96, US	15 moral dilemmas of two kinds: instrumental harm + righteous non-care; utilitarianism (scale) [a, b, c]	Religiosity: *r* w. high deontological choices *and* low utilitarianism
[48]	Christensen et al. (2014)	25, Spain	Neural activity during 48 moral dilemmas: instrumental harm [a]	Catholics, not atheists: different brain areas when deontological vs. utilitarian moral dilemmas
[49]	Conway & Gawronski (2013), Study 1	112, Canada	10 moral dilemmas: IH; scores for deontology *and* consequentialism [a]	Religiosity: *r* w. high deontology, not w. consequentialism
[16]	Deak & Saroglou (2016)	177, Belgium	9 moral dilemmas: righteousness vs. care [b]	Religiosity: *r* w. high non-caring righteousness when outcomes are not severe
[50]	Kahane et al. (2018)	86 experts, UK	Positive (universalistic, impartial, care) + negative (instrumental harm) utilitarianism (scale) [c]	Religiosity: *r.* w. universalistic, impartial care; not w. instrumental harm
[51]	Love et al. (2020), Study 6	890, US	Questionnaire: Formalism *and* Consequentialism [c]	Christians, Muslims, Hindus, Religiosity: high formalism *and* low consequentialism, comp. to the non-religious and Jews
[52]	McPhetres et al. (2018), 3 studies and a meta-analytic summary	Total *N* = 1207, US	10 moral dilemmas: IH; scores for deontology *and* consequentialism [a]	Religiosity: high deontology *and* low utilitarianism; effect reduces if pressure (time, cognition)
[53]	Piazza (2012), Study 1	82, UK + 82, US and others	Rule- vs. outcome-based bipolar reasons against 10 moral transgressions [c]	Religiosity, beyond political conservatism, predicted rule-based reasoning
	Study 2	133, US	As above [c]	Rel. orthodoxy, beyond sociocognitive rigidity, predicted rule-based reasoning

[35]	Piazza & Landy (2013), Study 1	290, US	14 counter-normative acts: never-permitted, permitted, mandatory [a, b]	Religiosity: *r* w. low utilitarianism (permitted or mandatory, for higher good); not due to inflexible thinking
	Study 2	211, US	11 moral dilemmas: righteousness vs. care [b]	Religiosity: *r* w. high non-caring righteousness; not due to moral conservatism
[54]	Piazza & Sousa (2014), Study 1	349, US	13 counter-normative acts: never-permitted, permitted, mandatory [a, b]	Religiosity: *r* w. low consequentialism for higher good
	Study 2	147, US	As above, but to prevent worse/more of the same transgression	Religiosity: *r* w. low consequentialism for preventing the worse
	Study 3	192, US	Permissiveness of two harmless transgressions	Religiosity: *r* w. low permissiveness
	Saroglou et al. (2010), unpublished, Study 1	64, Belgium	9 moral dilemmas: righteousness vs. care [b]	Authoritarianism among the religious: *r*. w. high non-caring righteousness
[55]	Szekely et al. (2015)	317, Romania	12 moral dilemmas: instrumental harm [a]	One religious dimension predicted high deontology
[56]	Van Pachterbeke et al. (2011)	152, Belgium	9 moral dilemmas: righteousness vs. care [b]	Relig. priming increased high authoritarians' non-caring righteousness
[57]	Yilmaz & Bahçekapili (2015), Study 1	355, Turkey	Forsyth's Relativism subscale [c]	Religiosity: r w. low moral relativism
	Study 2	97, Turkey	After rel. priming: Moral objectivity & subjectivity: (1) evaluations after six scenarios, (2) scale	Relig. priming increased objectivism and decreased subjectivism
	Study 3	150, Turkey	Activating through text moral subjectivism	Belief in God: lower after activation of subjectivism, comp. to objectivism or neutral

Notes. [a] = Trolley-like moral dilemmas: absolutely not harming/killing one person (deontology) versus doing it to save more people (consequentialism: instrumental harm). [b] = Moral dilemmas: absolutely respecting other than care principles (e.g., honesty, authority) (righteous deontology) versus transgressing them to save/protect others, including proximal people (caring consequentialism). [c] = self-reported measures of moral orientation or reasoning.