



Principles of Religious Prosociality: A Review and Reformulation

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Abstract

Historically, religion and religious belief have often been credited as the source of human morality. But what have been the real effects of religion on prosocial behavior? A review of the psychological literature reveals a complex relation between religious belief and moral action: leading to greater prosocial behavior in some contexts but not in others, and in some cases actually increasing antisocial behavior. In addition, different forms of religious belief are associated with different styles of co-operation. This body of evidence paints a somewhat messy picture of religious prosociality; however, recent examinations of the cognitive mechanisms of belief help to resolve apparent inconsistencies. In this article, we review evidence of two separate sources of religious prosociality: a *religious* principle associated with the protection of the religious group, and a *supernatural* principle associated with the belief in God, or other supernatural agents. These two principles emphasize different prosocial goals, and so have different effects on prosocial behavior depending on the target and context. A re-examination of the literature illustrates the independent influences of religious and supernatural principles on moral action.

What is the relation between prosocial behavior and religion? Religion is often seen as the source of morality, with absolute rules of right and wrong handed down by God, and (literally) set in stone. Secularism and atheism are frequently criticized as amoral, that a religious foundation is necessary for a moral foundation (e.g., Robertson, 1986). On the surface, the lesson treat others as we would like to be treated (i.e., the ‘Golden Rule’) seems to be a prominent narrative throughout nearly all major world religions (e.g., Jesus’ parable of the Good Samaritan emphasizing the virtues of outgroup prosociality, Luke 10: 25–37, King James Version; Bahá’u’lláh calling on his followers to ‘desire not for anyone the things you would not desire for yourselves,’ Gleanings from the Writings of Bahá’u’lláh, LXVI; Effendi, 1976; or Lao-Tzu’s description of ‘true goodness’ as doing good both to those who are and are not good themselves, Tao-Te Ching; Mitchell, 2006). But it may be unwise to accept these theological ideals as religious directives, or suppose that these teachings translate into actual behavior. One may just as easily find passages that prescribe the opposite (e.g., ‘Eye for an eye,’ Leviticus 24: 19–21). Critics argue that religion has also been a source of violence and intolerance, citing vivid examples of terrorist acts and holy wars (e.g., Dawkins, 2006; Harris, 2006). Indeed, a great deal of theory and research suggests that not only does religiousness fail to reliably predict universal helping behavior (e.g., Batson, Schoenrade, & Ventis, 1993) but also that it is a mistake to even hold such an expectation (e.g., Graham & Haidt, 2010; Saroglou, 2006; Wilson, 2002). Given the abstractness of religious beliefs, the broad social functions of religion, and the diverse conceptualization of supernatural agents, it is perhaps not surprising that the relation between religion and moral action is not straightforward. Rather, religious belief is associated with multiple moral goals that may guide moral behavior in conflicting directions.

The goals of this article are twofold. In the first half, we provide an updated review of the psychological literature that has investigated the relation between religion and prosocial behavior. We bring together classic and contemporary research measuring the effects of individual differences in religiosity, as well as more recent research utilizing experimental manipulations of religious cognition (for additional perspectives on these topics, see Batson et al., 1993; Bering & Johnson, 2005; Hansen & Norenzayan, 2006; Hood, Hill, & Spilka, 2009; Hunsberger & Jackson, 2005; Johnson & Bering, 2006; Norenzayan & Shariff, 2008). Second, on the basis of this review, we argue that religious cognitions guide moral action through two separate but related moral principles: a *religious* principle, in which the primary moral concern is for ingroup protection and co-operation, and a *supernatural* principle, where the primary moral concern is deference to God (or other supernatural agents). Throughout this discussion, we focus on the target of prosocial behavior, specifically, whether the potential target of prosocial behavior is considered a member of the religious ingroup or outgroup. The distinction between the supernatural and religious principles is highlighted by the difference in pattern of prosociality toward these different targets. In the end, we hope to provide a deeper scientific understanding of the multifaceted nature of 'religious' cognitions and their consequences for moral action.

Individual Differences in Religiosity

Religion is not a variable that researchers can easily manipulate, and so the majority of psychological studies of religion and prosocial behavior have combined laboratory studies with correlational methods on individual measures of religiousness. In this section, we review how this research has evolved in its study of different forms, or styles, of religious belief (e.g., *intrinsic* versus *extrinsic*; *literal* versus *symbolic*). We find that there is more to religious belief than the strength of one's convictions, and that different styles of religiousness lead to different patterns of prosociality.

Intrinsic, extrinsic, and quest orientations

Early studies focused on the relation between religion and *prejudice*, which can be broadly defined as negative attitudes toward an outgroup. Although prejudice is neither prosocial nor antisocial behavior *per se*, it is an important factor for predicting hostility or co-operation with others. Allport and Kramer (1946) found that students who reported an affiliation with Catholic or Protestant churches were more likely to hold ethnically prejudiced views than students who reported no religious affiliation. Stouffer (1955) similarly found that frequent religious attendance predicted more intolerance for groups holding different ideologies (e.g. socialism, atheism). But soon thereafter, Allport suggested that the broad classification of *religious* was an oversimplification, and instead made an effort to distinguish between two types of religious motivation – *intrinsic* and *extrinsic* – that could more accurately describe the relation between religiosity and prejudice (e.g., Allport & Ross, 1967). In Allport's terms, the intrinsically motivated believer was said to 'live' their religion as an end-in-itself, whereas the extrinsically motivated believer was said to 'use' their religion as a means to establish security, status, or social support (Allport & Ross, 1967; Allport, 1966). With this distinction, Allport argued that only extrinsically religious people tended to be more prejudiced, whereas there was no such relation for those who were intrinsically motivated (Allport, 1966).

Daniel Batson and colleagues have since extended the work of Allport in two important ways. First, Batson reconceptualized the intrinsic orientation as a more dogmatic identification with the activities, practices, and literal beliefs of their religion (Batson, 1976). Second, Batson introduced another dimension of religiosity – a *quest* orientation characterized by the search for existential meaning (Batson, 1976). In one classic experiment, Darley and Batson (1973) re-created the situation portrayed in the parable of the Good Samaritan to determine whether religiosity predicts helping an unknown stranger. Participants in this study were on their way to give a speech about the parable of the Good Samaritan, and on their way passed a shabbily dressed confederate hunched over in an alley – possibly in need of help. Much to the chagrin of those championing religion as a force for good, none of the three dimensions of religiosity (*intrinsic*, *extrinsic*, or *quest*) predicted helping behavior. Instead, the only factor that made a difference was whether people were in a hurry or not (Darley & Batson, 1973; Batson, 1976). But, further analysis of the results revealed that the kind of religious orientation held by participants affected the kind of help one was likely to give. Participants who scored high on the quest dimension were more likely to offer help of a tentative nature, that is, they only helped if the target seemed to *want* help. In contrast, people high on intrinsic religiousness who offered help were more insistent in their assistance (Batson, 1976; see also Batson & Gray, 1981).

Follow-up research focused on the distinction between quest and intrinsic orientations as they related to ‘true’ altruism. In a study of racial prejudice (Batson, Flink, Schoenrade, Fultz, & Pych, 1986), white participants were asked to choose between two theaters to watch a movie: one where they would have to sit beside a white student, or one where they would have to sit next to a black student. Important, however, for some participants the two theaters were playing the same movie, and so decisions to sit next to the fellow white student (over the black students) appeared overtly prejudiced. But in another condition the theaters played two different movies, so the decision could also be construed as a preference for the movie, not the white or black student. Intrinsically religious participants were only likely to sit with the black student when the movies were the same (i.e., when the choice could not have been attributed to movie preference and they only wanted to *appear* nonbiased), whereas quest-oriented participants were more likely to sit with the black student whether the movie was the same or not (Batson et al., 1986).

Value violations

Other evidence suggests the relation between religiousness and prejudice goes beyond ethnic discrimination but toward those who threaten important religious values. Jackson and Esses (1997) showed that subjects high in religious fundamentalism were more likely to blame a gay man or single mother for losing their job, mediated by the perceived threat to values posed by homosexuality/single motherhood, respectively. In another study, intrinsic religiosity did not predict helping behavior toward people who violated religious values (e.g., homosexuality), whereas people with a quest orientation (who value universalism) showed no such discrimination (Batson, Floyd, Meyer, & Winner, 1999). However, this does not mean that quest religiosity is always associated with greater prosociality. Further research suggests that the target of prosocial behavior plays an important role. Specifically, people high in *any* religious orientation (*intrinsic*, *extrinsic*, or *quest*) are less prosocial toward those perceived as threats to core values. For example, Batson, Eidelman, Higley, and Russel (2001) had students play a game where their performance on a task could help another male student win a raffle prize. People scoring high on intrinsic

religiosity were more likely to help if they had previously learned he held anti-gay attitudes (consistent with their religious teachings). In contrast, people high in quest religiosity were *less* likely to help the intolerant student, who violated their values of tolerance and universality (Batson et al., 2001; see also, Batson, Denton, & Vollmecke, 2008).

From the research presented so far, we can see a pattern of selective intolerance – religious people seem to be holding the ‘right’ tolerances and the ‘right’ prejudices as espoused by their religious teachings (Rowatt, LaBouff, Johnson, Froese, & Tsang, 2009; see also, Herek, 1987; Batson et al., 1993). More recent work has provided evidence that generally religious Americans hold less accepting attitudes of homosexuality but not necessarily less accepting attitudes toward ethnic minorities (Rowatt et al., 2009), presumably because many churches actively teach that homosexuality is wrong, but have no moral value attached with ethnicity. Moreover, this pattern has been demonstrated at the implicit level as well, with Christian Orthodoxy predicting a negative association with implicit racial prejudice (Rowatt & Franklin, 2004), but a positive association with implicit homosexual prejudice (Rowatt et al., 2006).

Other religious categorizations

Research has also examined religious motivations outside of Batson’s categories, but the results paint a similar picture. Zinnbauer et al. (1997) have offered a useful distinction between religion and spirituality as separate but related components of the sacred. *Religion* refers to the specific traditions, laws, beliefs and practices associated within a given faith (e.g., participation in traditions, services, and rituals associated with the religion). *Spirituality*, on the other hand, refers to the relationship one has with God (or the divine). In a meta-analysis of 21 studies from 15 countries on the relative importance of different core values (Schwartz, 1992), religiousness was associated with Benevolence (i.e. concern for welfare of others) but not Universalism (i.e. acceptance of others as equal) (Saroglou, Delpierre, & Dernelle, 2004). In another study, however, the value of Universalism was positively related to a single self-reported index of spirituality (Saroglou & Galand, 2004). Likewise, Saroglou and colleagues found that religiousness was positively related to a willingness to help friends and family, but not strangers. But again, the single item index of spirituality was associated with a willingness to help both close targets and strangers (Saroglou, Pichon, Trompette, Verschueren, & Dernelle, 2005). Using a different theoretical framework (Hutsebaut, 1996), Pichon and Saroglou (2009) examined the effect of literal (close-minded) versus symbolic (open-minded) religious beliefs on helping. The researchers were interested in three different styles of helping: *direct assistance* (actively solving a problem for the target), *empowerment* (helping the target to help themselves), and *group change* (blaming the target for their problem and expecting them to change to help themselves). People with literal religious beliefs tended to endorse nonhelping group change attitudes, whereas symbolic believers were more likely to endorse direct and empowerment styles of helping (Pichon & Saroglou, 2009).

Together, these studies indicate a complex relation between individual styles of religiousness and prosocial behavior. Religiosity does not reliably predict universal prosocial behavior, rather it appears to facilitate prosocial behavior only in some contexts, and only toward some targets (cf. Saroglou, 2006). Researchers’ observation that religiousness *is not* a single construct – that there is more than one way to be religious – has highlighted the divergent attitudes and behaviors that follow from these individual differences.

Experimental Manipulations of Religious Cognition

Recent advances in priming methodology from social and cognitive psychology have provided researchers with a new means of directly manipulating religious concepts, rather than relying solely on correlational research. Research using experimental manipulations of religious cognition on prosociality is still a relatively new enterprise. The majority of studies have been conducted within the past 3 years, and so the field is only beginning to understand the behavioral and cognitive consequences of religious priming (see Table 1).

Self-control and self-regulation

One effect that has emerged in this research is that priming religious concepts enhances the capacity for self-control and self-regulation (for a review on the relationship between religiousness and self-regulation, see McCullough & Willoughby, 2009), which are necessary for moral action. For example, Baldwin, Carrell, and Lopez (1990) subliminally primed women with a scowling picture of the Pope, or a nonsignificant disapproving person, after they read a sexually permissive passage. Catholic women exposed to the disapproving Pope subsequently rated themselves lower on a momentary measure of self-concept (including judgments of morality, competence, and anxiety), but non-Catholic women did not. For Catholic women, exposure to the Pope activated feelings of disapproval and shame for their previous immoral act and motivated self-control to restore a sense of approval (Baldwin et al., 1990). In other research, Fishbach, Friedman, and Kruglanski (2003) found that priming religious words (e.g., *prayer, bible, religion, God*) lead to decreased accessibility of temptation-related words (e.g., *drugs, temptation, sin, sex*) during a lexical decision task. The religious primes may have activated a goal of self-control, thereby inhibiting associations with morally questionable actions (Fishbach et al., 2003). In another behavioral study of self-control, exposure to religious primes reduced cheating (Randolph-Seng & Nielsen, 2007). Participants were given the 'circle task' (Hartshorne & May, 1928), in which participants must write numbers inside small circles with their eyes closed. Temptation to cheat on this difficult task was increased by setting unrealistically high expectations for task performance, offering extra credit for exceptional performance, and leaving subjects alone to complete the task unsupervised. But people who were exposed to religious words (e.g., *heaven, bless, holy, prayer, cross*) before completing the circle task were significantly less likely to cheat. This effect held for both subliminal primes (Study 1) and supraliminal primes (Study 2), regardless of the participant's religiosity.

Prosocial intentions and behavior

More than just enhancing self-control, religious primes have also been shown in a number of studies to increase prosocial intentions and actions. Pichon, Boccato, and Saroglou (2007) subliminally primed subjects with either positive religious (e.g., *heaven, miracle, belief, salvation*), neutral religious (e.g., *alter, steeple, rosary, incense*), or control words. Those primed with positive religious concepts were faster to recognize prosocial words (e.g., *help, support*), suggesting an activation of prosocial concepts. In a second study, participants were given the opportunity to pass out pamphlets espousing the virtues of charity. Again, participants showed more prosocial intent (i.e., took more pamphlets to distribute) when primed with positive religious words. Positive nonreligious

Table 1 Experimental manipulations of religious cognition

Study	Manipulation	Effect	Results
Bushman et al., 2007	Violent story credited to the Bible or ancient texts, sanctioned by God or not.	Antisocial	More aggressive to stranger in competition (blast with loud noise)
Fishbach et al., 2003	Subliminal primes: <i>Prayer, Bible, Religion, God</i>	Prosocial	Decreased accessibility to temptation related words
Ginges et al., 2009	Israeli participants asked frequency of synagogue attendance, or prayer (separate conditions)	Mixed	Synagogue prompt increased support for suicide attacks against Palestinians; Prayer prompt decreased support for suicide attacks against Palestinians
Hernandez & Preston, 2010	Asked belief in God or religious affiliation (separate conditions)	Mixed	God primes increased donations to outgroup charity
M. K. Johnson, W. C. Rowatt, and J. LaBouff, 2010	Subliminal primes: <i>Bible, Faith, Christ, Church, Gospel, Heaven, Jesus, Messiah, Prayer, Sermon</i>	Antisocial	Increased prejudice toward African-Americans
Pichon & Saroglou, 2009	Religious versus Secular context of person in need (church or gym background)	Mixed	More help offered to homeless target, but not illegal immigrant
Pichon et al., 2007	(Study 1) Subliminal primes: <i>Heaven, Miracle, Wedding, Spirituality, Angel, Praise, Baptism, Tradition, Aureole, Salvation, Soul, Beatitude, Christmas, Belief, Bless, Faith, Temple, Pilgrimage, Prayer, Communion</i> (Study 2) Word search primes: <i>Communion, Pilgrimage, Faith</i>	Prosocial	Positive religious primes increased prosocial intentions (take more charity pamphlets, Study 1; increased accessibility to prosocial concepts, Study 2)
Randolph-Seng & Nielsen, 2007	Subliminal primes: <i>Heaven, Bless, Gospel, Cross, Faith, Prayer, Salvation, Saved, Holy, Worship, Baptism, Amen, Church, Resurrection, Commandments, Communion, Saint, Prophet, Sabbath, Preacher</i>	Prosocial	Reduced cheating on difficult task
Ritter & Preston, 2010	Subliminal primes: <i>God, Religion</i> (separate conditions)	Mixed	Religion primes increased co-operation with ingroup member; God primes increased co-operation with outgroup member
Saroglou et al., 2009	Subliminal primes: <i>Heaven, Miracle, Wedding, Spirituality, Angel, Praise, Baptism, Tradition, Aureole, Salvation, Soul, Beatitude, Christmas, Belief, Bless, Faith, Temple, Pilgrimage, Prayer, Communion</i>	Mixed	More retaliation against another participant (assign difficult questions) when revenge suggested by experimenter, but decreased retaliation when not suggested
Shariff and Norenzayan, 2007	Scrambled sentence primes: <i>Sacred, Divine, Spirit, God, Prophet</i>	Prosocial	Gave more money to stranger in anonymous dictator game

words did not result in more pro-social intentions, but rather, the positivity had to be coupled *with* religion in order for people to have greater charity intentions (Pichon et al., 2007). In another study, Pichon and Saroglou (2009) manipulated the religious context of a hypothetical person in financial need, by providing a picture of the person either in front of a church or a gymnasium. Important, the religious context increased self-reported intentions to help the person if he was presented as *homeless*, but not if he was presented as an *illegal immigrant* (Pichon & Saroglou, 2009). Other research has examined the effects of religious primes on actual behavior. Tan and Vogel (2008) investigated how interactive co-operation may be impacted by the perceived religiosity of the other person. Participants took turns exchanging a monetary sum where the sum is multiplied each time it is passed on to the other participant. By trusting the other person, the participant stands to gain a greater sum, but only if the other person reciprocates. When the other person knew the participant's level of religiosity, more money was forwarded, especially when the other person was also religious (Tan & Vogel, 2008). In another study of prosocial behavior, Shariff and Norenzayan (2007) found that people gave more money to an anonymous stranger during an economic dictator game if they were previously exposed to religious words. Using a scrambled sentence task (Srull & Wyer, 1979), participants were first primed with neutral or religious words (e.g., *spirit, divine, God, sacred, prophet*). Following priming, participants were given \$10 to distribute between themselves and the anonymous other player. Religious primes were shown to increase the amount of money given to the other player for both believers and atheists in a college sample (Study 1), but only among believers in a larger community sample (Study 2). Overall, a higher proportion of participants behaved selfishly (i.e., offered nothing) in the control condition than in the religious prime condition, whereas a higher proportion behaved fairly (i.e., offered exactly \$5) in the religious prime condition than in the control condition (Shariff & Norenzayan, 2007).

Antisocial behavior

But on the darker side of social behavior, religious priming may also produce antisocial actions. M. K. Johnson, W. C. Rowatt, and J. LaBouff (2010) demonstrated, for example, that subliminal exposure to religious words increased racial prejudice toward African Americans using both overt and covert measures. Religious primes have also been shown to increase support for suicide attacks – a form of ‘parochial altruism’ characterized by a combination of ingroup altruism and outgroup hostility (Choi & Bowles, 2007). Ginges, Hansen, and Norenzayan (2009) found that Jewish Israeli settlers were significantly more likely to approve of suicide attacks against Palestinians if they were primed to think of synagogue attendance at the beginning of a telephone survey (23% approve) compared to no prime (15%). In contrast, rates of approval for the suicide attacks were significantly lower if people were primed to think about how much they pray (6%).

Bushman, Ridge, Das, Key, and Busath (2007) similarly demonstrated that reading stories that depict violence in the name of God can increase aggression toward a stranger. Participants in this study first read a story advocating violence that was credited either to the Bible or to ‘ancient scrolls.’ In addition, half of the participants read that it was God who commanded retaliation. In a later task, participants were told they would play a competitive reaction time game with another person. The loser of each trial would be punished with a loud noise, but important, participants could choose the

level of volume of their opponent's headphones. Participants were more aggressive (i.e., chose higher levels of volume for their competitor) if they had previously read a violent story credited to the Bible, and also if the violence was sanctioned by God in the story. This effect was much larger for believers than nonbelievers (Bushman et al., 2007).

Priming religious words has also been found to increase vengeance taken against another person, but only as a function of personal submissiveness (Saroglou, Corneille, & Van Cappellen, 2009). In the first part of the study, participants were subliminally primed with either religious (e.g., *salvation*, *bless*) or control words, and then submissiveness was measured on a five-item scale. Next, participants wrote an advertisement for a generic company, and then were given (phony) feedback criticizing their work from (who they thought was) another participant in the same study. In one condition, the experimenter suggested the participant punish the critic by assigning them difficult questions in the next task. Participants were much more likely to take revenge in this way after having been primed with religious words; however, this effect was moderated by postprime submissiveness. Furthermore, without the experimenter's suggestion to seek revenge, religious primes actually increased prosocial behavior toward the other person, by selecting less difficult questions (Saroglou et al., 2009).

Collectively, these findings demonstrate a similar pattern as the individual differences literature reviewed earlier. Under some circumstances, prosociality follows from the activation of religious concepts, but in other situations religious concepts may have the opposite effect. However, one issue in much of the priming work is that researchers often use multiple religious terms to prime 'religious cognition', broadly construed (see Table 1). As we argue in the following sections, it may be a mistake to assume that these various religious terms are conceptually interchangeable. Rather, different religious concepts may relate to separable aspects of religious belief. Depending on the particular religious concept activated, prosocial behavior may be guided in different directions by creating different moral concerns.

Two Moral Principles: Religion and God

So far we have reviewed evidence that religion (as an individual difference, or experimental manipulation) is associated with a conditional form of prosociality: leading to more prosocial behavior toward some targets, but not others. What we have not yet discussed is *why* these different effects occur, i.e., what are the underlying cognitive mechanisms responsible for the complex relation between religion and prosocial behavior? However, the literature does provide some clues by the evidence that the different prosocial concerns seem to arise from different religious 'styles.' In the remainder of this article, we present arguments that religious prosociality may be shaped by two separate aspects of the sacred: religion as a social ingroup, and the belief in God as a supernatural moral agent. We propose that religion and belief in God are both related to moral behavior, but are guided by different moral concerns. The *religious* principle emphasizes religious affiliation as the social unit, where the primary moral concern is ingroup protection and co-operation. The *supernatural* principle arises from the belief in God (or gods) as a morally concerned agent. The primary moral concern is virtue, defined as obedience to God, and following the moral rules of God. By unpacking religious cognitions in this manner, we hope to illustrate the cognitive mechanisms that motivate prosocial behavior and the different patterns of prosocial behavior that are activated by religion and belief in God, respectively.

Religious dimension of prosociality

We have reviewed evidence that religiosity and religious cognition are associated with prosocial behavior toward some targets, but less prosocial (and sometimes antisocial behavior) toward other targets. This seems to present an inherent contradiction in religious prosociality – that religion can direct devotees to both kindness and coldness in their treatment of others. Many scholars have argued that this apparent paradox can be resolved, however, if religious prosociality is restricted to the welfare of the religious ingroup (Batson, 1983; Norenzayan & Shariff, 2008; Saroglou, 2006; Wilson, 2002). A religion is more than just a belief system, it is also a group affiliation that unites individual believers by common traditions, holidays, and rituals. Moreover, one's personal identification with a religious group may be separate from identification with religious beliefs. For instance, it is not uncommon for people to refer to themselves in categories such as '*non-practicing Catholic*', or '*secular Jew*'. Saroglou and colleagues note that an inherent aspect to all organized religion is the divisions between groups, and this may restrict prosocial motivation toward members of the religious ingroup (Saroglou, 2006; Saroglou et al., 2005). Consistent with these arguments, we propose that the *religious principle* of prosociality activates moral concerns for ingroup protection. Rather than expect religion to facilitate universal prosociality (as the Golden Rule suggests), religion may promote helping only toward fellow group members.

Religion's role in creating concerns for the ingroup is probably most evident in its demarcation of 'us' from 'them'. One way that religious groups may promote concerns for the ingroup is through various communal rituals and traditions that consolidate social bonds with other group members. Co-ordinated movement among interaction partners elicits feelings of interpersonal connectedness and rapport (Miles, Nind, & Macrae, 2009) and facilitates co-operation (Wiltermuth & Heath, 2009). Through the 'sensory pagentry' of collective religious rituals, groups of believers can bond with one another by experiencing the same movements, sounds, odors, physical sensations, and sights (Atran, 2006, p. 183; Rappaport, 1999). Other scholars have emphasized the importance of rituals in demonstrating commitment to the group (Irons, 2001; Sosis & Alcorta, 2003). Religious affiliations require a variety of costly behaviors to join and remain in good standing within the group: elaborate rituals and rites of passage, public commitments of faith and devotion, contributions of time and money, wearing special clothing, and/or reading and learning various scriptures are just a few examples to illustrate this point. The effort and difficulty associated with these rituals can further increase commitment and trust among group members, thus increasing the likelihood of intragroup co-operation and prosociality (Sosis & Alcorta, 2003). But equally important, free-riders – people who reap the rewards of group co-operation without contributing anything themselves – can be detected and avoided by requiring costly advertisements of commitment from group members (Irons, 2001; Sosis, 2000).

Daniel Batson (1983) proposed that religion does not *counteract* innate selfish impulses as had been previously suggested (Campbell, 1975), but rather that it may have served to *co-operatively guide* humans' innate altruistic impulses to extend beyond offspring and close relatives to a larger 'family.' That is, religions emphasize the greater religious community as the focus of human co-operation. Just as selfish genes select for altruism toward genetically related kin (Dawkins, 1976), religion acts as a 'selfish meme' that selects for altruism toward members of the religious ingroup. This restricted form of prosociality associated with the religious principle may seem to fall short of 'true' altruism, but the religious principle may actually be the secret to our success as a species (Batson, 1983). Indeed, a

recent review by Richard Sosis (2000) found that religious communes in the 19th century outlived secular ones, owing their success at least in part to the increased commitment and co-operation among their members.

Evidence. If the religious principle works by activating moral concerns for ingroup protection, then religiousness should be associated with both greater ingroup co-operation and greater outgroup hostility. In the individual differences and experimental literature reviewed earlier, we can see evidence for such a *religious* principle of prosociality at work. Saroglou et al. (2005) found that highly religious participants were likely to report a willingness to help a close target (e.g., a family member or close friend) but not an unknown target. *Intrinsic* religious orientation (characterized by identification with religious teachings) has been linked to greater prejudice, ingroup bias, and egoistic prosocial motivation (e.g., Batson et al., 1986, 1989, 2001). Consistent with our framework, these findings suggest that increased commitment and affiliation with one's religious group may heighten concerns for protecting ingroup values and increase co-operation with fellow group members. We should also be able to observe similar effects by activating the religious principle experimentally (i.e., with priming techniques). As discussed earlier, much of the existing priming research used multiple religious terms as primes, making it difficult to differentiate between religious and supernatural principles. However, some of the research does lend support for the religious principle. Indeed, Pichon and Saroglou (2009) found that priming participants with a religious context (i.e., a church background) increased the likelihood of helping a homeless person, but not an illegal immigrant, who was both a foreigner and breaking the law. Ginges et al. (2009) also found that asking Israeli participants about their frequency of synagogue attendance (but not frequency of prayer) increased their support of suicide attacks against the Palestinians. In both cases, these manipulations may be viewed as emphasizing the *religious* dimension of prosociality. Accordingly, prosocial behavior tended to emphasize helping the ingroup member but not the outgroup member (Pichon & Saroglou, 2009), and increased support for violent action against the outgroup to protect ingroup values (Ginges et al., 2009).

Supernatural dimension of prosociality

In the previous section, we discussed the importance of religion as the formalized practice of a belief system, and the effect that religion has on moral concerns for ingroup protection. But all religions revolve around core beliefs in gods and other supernatural agents – the main characters of religious folklore. How people mentally represent these supernatural agents exerts a powerful influence on moral behavior, distinct from concerns for ingroup welfare associated with religion. Gods and supernatural agents serve as moral authorities – both by setting the rules of right and wrong, and enforcing the rules by a system of supernatural threat/reward.

The first step in understanding the impact that belief in gods have on moral actions is to recognize that gods are supernatural *agents*, and so are represented as having minds, thoughts, intentions, and desires, like 'natural' agents do (Epley & Waytz, 2010). We can even hold complex second order representations about God's thoughts (e.g., 'God is disappointed in me'), desires (e.g., 'God wants me to go back to school'), or intentions (e.g., 'That was a sign from God'). What distinguishes the representation of supernatural agents from natural agents are violations of the intuitive ontological categories that humans use to reason about the natural world (Atran & Norenzayan, 2004; Barrett & Keil, 1996; Boyer, 2001). For example, a supernatural agent may be represented as

possessing counter-intuitive qualities of psychology (e.g., can read thoughts), biology (e.g., invisible, immortal), or physics (e.g., capable of violating the laws of nature). The image of God as omniscient, omnipotent, and omni-benevolent represents the ultimate extreme of supernatural agency. God has the perfect abilities to see everything, do everything, and (perhaps most incredible of all) to always do what is right to maximize good. In other words, God is an ideal moral agent (Preston & Wegner, 2005; Gray & Wegner, 2010), providing both the moral standards for humans to live by and possessing the power to enforce those standards.

In terms of moral behavior, we argue that the mental representation of God or other supernatural agents (the supernatural principle) should activate moral concerns of *virtue*, as a means of obedience to the supernatural agent as a moral authority. The primary motivation is to please the supernatural agent to gain praise and favor, but perhaps more important, avoid supernatural punishment. The omnipotent God of Abrahamic religions is capable of watching over every action, no matter how small or undetectable by others, and also capable of rewarding or punishing for those actions accordingly. A believer may potentially attribute any positive or negative event in his life (e.g., job promotion or job demotion) to the will of God, and also interpret these events as moral judgments over his own good or bad actions. Belief in such a *moralizing* God(s) – an agent who cares whether we are good or bad – appears to be a prominent feature of all large-scale religious cultures (Boyer, 2001; Roes & Raymond, 2003). Fears of supernatural punishment can motivate greater self-monitoring and self-control, getting people to police their own actions and prevent cheating from happening. Although the supernatural principle may initially operate by an extrinsic fear of punishment, it can evolve into a more intrinsic motivation to be a morally good person. Rules of right and wrong set by supernatural agents are internalized as morals so that breaking those rules is not only believed to be wrong, but *feels* wrong. The supernatural principle thereby provides an effective means of maintaining social order, by creating a system of moral self-enforcement, fueled by fear and guilt (cf. Bering & Johnson, 2005; Johnson & Bering, 2006).

Under the supernatural principle, the primary moral concern is virtue and obedience to God. The question for moral action then becomes: *What does God want me to do?* This is not such a simple question to answer, as very few people ever claim to have direct interaction with God, and even fewer of those make reliable sources. But most world religions answer this question for us by some version of the *Golden rule* – to ‘love thy neighbor as yourself’ (Mark 12: 31). But a belief in the Golden rule seems to imply an all-inclusive prosociality that may conflict with concerns for ingroup protection associated with the religious principle. If religious communities owed their success to ingroup co-operation, then why would so many religions seem to promote universal prosociality? One possibility is that the virtue of universal prosociality may have been an extension of an earlier virtue of ingroup protection. The perceptions of God as a supernatural punisher may have been essential in maintaining co-operation, because God could punish ‘cheaters’ that would go unnoticed by other people (Bering & Johnson, 2005; Johnson & Bering, 2006). Early religious communities were relatively small and homogenous, with limited outside contact, so moral virtues that commanded general kindness and co-operation would help reinforce concerns for ingroup protection. But as groups grew larger they faced increasing interaction, (first through trade, then in multicultural towns and urban centers) and it became important to be able co-operate outside the religious ingroup. The moral rules of prosociality established by one’s deity could have been broadened to include all others, not just the members of one’s group. Much like the

bonds of religion created new moral concerns for group protection that extended cooperation beyond genetic kin, it is possible that the moral concern for *virtue* may have extended religious prosociality to an even larger family: all humankind.

The mental representation of God (or supernatural agents) may therefore play dual roles in guiding moral action, by personifying both the moral standard and the means of moral enforcement. The mental representation of God as benevolent establishes a standard of universal prosociality, untainted by prejudices or preferences. Meanwhile, God as an omnipotent, omniscient figure elicits the fear of wrath if one does not uphold this moral ideal. As a result, thoughts of God may promote good will toward all others, not just the ingroup. Fear of supernatural punishment may even produce exaggerated prosocial behavior toward outgroup members to appear most virtuous before God. It is critical to note, however, that people's representation of God's thoughts, intentions, and desires does not always reflect this ideal of selfless morality. Beliefs about the attitudes of God vary widely among different faiths and sub-denominations and may also fluctuate within an individual depending on the context. When the moral values of God are ambiguous, people may answer this question by what they personally believe is right (Epley, Converse, Delbosch, Monteleone, & Cacioppo, 2009). What is most important in the supernatural principle is obedience to supernatural agents, and so 'virtue' depends on what the supernatural agent deems good or bad. If one believes God condones universal kindness toward others, then thoughts of God should promote good will toward all others. If God is perceived as condoning violence and hostility, however, then activating thoughts of God may produce antisocial behavior.

Evidence. A re-examination of the reviewed literature suggests some evidence for such a separate *supernatural* influence on prosocial behavior. Recall that Batson's quest orientation is not characterized by a strong affiliation with a religious ingroup *per se*, but rather a more spiritual connection with the divine (Batson, 1976). Those with a quest orientation tend to display decreased prejudice, more universal helping behavior, and more altruistic prosocial motivations relative to believers with an intrinsic orientation (e.g., Batson et al., 1999, 1989, 1986). Likewise, Saroglou and colleagues have demonstrated that self-reported spirituality is positively associated with the value of Universalism (the acceptance of others as equal; Saroglou & Galand, 2004). This same measure of spirituality was also found to predict an increased willingness to help both an unknown target and a close family member or friend (Saroglou et al., 2005). Further, Ginges et al. (2009) found that asking Israeli participants about their frequency of prayer decreased support for suicide attacks against Palestinians relative to the synagogue attendance or neutral prime conditions. This finding is consistent with our prediction that activating awareness or connection with a supernatural agent should elicit behavior that reflects the values of an all-loving God. But as we discussed earlier, the motivation underlying the supernatural principle is not necessarily to be universally good, but to conform with what God wants. If one believes that God condones hostility and violence, then thoughts of God should promote such antisocial behavior. Indeed, in their study of religious aggression, Bushman et al. (2007) found that God primes actually increased later aggression against another participant, when subjects first read bible passages condoning violence that were directly attributed to God. The role of obedience to a moral authority is further underscored by Saroglou et al.'s (2009) study on vengeance. In this study, primes (e.g. *Heaven, Spirituality*) increased vengeance taken against another student, but only when primes activated participant submissiveness, and revenge was recommended by the experimenter (who was the authority in the experiment).

Further evidence for separate religious and supernatural principles

We have argued that religious cognition may impact prosocial behavior by two separate mechanisms associated with separate components of the sacred: a *religious* principle, concerned with ingroup protection, and a *supernatural* principle, concerned with virtue and obedience to God. Some past experimental work can be re-interpreted in this framework, as we discussed earlier (e.g. effects of prayer versus religious attendance on condoning suicide attacks, Ginges et al., 2009). But because much of the experimental priming research has used multiple religious terms to activate 'religious' cognition, those studies cannot address the specific connotations or associations activated by different terms (see Table 1). As a result, many priming studies may have inadvertently conflated the religious and supernatural principles, making it difficult to interpret the underlying mechanisms responsible for their effects. Recently, we set out to test whether there is in fact a difference between *religious* and *supernatural* cognitions in facilitating prosocial behavior toward others, by separately priming 'religion' or 'God'. In one study (Ritter, & Preston, 2010), participants were subliminally primed with either the word 'God,' 'Religion,' or a control word before playing a prisoner's dilemma game with another player. Participants were told that one player would be able to view a picture of the other player for 4 seconds, whereas the other player would not have access to such information. The game was rigged, of course, so that everyone was assigned to see a picture of the 'other player' – either a White or Indian male. We found that 'Religion' primes increased co-operation with the ingroup member, compared to both 'God' or control primes. However, the primes had completely different effects on co-operation with the outgroup member. Those primed with 'God' were significantly more likely to co-operate with an outgroup member than people primed with 'Religion' or a control word.

In another study, we examined the effects of God and religion primes on prosocial behavior in a context of a deadly contagious disease: the outbreak of swine flu in 2009. Surveys were conducted from April 27th–May 1st, 2009 – shortly after the first reports of the virus. This was at the height of the public fear and anxiety over the disease, when it was unclear how contagious or fatal the virus would be. At the beginning of the survey, participants were primed with God or religion, by asking either 'Do you believe in God?' (Yes/No) or 'What is your religion?', respectively. At the bottom of the page, participants were asked to distribute 99 cents as they wished between two charities involved in local efforts to fight swine flu: either the American Red Cross or the Mexican Red Cross (at this time, confirmed cases of the virus were limited to the United States and Mexico). Participants primed with religion distributed a larger proportion of money to the ingroup charity than to the outgroup charity. In contrast, participants primed with God distributed more money to the outgroup charity than to the ingroup charity (Hernandez & Preston, 2010).

Although only preliminary evidence, these findings provide three important contributions to the research investigating the relation between religious cognitions and prosocial behavior. First, we provide empirical support for the long-standing speculation that a focus on religion promotes ingroup-specific prosociality. Second, we found a novel effect of outgroup prosociality following God primes, consistent with belief in an omniscient, omnipotent, benevolent God. Finally, these findings highlight the important conceptual distinction between *religious* and *supernatural* cognitions, and moreover, the important differences they may have for behavior. Future research using priming methods should take these differences into consideration and avoid methods that prime multiple religious terms

together, or else suffer from problems with validity and interpretation by conflating distinct components of religious cognition.

Conclusion

All major world religions share a theoretical belief in the Golden Rule – the prescription to treat *all* others as you would like to be treated – but in practice, the effect of religion on moral action has been less than golden. We have reviewed here evidence that individual differences in religiosity lead to different patterns of prosocial behavior toward others – that religious belief fosters co-operation with only some targets under some circumstances (cf. Saroglou, 2006). We also reviewed recent experimental research using priming methods that showed religious priming can increase prosocial actions in some contexts, but increase antisocial behavior in other contexts. Building from this work, we suggest a distinction between religious and supernatural aspects of the sacred, each associated with different moral principles. Activating the *religious* principle should motivate the protection of ingroup values, and so can both facilitate co-operation with fellow group members while inhibiting prosocial behavior toward outsiders. The *supernatural* principle should activate a goal of virtue – to live up to the moral standards set by supernatural agents. Many discussions of religious cognition conflate religion and belief in God(s), but it is essential to recognize the conceptual differences between the two, and the independent effects each may have on our moral goals and actions. Our goal in this review has been to bring order to a seemingly disordered body of literature. Though there may be other conceptualizations of religion and moral action, we hope that the present framework will be useful to other researchers in understanding the complex effects of religious cognition on people's thoughts and actions toward others.

Short Biographies

Jesse Lee Preston received her PhD in Social Psychology from Harvard University and currently holds the position of Assistant Professor at the University of Illinois at Urbana-Champaign. Her research focuses on causal thinking and explanation, religious beliefs, and perceptions of agency in the self and others, and has appeared in journals such as *Journal of Experimental Social Psychology*, *Journal of Personality and Social Psychology*, and *Psychological Science*.

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Endnote

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