AMERICAN PSYCHOLOGICAL ASSOCIATION

Psychology of Religion and Spirituality

© 2025 American Psychological Association
ISSN: 1941-1022

https://doi.org/10.1037/rel0000565

Karma Rewards Me and Punishes You: Self–Other Divergences in Karma Beliefs

Cindel J. M. White, Atlee C. H. Lauder, and Mina Aryaie
Department of Psychology, York University

Many people apply supernatural explanations to understand the cause of important positive and negative life events, but specific types of events are more likely to evoke specific supernatural explanations that best satisfy various personal motives. We test the hypothesis that believers will differ in their willingness to apply karmic explanations to their own experiences compared to the experiences of other people, such that they are more willing to explain their own positive experiences as caused by their own karmic merit (to satisfy self-enhancement motives), while being more willing to explain other people's negative experiences as karmic punishment for others' misdeeds (to satisfy justice motives). In three studies (total N = 2,041), we ask participants to recall events believed to have been caused by karma in their own life and events believed to have been caused by karma in the lives of other people, and we code whether these descriptions of karma-caused events are primarily positive or negative, using a combination of human coders, sentiment analysis, and participants' self-reported evaluations of the events. Results consistently show that positive experiences are more likely to come to mind when they think about how karma influences their own life, but negative experiences are more likely when thinking about other's karma, although this difference was weaker in Singapore and India than in the United States. Results are consistent with predicted self-enhancement biases in karmic attributions and show how personal motivations predict willingness to adopt supernatural explanations for specific life events.

Keywords: karma, self-enhancement, attributions, self

Supplemental materials: https://doi.org/10.1037/rel0000565.supp

This document is copyrighted by the American Psychological Association or one of its allied publishers.
This article is intended solely for the personal use of the individual user and is not to be disseminated broadly.

Many people around the world interpret their life events as caused by the karmic repercussions of their past behavior: Doing good deeds increases the likelihood of future good outcomes, and doing bad deeds increases the likelihood of future bad outcomes, even if the link between actions and outcomes is causally opaque or occurs over long timescales (White & Norenzayan, 2019). As a general worldview, these karmic principles can be applied to understand any type of experience that befalls oneself or another person. However, we predict that karmic attributions are more likely to be applied to some situations than others due to their ability to satisfy particular psychological motivations for believers. Karma is only one of several possible explanatory frameworks that coexist in believers' minds with alternative supernatural and natural explanations (Exline et al., 2023; Johnson, 2021), meaning that different types of events are more or less likely to afford karmic attributions from believers. Specifically, we hypothesize that believers will be more likely to attribute their own positive (vs. negative) experiences to karma because doing so satisfies self-enhancement motives that encourage taking credit for one's successes, whereas believers will be more willing to attribute negative experiences to karma when these negative events befall other people, perhaps especially when these events satisfy motives for fairness and justice through perceived karmic punishment. We test this valence asymmetry in three studies that assessed the difference in positivity/negativity in karma-attributed events that happen to oneself versus other people.

What Is Karma?

The concept of karmic causality is central to the worldview of many Asian religious traditions, including Hinduism and Buddhism (Bronkhorst, 2011), but is also present around the world, including in nonreligious or Christian-heritage communities in Western countries (White & Norenzayan, 2019; White, Norenzayan, & Schaller, 2019). Although cultures may vary in the specific network of associations between karma and other beliefs and values, diverse religious traditions endorse the underlying logic of karmic causality: that impersonal cosmic forces track people's moral behavior, rewarding good behavior with eventual good outcomes and punishing bad actions with eventual bad outcomes. Karmic causality is distinct from other types of supernatural rewards and punishment because it relies on a process that is largely *internal* to individuals and does not rely on obvious external entities—like gods or other humans—who are tracking moral behavior and generating commensurate outcomes. This internal focus is present in both theological writings about karma, but also evident more implicitly in

Sarah A. Schnitker served as action editor.

Cindel J. M. White https://orcid.org/0000-0001-6050-2449

All materials, data, and analysis code are available on the Open Science Framework at https://osf.io/4w5bk/. This research was funded by a Social Sciences and Humanities Research Council, Insight Development grant (430-2022-00762) awarded to Cindel J. M. White.

Correspondence concerning this article should be addressed to Cindel J. M. White, Department of Psychology, York University, 4700 Keele Street, Toronto, ON M3J 1P3, Canada. Email: cjmwhite@yorku.ca

believers' psychological responses, such as in greater feelings of pride (an internally focused positive emotion) for positive experiences believed to have been caused by karma versus God or other people, but greater feelings of gratitude (an externally directed positive emotion) for positive experiences believed to have been caused by God or other people versus karma (White et al., 2024).

Karmic Reasoning About the Self Versus Others

This internal attributional style of karmic reasoning means that beliefs are likely susceptible to other psychological motives that impact reasoning about the self and others. For example, karmic attributions can help cope with uncertainty and give people a sense of confidence and control over their lives, such as by giving people confidence that if they invest in (potentially costly) good deeds and hard work now, it will eventually pay off in good outcomes (see Converse et al., 2012; cf. Hafer, 2000; Hafer & Rubel, 2015, for a comparable argument about Just World beliefs). Karmic beliefs can also satisfy justice motives by making people feel like bad deeds have received fair punishment, even if the punishment did not come at the hands of other human beings (E. Taylor et al., 2022; White, Norenzayan, & Schaller, 2019; Young et al., 2011).

These concerns for just punishment for misdeeds are likely to be especially prevalent when judging the actions of other people. Karmic attributions for others' misfortune may be part of a general motivation to maintain perceptions of a Just World, which manifests in blaming (even ostensibly innocent) victims for their own misfortune (Bizer et al., 2012; Correia & Vala, 2003; Lerner & Simmons, 1966; Tepe et al., 2020) and viewing low-status groups as deserving of their status (Cotterill et al., 2014). In addition, individuals across cultures tend to attribute others' failure to a lack of effort (Amos et al., 2019; Markus & Kitayama, 1991). Therefore, karmic attributions might be easily brought to mind for situations where misfortune befalls another person who deserves punishment for past behavior, perhaps especially when they did not receive punishment through naturalistic means.

These psychological motives are likely to play out differently when evaluating karmic events that happen to oneself because of self-serving biases that come into play when people reason about their own personal responsibility for good versus bad experiences. Substantial evidence indicates that many people, especially in Western cultural contexts, maintain positive self-illusions (S. E. Taylor & Brown, 1988) and have self-serving positive biases in attributions (Mezulis et al., 2004). For example, they tend to view themselves as better-than-average across many dimensions of subjective self-perception (Zell et al., 2020). Moreover, individuals in these contexts are more likely to recall positive events than negative ones in their own lives, while recalling more negative events in others' lives (Betz & Skowronski, 1997; Lotterman & Bonanno, 2014). They are also more optimistic about their own future outcomes than others' future outcomes (Kim & Hancock, 2015; Popova & Halpern-Felsher, 2016; Rentner & Alsulaiman, 2024). In the moral domain, many people view themselves as substantially more positive than they view other people across many judgments. People often view their true self as morally good (Strohminger et al., 2017), construe their past immoral actions in ways that minimize transgression severity (Stanley & De Brigard, 2019; Stanley et al., 2017), and are more likely to attribute their own negative outcomes to external factors. In contrast, people view others' true selves as less morally good (Zhang & Alicke, 2021) and attribute other people's negative outcomes to internal factors (Malle, 2006).

As a result of these self-serving and self-enhancing biases in people's judgments of their own actions, experiences of karmic rewards for good behavior may be more psychologically salient and compelling than instances of karmic punishment for one's own bad behavior. Thinking about karmic rewards may also be especially salient in everyday life, when believers are engaged in moral decision making and can be motivated to engage in prosocial behavior in order to increase their chances of a positive future outcome (Converse et al., 2012; White, Kelly, et al., 2019; Willard et al., 2020). The possibility of karmic rewards for good behavior may be less salient when evaluating the actions of other people, because people are less motivated to make excessively positive attributions for other people's behavior and more motivated to see other people face cosmic punishments for their misdeeds. We predict that these alternative motives will result in asymmetries in the salience of good versus bad karma in the lives of oneself versus other people. This pattern would be consistent with preliminary evidence that people endorse positively valenced beliefs about a Just World for themselves (e.g., their good deeds will increase the probability of good outcomes) more than negatively valenced beliefs (Kaliuzhna, 2020).

Possible Cultural Variation

The basic idea of karmic causality is present across many diverse cultural contexts (Bronkhorst, 2011; Obeyesekere, 2002) and aligns with the broader notion of Just World, which is endorsed in both Asian and Western countries (Chobthamkit et al., 2022; Reich & Wang, 2015; White, Norenzayan, & Schaller, 2019). But other relevant psychological tendencies show meaningful variation across different cultural contexts. Specifically, cross-cultural psychologists have gathered substantial evidence that self-enhancing biases in perception are especially strong in Western cultures and are reduced or even reversed in East Asian samples. Compared to North American or European-heritage samples, East Asian samples are generally more self-critical, more likely to see themselves as personally responsible for bad things that happen to them, and generally have weaker positivity biases in self-perception (e.g., Heine et al., 1999; Kitayama et al., 1997; Markus & Kitayama, 1991; Mezulis et al., 2004; Salvador et al., 2022; Zell et al., 2020). However, other studies indicate that Asian samples also exhibit self-serving biases (Hu et al., 2016). For instance, they associate the self more than others with positivity (Zhou et al., 2013) and expect negative events to befall others more than themselves (Chang et al., 2001). If these self-enhancement motives play a role in how people make karmic attributions, then any positivity bias in how people think about their own karmic experiences may be strongest in North American samples and weaker in Asian samples.

Below, we provide a test of this main pattern in samples from the United States, India, and Singapore, who all report belief in karmic principles in general but who differ in their cultural motives surrounding self-perception and other perception. Belief in karma is more common and widespread in daily life in India and Singapore than in the United States (White, Norenzayan, & Schaller, 2019; Willard et al., 2020). The majority of Americans (67%) identify as Christian or come from Christian-heritage families, meaning that belief in karma is not an orthodox part of people's religious worldviews and exists

This document is copyrighted by the American Psychological Association or one of its allied publishers.
This article is intended solely for the personal use of the individual user and is not to be disseminated broadly.

outside of mainstream Christian religious institutions. In contrast, the majority (80%) of India's population identifies as Hindu, and Singapore has strong Buddhist traditions (31% of Singaporeans today, with an additional 20% identifying as nonreligious; Kramer, 2021; Musa, 2023; Nadeem, 2022), meaning that many people in India and Singapore have learned about karma as part of their religious socialization. These different routes of exposure to karmic teachings may further influence the way that people apply karma to understand events in their everyday lives.

Another important cultural difference is that Singapore and India are collectivistic cultures, which emphasize group goals, norms, and duties, in contrast to individualistic cultures such as the United States, which emphasize independence, personal goals, and success (Hwang et al., 2003; Markus & Kitayama, 1991; Savani et al., 2008). Considering India's and Singapore's focus on social obligations and prioritization of the group over the self, their cultural views and contexts may decrease the presence of positivity bias in views of one's own karma. There might also be differences between Singapore and India due to additional cultural variables. For example, Singaporeans have been found to be especially structured and fearing failure, whereas Indians tend to be more creative, flexible, and frugal (Hubner et al., 2022). Singaporeans have also been found to be particularly critical of themselves (Hubner et al., 2022). Therefore, Singaporeans may be especially unlikely to display self-enhancement biases compared to participants in both India and the United States.

Overview of Present Studies

In three studies, we tested whether karma believers view experiences attributed to karma as more positive when they happen to themselves, but are more likely to view other people's negative experiences as caused by karma. By reanalyzing previously collected data sets, in Study 1, we coded open-ended descriptions of experiences believed to have been caused by karma for their protagonist (self vs. other) and valence (overall positive vs. negative). In Study 2, we manipulated whether participants wrote about a karma-attributed event that happened to themselves or someone else and coded the valence of the experiences. Study 3 provided a preregistered replication of the main findings that also manipulated the protagonist of the event, but asked participants to self-report the event's positivity and other qualities to complement our coding of valence from their written responses. All studies included samples of karma believers from the United States, and Study 2 also included samples of Singaporean Buddhists and Indian Hindus, to test for the generalizability of the self-positivity bias across other cultural groups, which are known to have different cultures of karma belief and different cultural norms regarding self-enhancement that may alter how people apply the concept of karma to interpreting life events.

Measuring these differences between karmic judgments about oneself and about others will contribute to a deeper understanding of the interplay between explicit supernatural beliefs and more implicit psychological motives and how these factors manifest in judgments of everyday life. Although none of these studies directly test participants' underlying desires to self-enhance or restore justice, self-other discrepancies in karmic attributions (despite the general belief that karma influences both oneself and other people in similar ways) would be consistent with theoretical predictions about how supernatural beliefs can be selectively recruited to satisfying intrapsychic motives. By studying karmic attributions, we are testing the generalizability of existing theories of social perception in new domains of judgments and across both Western contexts and nonWestern cultural contexts (India and Singapore) that are underrepresented in existing psychological literature.

Study 1: Free Description of Events Believed to Have Been Caused by Karma

Study 1 examined freely generated descriptions of events believed to have been caused by karma, collected from samples of Americans who reported belief in karma (who were mostly Christian or nonreligious) and a more targeted sample of Hindus and Buddhists from the United States (drawn from data reported in Studies 1 and 2 of White, Kelly, et al., 2019). Participants described an event believed to have been caused by karma, which we then coded for (a) whether the karmic event befell the participants themselves or happened to another person and (b) whether this was a positive or negative event.

Method

This data set was part of a larger survey involving several other variables, examining karma and prosociality, for which the data collection plan, methods, and primary analysis plan were preregistered on the Open Science Framework at https://osf.io/trnx7/ and https://osf.io/2jyde/. Analyses reported below are exploratory. Data and analysis scripts for all studies are available at https://osf.io/4w5bk/.

Participants

Our present study examined a subset of responses from the original data set where participants described events believed to have been caused by karma (excluding participants who were assigned to write about God). We also excluded participants who did not respond appropriately to the question prompt, including those who stated a general belief or opinion of karma (e.g., defined karma in general) rather than a specific event that befell oneself or others (n = 209). We also excluded from analyses 16 responses coded as "mixed" valence, rather than clearly positive or negative. After these exclusions, Study 1 comprised 478 participants: 30% Buddhist, 29% Christian, 22% Hindu, 4% other religions, and 15% nonreligious (Atheist, Agnostic, and nonreligious), with a gender distribution of 67% female and 33% male. The mean age of the participants was 41 years (SD = 14.26, range = 60). Regarding ethnicity, 53% of the participants identified as Caucasian/White, 20% as South Asian, 15% as East Asian, and 12% as other ethnicities. This total sample size had 80% power to detect small effects (w = 0.13).

Procedure

In the original larger survey, participants first completed demographic prescreening questions that established that participants believe in karma, or are from religious traditions where karma belief is prevalent (i.e., self-identified Hindus and Buddhists), before completing a Dictator Game where they were asked to think about karma while deciding to share money with a stranger. Participants

This document is copyrighted by the American Psychological Association or one of its allied publishers.
This article is intended solely for the personal use of the individual user and is not to be disseminated broadly.

then answered open-ended questions about karma and completed a variety of other questions about karma and other supernatural beliefs (additional participants completed analogous questions about God, but are not analyzed here). The questions directly relevant to the present analyses are described below.

Materials

Karma Event Prompt. Participants were asked to write a short paragraph that described "an event in your life that was caused by karma. What were the circumstances? What about the situation made you think that karma was responsible? How did this incident make you feel?"

Coding. Two separate teams of human coders, both blind to the hypothesis, coded for (a) the protagonist of the karmic experience: whether the karmic event befell the participants themselves or happened to another person, and (b) the valence of the event: whether the karmic event was overall positive or negative. Each team of coders attended a group training session to ensure interrater reliability and then worked independently to code participants' responses, and then, the codes were reviewed by the authors. Inconsistently coded responses were reviewed and discussed to determine the final coding, and responses were excluded from further analysis when the authors were unable to clearly identify the appropriate coding category.

For (a) *protagonist of the karmic experience*, coders determined who in the response was the main actor whose past actions shaped their later experiences through karma: oneself versus another person (e.g., a stranger, friend, or spouse). To decipher what category each response fell into, the coders examined if the response was written in first person or third person, if each response described themes of a specific personal event or experience, explicit statements about who experienced karmic outcomes, and any personal reflections regarding the karmic event. When the protagonist was not as clearly indicated by the participant, human coders identified who the main actor was that created a karmic outcome in the situation based on an initial good or bad deed. Responses that did not fit into the self or other categories were excluded (e.g., responses that described karma in a generic way without mentioning a concrete experience).

For (b) *valence*, coders examined if each response had an overall positive, mixed, or negative theme. Valence coders identified whether the main initiating event was good (e.g., being kind to others and donating money to a charity) or bad (e.g., cheating on a romantic partner, lying), considered if the protagonist received an overall positive or negative outcome (e.g., loss or gain of a job, financial or relationship changes, and impact on physical or mental well-being), and identified if the participants included subjectively positive or negative reflections about their karmic event. There was an additional mixed category for responses that were unclear in valence or contained both positive and negative aspects, and these responses were also excluded from the final analysis.

Results

Coded Valence

The majority of participants (86%) reported experiences that happened to oneself, while 14% discussed experiences that happened to others. A Pearson chi-square test showed that there was a statistically significant relationship between the type of experience (self vs. other) and emotional valence (positive vs. negative), $\chi^2(1, N = 478) = 58.17$, $p < .001$, with a higher frequency of positive events (59% positive, 41% negative) associated with experiences that happened to oneself, in contrast with predominantly negative events (92% negative; 8% positive) when experiences happened to others. This suggests that experiences pertaining to oneself are generally viewed more positively than negatively, $\chi^2(1) = 13.29$, $p < .001$, whereas those related to others are perceived more negatively than positively, $\chi^2(1) = 47.52$, $p < .001$.

Sentiment Analysis

In addition to human coders of event valence, as a second convergent method of measuring valence, we also used the *syuzhet* package in R (Jockers, 2015) to code the sentiment of the words used in the descriptions. Sentiment analysis computes the positivity or negativity of words within a written passage, according to word sentiment compiled using the "afinn" lexicon, allowing us to measure whether the topic of writing contained more positive or negative themes for each protagonist. Karma-attributed events coded as happening to oneself had a slightly positive sentiment, $M = 1.40$, $SD = 5.76$, whereas karma-attributed events that happened to others had a slightly negative sentiment, $M = -3.06$, $SD = 4.90$, $d = 0.79$, 95% CI [0.53, 1.05], $t(96) = 6.70$, $p < .001$, consistent with the greater prevalence of positive experiences when writing about oneself versus others that we observed using the manual valence coding above.

Study 2: Random Assignment to Write About Self Versus Others' Karma Experiences

Study 2 examined descriptions of events believed to have been caused by karma, drawn from a study that experimentally manipulated whether participants described a karmic event that happened to oneself or to another person (drawn from Study 1 of White & Willard, 2025), which we coded for whether the event was positive or negative overall. We also examined the generalizability of these patterns across karma believers from three different countries, where people tend to be more likely (the United States) versus less likely (India and Singapore) to display self-enhancement that might impact the strength of the positivity bias in views of one's own karma.

Method

This data set was part of a larger survey that also involved other variables examined (White & Willard, 2025). Participants first completed a writing task where they described an event believed to have been caused by karma before completing other questionnaires about social attitudes and beliefs. Analyses reported below are exploratory, although the original data collection, the recruitment plan, methods, and primary analysis plan were preregistered on the Open Science Framework at https://osf.io/kbqr5/.

Participants

Of the initial sample, participants were excluded if they did not respond appropriately to the open-ended question ($n = 13$), such as participants who did not report any experience, said that the

This document is copyrighted by the American Psychological Association or one of its allied publishers.
This article is intended solely for the personal use of the individual user and is not to be disseminated broadly.

This document is copyrighted by the American Psychological Association or one of its allied publishers.
This article is intended solely for the personal use of the individual user and is not to be disseminated broadly.

experience was not believed to have been caused by karma, or did not report an experience that matches the condition (i.e., described someone else's experience in the Self condition, reported their own experience in the Other condition, or just generically described karma without mentioning a concrete experience). We also excluded from analyses responses coded as "mixed" valence, rather than clearly positive or negative ($n = 38$), and participants assigned to the control condition who did not report any experience. After these exclusions, Study 2 involved 1,268 participants, with a gender distribution of 56% female, 41% male, and 2% nonbinary, and 1% other/preferred not to say their gender. The mean age of the participants was 38 years ($SD = 13.05$, range = 62). Seventy-two percent ($n = 907$) of the participants were from the United States, 16% ($n = 197$) from Singapore, and 13% ($n = 163$) from India. Regarding ethnicity, 54% of the participants identified as Caucasian/White, 15% as Chinese, 10% as South Asian, 7% as East Asian, and 14% as other ethnicities. Due to targeted recruiting, the Indian sample all identified as Hindu, and the Singaporean sample all identified as Buddhist. The U.S. participants were not targeted based on religious affiliation and identified as 41% Christian, 2% Jewish, 1% Buddhist, 1% Muslim, 5% other religions, and 50% nonreligious. This total sample size had 80% power to detect small effects ($w = 0.08$) in the total sample and small-to-medium effects within each country ($w < 0.22$).

Materials

Karma Event Prompt. Participants were randomly assigned to describe an event believed to have been caused by karma that happened to themselves or happened to someone else. In the *Self* condition, participants were reminded that "when you do a good deed this creates merit that makes you more likely to experience good fortune in the future. In contrast, doing bad deeds is believed to increase your chance of misfortune" and instructed to "write a brief description of an event in your own life that has been caused by karma. Describe how your past actions created merit that shaped your later experiences, through the law of karma." In the *Other* condition, participants were reminded that "other people's good fortune is caused by the karmic merit created by their past good deeds. In contrast, people's misfortune can often be explained by their past bad deeds" and instructed to "write a brief description of an event in a person's life that has been caused by karma. You can write about an event that happened to someone you know, or something you witnessed or heard about happening to a stranger. Describe how this person's past actions created merit that shaped their later experiences, through the law of karma." To ensure the question was also eligible to nonbelievers, participants were prompted "If you don't believe in karma, write about an event that someone else might think was caused by karma."

Valence Coding. For Study 2, we used the same coding process and training as outlined in Study 1 to identify whether the karmic event was considered a generally positive or negative event. Responses that did not describe a specific experience or that were unclear in valence and contained a mix of positive and negative aspects within the response were coded as mixed and were excluded from the final analysis.

Results

Coded Valence

Across all participants in all countries, a Pearson chi-square test showed that there was a statistically significant relationship between the type of experience (self vs. other) and emotional valence (positive vs. negative), $\chi^2(1, N = 1{,}268) = 331.87$, $p < .001$. The result indicated a higher frequency of positive responses (69% positive, 31% negative) associated with experiences that happened to oneself, $\chi^2(1) = 78.57$, $p < .001$. In contrast, the responses concerning experiences that happened to others were predominantly negative (82% negative, 18% positive), $\chi^2(1) = 287.49$, $p < .001$. Further, we examined results separately for participants from the United Sates, India, and Singapore and found a similar self-positivity bias in all three countries (see Figure 1). For participants from India, the chi-square, $\chi^2(1, N = 165) = 23.04$, $p < .001$, indicated a higher frequency of positive responses (65%) than negative responses associated with experiences that happened to oneself, while responses concerning experiences that happened to others were predominantly negative (74%) rather than positive, ps < .02. For Singaporean participants, the chi-square, $\chi^2(1, N = 166) = 21.22$, $p < .001$, indicated a higher frequency of negative responses (83%) associated with events that happened to others, $p < .001$, while responses concerning experiences that happened to oneself were more positive (52%, with no significant difference between the likelihood of positive and negative experiences for oneself, $p = .63$). Similarly, for participants from the United States, the chi-square, $\chi^2(1, N = 873) = 262.70$, $p < .001$, showed a higher frequency of positive responses (71%) than negative responses associated with experiences that happened to oneself, whereas experiences that happened to others were predominantly negative (83%) rather than positive, ps < .001. A similar pattern was observed for both Christian and nonreligious participants in the United States (ps < .001) and for both participants who explicitly endorse belief in karma and those who overtly deny believing in karma (ps < .001), demonstrating consistency in this self-positivity bias across participants from multiple religious backgrounds and levels of explicit supernatural belief.

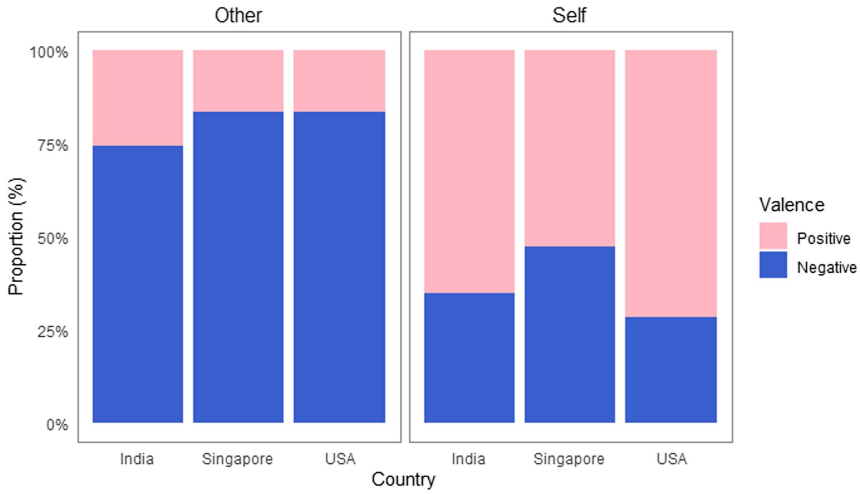
We next used a Pearson's chi-squared test to examine whether the valence of experience varied across countries (Figure 1). In the Self condition, a Pearson's chi-squared test indicated a statistically significant association between emotional valence and country, $\chi^2(2, N = 572) = 10.18$, $p = .006$, with the United States having a higher frequency (71%) of positive responses associated with experiences that happened to oneself compared to India (65%) and Singapore (52%). However, in the Other condition, there was no difference between countries, $\chi^2(2, N = 695) = 4.84$, $p = .089$, with the majority of experiences believed to have been caused by karma being negative in the United States (84%), India (74%), and Singapore (83%). These results indicate that a higher proportion of experiences pertaining to oneself were positive compared to those involving others, with this trend appearing especially pronounced in the United States.

Sentiment Analysis

We also measured the positivity or negativity of participants' written descriptions using sentiment analysis. In all three countries,

Figure 1

Target of Experience (Self vs. Other) and Coded Emotional Valence (Positive vs. Negative) of Events Attributed to Karma Were Reported by Participants in India, Singapore, and the United States



Note. See the online article for the color version of this figure.

events that happened to oneself were measured to have more positivity in sentiment than events that happened to someone else, United States: $M_{self} = 2.13$ ($SD = 5.24$), $M_{other} = -2.63$ ($SD = 6.50$), $d = 0.80$, 95% CI [0.67, 0.94], $t(888) = 12.18$, $p < .001$; India: $M_{self} = 0.91$ ($SD = 4.56$), $M_{other} = -1.34$ ($SD = 4.78$), $d = 0.48$, 95% CI [0.16, 0.80], $t(144) = 3.03$, $p = .003$; Singapore: $M_{self} = 1.29$ ($SD = 4.44$), $M_{other} = -1.59$ ($SD = 4.18$), $d = 0.67$, 95% CI [0.37, 0.97], $t(135) = 4.44$, $p < .001$. Consistent with the manually coded results, the self-positivity bias was present across all three countries, but largest in magnitude in the United States and smaller in India and Singapore.

Study 3: Random Assignment and Self-Reported Evaluations of Self Versus Others' Experiences

Study 3 was a preregistered replication of the key findings in a sample of American karma believers. In addition to coding the written descriptions of events (as in previous studies), we also included a broader set of self-reported judgments of event positivity and emotions elicited by the event and general beliefs about how karma affects oneself and others. We also measured general tendencies to engage in impression management (Blasberg et al., 2014) in order to test whether the self-positivity biases remain in karmic attributions after controlling for participants' general willingness to present themselves in a socially desirable way. We specifically targeted participants who explicitly believed in karma and excluded nonbelievers from our analyses to provide a cleaner test for how karmic attributions are made by people who think karma is a real and personally relevant force in their lives.

Method

The recruitment plan, methods, and plan for the analyses reported below were preregistered on the Open Science Framework at https://osf.io/4w5bk/.

Participants

Participants from the United States were recruited from Prolific. We were primarily interested in the responses of karma believers; therefore, we recruited participants who indicated in a previous unrelated survey from our lab that they believe in karma somewhat, a lot, quite a lot, or very much and only retained for analysis participants who also stated within our survey that they believe in karma (i.e., those who scored above the midpoint on the karma belief scale). We aimed to recruit a final sample size of approximately 300 participants.

Following preregistered criteria, participants were excluded from the final sample if they failed to complete the survey, if they failed two simple attentiveness and English comprehension checks, if multiple responses came from the same Internet Protocol address ($n = 16$), or if they reported within the survey that they did not believe in karma ($n = 72$). Participants were required to report a personal experience believed to have been caused by karma, and we further excluded those who did not report such an experience and who stated that their experience was not believed to have been caused by karma or if their personal experience did not match their assigned experimental condition (i.e., reported someone else's experience in the Self condition or reported their own experience in the Other condition, or just described karma in a generic way), $n = 102$.

After these exclusions, Study 3 included 295 participants, with a gender distribution of 50% female, 49% male, and 1% nonbinary. The mean age of the participants was 44 years ($SD = 15.07$, range = 67). Regarding ethnicity, 65% of the participants identified as Caucasian/White, 18% as African American, 7% as Hispanic or Latino, 4% as East Asian, 1% as South Asian and Southeast Asian, and 4% as other ethnicities. The distribution of religious affiliation was 63% Christian, 2% Buddhist, 2% Muslim, 7% other religions, and 26% nonreligious (Atheist, Agnostic, and

This document is copyrighted by the American Psychological Association or one of its allied publishers.
This article is intended solely for the personal use of the individual user and is not to be disseminated broadly.

nonreligious). This sample had 80% power to detect relatively small-to-medium differences between conditions (e.g., $w = 0.16$, Cohen's $d = 0.33$).

Materials

Karma Event Prompt. Participants were randomly assigned to describe an event interpreted to be caused by karma that happened to themselves or happened to someone else, following prompts adapted from Study 2. In the *Self* condition, participants were then instructed to "write a brief description of an event in your own life that has been caused by karma. Describe how your own past actions shaped your later experiences, through the law of karma." In the *Other* condition, participants were instructed to

> write a brief description of an event in someone else's life that has been caused by karma. You can write about an event that happened to someone you know, or something you witnessed or heard about happening to a stranger. Describe how this person's past actions shaped their later experiences, through the law of karma.

Valence Coding. We used the same coding process and training as in Studies 1 and 2 to identify whether the karmic event was considered a generally positive or negative event. Responses that were not about a specific experience or that were unclear in valence and contained a mix of positive and negative aspects were coded as mixed and were excluded from the final analysis.

Evaluation of the Experience. After providing their open-ended response about a karmic event, participants reported their *overall evaluation* of the event ("How negative or positive was this experience overall?"; 7-point scale ranging from *extremely bad* to *extremely good*), who was primarily responsible for creating the karmic outcome (oneself vs. others), and in the *Other* condition who this person was to the participant (e.g., friend, spouse). They also rated how strongly the target person "deserved this experience" and "is generally a bad person or a good person" and whether they believe that this person "had control over what happened in this event," each on 5-point scales.

Emotions. Participants reported on 5-point scales (ranging from *not at all* to *extremely*) how strongly they felt each of 17 different emotions about the karma-attributed experience, which were divided into a *positive emotion* composite score, which includes the items grateful, amused, happy, optimistic, proud, content, awe, and surprised ($\alpha = .88$), and a *negative emotion* composite score, which included angry, sad, afraid, anxious, scornful, embarrassed, guilty, and ashamed ($\alpha = .90$). Exploratory factor analyses of the emotion items revealed that a final item (sympathetic) did not load strongly on either a positive emotion or negative emotion factor, and it was excluded from analyses reported below.

Views of Karma. Participants completed several additional closed-ended questions about karma as additional measures of how positive or negative people see the influence of karma on themselves and others. Participants reported their general belief in karma through a 10-item, 5-point Likert scale, adapted from White, Norenzayan, and Schaller (2019), that referred to both the general belief that karma influences the life of oneself/others and the belief that karma impacts positive situations (e.g., good deeds are rewarded) and that it impacts negative situations (e.g., bad deeds are punished). Half of the items referred to oneself as the target of karma's influence, and the other half referred to other people as the target of karma, allowing us to test whether participants generally believe karma to be more positive toward oneself versus others when asked about it directly. Additional questions asked directly whether participants believe that they "experience more positive karma than the average person" (5-point scale ranging from *definitely not* to *definitely yes*) and "What is the first experience that comes to mind when you think of negative [positive] events caused by karma; your own experience or someone else's experience?"

Individual Differences and Demographics. Participants finally answered several questions about their personal background (level of education, gender, ethnicity, age, political orientation, religion, and years of formal education), as well as other individual differences in religiosity, experiences with luck, and the Just World Belief Scale (Lipkus et al., 1996). They also completed the Bidimensional Impression Management Index (Blasberg et al., 2014; $\alpha = .80$) as a measure of their general willingness to describe themselves in exaggeratedly socially desirable ways. These measures were not used in the primary analyses, but used to explore the robustness of the findings below.

Results

Do Self Versus Other Events Differ in Valence?

Coded Valence. A Pearson chi-square test showed that there was a statistically significant association between the type of experience (self vs. other) and emotional valence coded from the written response (positive vs. negative), $\chi^2(1, N = 294) = 32.63$, $p < .001$. Responses concerning experiences that happened to others were predominantly negative (81%) rather than positive, $\chi^2(1) = 58.23$, $p < .001$. In contrast, there was a higher frequency of positive responses (52%) associated with experiences that happened to oneself. There was no significant difference in the likelihood of describing positive versus negative experiences that happened to oneself, $\chi^2(1) = 0.18$, $p = .67$.

Self-Reported Valence. A two-sample t test was conducted to compare the participants' self-reported overall evaluation (positive vs. negative) based on the conditions (self vs. other). The results indicated a significant difference between the two groups, $t(283.52) = -5.39$, $p < .001$, $d = 0.64$, 95% CI [0.40, 1.87]. The participants in the Self condition evaluated their experience significantly more positively ($M = 4.89$, $SD = 2.11$) compared to participants in the Other condition ($M = 3.54$, $SD = 2.12$). A one-sample t test comparing these scores to the scale midpoint (*neither good nor bad*) revealed that participants in the Self condition tended to rate the event significantly positive (i.e., above scale midpoint), $t(136) = 4.93$, $p < .001$, and in the Other conditions, participants rated the event significantly negative (i.e., below scale midpoint), $t(150) = 2.65$, $p < .001$. These results were robust to controlling for participants' overall level of belief in karma and impression management tendencies (see Supplemental Results for additional robustness checks). This suggests that the pattern of greater positivity when describing one's own karmic experiences is not reducible to a general response bias favoring socially desirable responding nor explained by how strongly someone believes karma is real and available to affect daily life. Instead, this positivity discrepancy may

This document is copyrighted by the American Psychological Association or one of its allied publishers.
This article is intended solely for the personal use of the individual user and is not to be disseminated broadly.

be inherent to how people think about karmic causality and how they are accustomed to thinking about karma's role in lived experiences.

Self-Reported Emotions. A two-sample *t* test was conducted to examine if self-reported emotions (positive vs. negative) differ between the conditions (others vs. self). For positive emotions, the results showed a significant difference between the two conditions (self vs. other), $t(279.88) = -4.35$, $p = .001$, $d = 0.51$, 95% CI [0.27, 0.74]. Participants in the Self condition ($M = 23.42$, $SD = 9.23$) reported significantly higher positive emotions compared to participants in the Other condition ($M = 18.97$, $SD = 8.22$). There was also a significant difference in negative emotions between the two conditions, $t(241.93) = -3.96$, $p < .001$. Participants in the Self condition ($M = 15.88$, $SD = 8.41$) reported significantly higher negative emotions compared to participants in the Other condition ($M = 12.52$, $SD = 5.74$), $d = 0.47$, 95% CI [0.24, 0.70].

To test the robustness of these differences between conditions, we conducted a multiple regression analysis to examine whether condition (self vs. other), general impression management, and general belief in karma predict emotions (positive and negative). The results showed that both stronger positive and stronger negative emotions were felt when thinking about one's own experiences, even when controlling for general impression management, which also predicted a greater likelihood of reporting positive emotions (see Table 1).

Sentiment Analysis. We also measured the positivity or negativity of participants' written descriptions using sentiment analysis. Events that happened to oneself were measured to have more positivity in sentiment than events that happened to someone else, $M_{self} = 1.93$ ($SD = 6.42$), $M_{other} = -1.60$ ($SD = 6.50$), $d = 0.55$, 95% CI [0.31, 0.78], $t(290) = 4.69$, $p < .001$.

Exploration of Other Possible Differences Between Self and Other Experiences

Two-sample *t* tests were conducted to compare how self and other experiences differ in deservingness of experience, morality of the person, and controllability of the experience. Participants rated the deservingness of the experience for others ($M = 4.33$) higher than for the self ($M = 4.09$), $t(284.49) = -2.30$, $p = .022$, $d = 0.27$, 95% CI [0.04, 0.50]. Participants rated themselves ($M = 4.17$) as having higher morality than others ($M = 2.93$), $t(228.64) = 10.08$, $p < .001$, $d = 1.17$, 95% CI [0.91, 1.42]. However, in terms of the experience's controllability, there was no significant difference between the self ($M = 3.22$) and others ($M = 3.20$), $t(289.96) = 0.17$, $p = .87$, $d = 0.02$, 95% CI [−0.21, 0.25]. Exploratory multiple regressions (available in the Supplemental Results) revealed that self-reported positive evaluations of the event were positively predicted by perceived deservingness, $b = 0.73$, 95% CI [0.49, 0.98], $p < .001$, and recipient morality, $b = 0.82$, 95% CI [0.61, 1.03], $p < .001$, but not perceived control over the event, $b = -0.13$, 95% CI [−0.30, 0.04], $p = .13$.

Do General Beliefs in Karma for Self Versus Others Differ in Valence?

A linear mixed-effects model was conducted to examine whether the general belief in positive karma and negative karma differs depending on the target of belief (e.g., "When I experience good fortune, I have brought it upon myself by my previous behavior" vs. "When someone experiences good fortune, they have brought it upon themselves by their previous behavior"), controlling for the general (nonvalenced) belief that karma is a supernatural force that affects oneself and others. For positive karma beliefs, the target of positive karma (self vs. other) did not predict belief in positive karma, $b = -0.05$, 95% CI [−0.11, 0.01], $p = .104$, after controlling for the general belief that karma affects oneself and others, $b = 0.15$, 95% CI [0.09, 0.20], $p < .001$. Similarly, the target of negative karma did not predict belief in negative karma, $b = 0.03$, 95% CI [−0.04, 0.11], $p = .374$, after controlling for the general belief that karma affects oneself and others, $b = 0.15$, 95% CI [0.08, 0.22], $p < .001$. These findings suggest that there are no significant differences between the self and other in general beliefs that karma is positive or that karma is negative in these direct, closed-ended questions, in contrast to the large differences in the valence of spontaneously generated events described above.

A one-sample *t* test was conducted to determine whether participants experience more positive karma than the average person. The results indicated that the mean ($M = 3.17$, $SD = 0.88$) was significantly greater than the scale midpoint of 3, $t(289) = 61.52$, $p < .001$, indicating that participants tend to agree that they experience more positive karma than the average person.

Finally, for a direct question about what comes first to mind when participants think of negative and positive events believed to have been caused by karma, we conducted a chi-square test of independence to examine the relationship between the type of karmic event (positive vs. negative) and the type of experience recalled (self

Table 1

Multiple Regression Predicting Positive and Negative Emotions From Condition (Self = 1 vs. Other = 0), General Impression Management, and General Belief in Karma

	Positive emotion		Negative emotion	
Predictor	*b* [95% CI]	*p*	*b* [95% CI]	*p*
Intercept	8.91 [0.47, 17.34]	.039	13.05 [6.07, 20.04]	<.001
Karma belief	0.77 [−1.17, 2.71]	.437	0.62 [−0.99, 2.23]	.448
Impression management	2.71 [0.85, 4.57]	.004	−1.08 [−2.63, 0.46]	.167
Condition (self)	4.45 [2.47, 6.43]	<.001	3.3 [1.66, 4.94]	<.001
R^2/R^2 adjusted	0.091/0.082		0.060/0.050	

This document is copyrighted by the American Psychological Association or one of its allied publishers.
This article is intended solely for the personal use of the individual user and is not to be disseminated broadly.

vs. others). There was a significant association between the type of karma event and the type of experience recalled, $\chi^2(1, N = 587) = 20.617$, $p < .001$. For negative karmic events, 47% reported they first thought of an event that befell themselves ($n = 137$), and 53% reported events that happened to others ($n = 156$). For positive karma recall events, 64% reported self-related events first came to mind ($n = 188$), compared to 36% who reported events that befell others ($n = 106$). This indicates that positive karma–attributed events are more likely to be associated with self-recalled experiences, while negative karma–attributed events are more likely to be associated with others-recalled experiences.

General Discussion

Across three studies, we found that karma believers are more likely to spontaneously report positive experiences when describing karma-attributed events that happened to themselves, while being more likely to report negative experiences when describing karma-attributed events that happened to someone else. This self-positivity association was present across several different indicators of event positivity, including human-coded and computer-coded valence in events described by participants, and participants' self-reported positivity of the karmic event. We also found the same pattern of greater self-caused positive karmic events across multiple cultural contexts with different religious traditions and typical attributional styles, although it was stronger in the United States than in Singaporean and Indian samples. This cross-cultural difference is consistent with previously documented patterns of greater self-enhancement biases in Western than in Asian samples. Similarly, the negativity bias found in our study toward others is consistent with cultural literature on the attributions and beliefs toward others. These results imply that various psychological motives of self and other perception play a role in how believers apply karmic explanations to understand events in the world. Even though the general logic of karmic causality allows believers to explain both good and bad events as equally plausible outcomes of karmic payback, the greater willingness to perceive their own (vs. others') karmic experiences as positive is consistent with the hypothesis that these karmic attributions also fulfill broader psychological motives to perceive oneself as virtuous and deserving of good fortune and to perceive other people as recipients of just punishments for their misdeeds.

These findings are consistent with other patterns of positivity biases in self-perception that have been documented in secular attributional styles (e.g., Mezulis et al., 2004; Rentner & Alsulaiman, 2024; Strohminger et al., 2017; Zell et al., 2020) and beliefs about a Just World (Kaliuzhna, 2020) and show a case where these psychological biases are also likely to appear in supernatural attributions. The types of supernatural attributions that people make for life events are likely to have important downstream consequences for other psychological processes, such as the emotional responses to life events (e.g., pride for good experiences and shame for bad experiences; e.g., White et al., 2024) and motivations to pursue future good deeds and avoid future bad deeds based on whether they are expected to elicit similar supernatural rewards and punishments in the future (Fitouchi & Singh, 2022; Norenzayan et al., 2016). Our studies imply that willingness to apply specific supernatural explanations to life events is likely structured by both general beliefs about the operating rules of a given supernatural agent and personal motives that make belief in these operating rules cognitively compelling.

For example, previous research has documented that attributions to God often follow a pattern of the "God of the good gaps," such that God is perceived as ultimately benevolent and powerful and is most often credited with causing life events that are positive, important, and outside of typical human control (Nieuwboer et al., 2016; Ramsay et al., 2023; Spilka & Schmidt, 1983; Van Cappellen et al., 2024), thereby satisfying a variety of personal motives for safety and control over a dangerous, uncertain world (Laurin & Kay, 2017). Beliefs about karma encompass both positive/rewarding and negative/punitive aspects (White, Norenzayan, & Schaller, 2019; Willard et al., 2020) and are readily applied to explain others' misfortune (e.g., Callan et al., 2014; E. Taylor et al., 2022, p. 202; White, Norenzayan, & Schaller, 2019). But our results also suggest the influence of positivity biases in self-perception that reduce willingness to apply negative karmic attributions to oneself. Other types of supernatural attributions (e.g., to fate or to Satanic influences) are likely to have their own unique causal logics that interact with psychological motives in distinct ways that make them chronically accessible in some situations more than others (Exline et al., 2023; Norenzayan & Lee, 2010). Understanding how these supernatural beliefs are applied in everyday life therefore requires understanding both people's general beliefs about the traits and typical operation of these supernatural forces and the psychological motives that make these supernatural beliefs especially compelling to individuals.

Limitations and Future Directions

The present studies measured what first came to mind when participants think about karma-attributed events, which provides valuable insight into how karmic attributions might spontaneously come to mind in everyday life. Open-ended descriptions, like those we gathered in these studies, are useful to reveal what ideas are chronically and easily accessible to participants, which may differ from responses elicited by more direct, closed-ended questions. For example, in Study 3, closed-ended questions about belief in positive and negative karma for oneself and others did not show significant differences in belief about how karma affects oneself and others, indicating that while participants believe that both positive and negative karma events befall oneself, it was the positive self-caused events that came to mind more easily in the open-ended responses. Further research using alternative methods is needed to test the robustness of this pattern, such as by specifically asking participants to report positive and negative events in their own and others' lives and assessing how easily accessible and plausible are karmic interpretations of these events. Future studies could also test whether believers interpret the same events differently depending on whether they happen to oneself or others, such as being more likely to accept karmic explanations when good events are imagined happening to oneself rather than another person.

Additional research is also needed to confirm the underlying mechanisms that generated the observed self-other differences. The present results are consistent with hypothesized patterns of self-serving biases in attributions for life events, including expected cross-cultural variability in these self-enhancement

This document is copyrighted by the American Psychological Association or one of its allied publishers.
This article is intended solely for the personal use of the individual user and is not to be disseminated broadly.

motives. However, we were not able to directly test which motives were most important to shaping participants' responses, and future research would benefit from a more careful study of possible mechanisms. For example, if self-enhancement motives are especially important for generating positive karmic attributions for oneself, then positive self-attributions may be especially likely when participants want to present a positive view of themselves to observers (vs. when responding anonymously) or when their positive self-view has been threatened and karmic attributions provide a pathway to restore self-esteem. Alternatively, to test the importance of justice motives in shaping karmic attributions of others, future research could manipulate the injustice of moral transgressions (e.g., whether or not they go unpunished by secular forces) and test whether this increases karmic attributions for other's negative experiences. Additional evidence of when people make karmic attributions (and when they do not) would provide stronger converging evidence for underlying psychological processes.

Real-world processes of supernatural attributions likely involve a combination of both spontaneously arising ideas about supernatural causes and prompts from other people and other external cultural influences that suggest the appropriate interpretation of life events. These personal and social ideas are likely to be accepted or rejected in part based on how well they fit with a variety of psychological motives that encourage people to view themselves as virtuous and the world as fair, resulting in a consistently greater willingness to accept good experiences as one's own karmic rewards and bad experiences as other people's karmic punishments.

References

Amos, C., Zhang, L., & Read, D. (2019). Hardworking as a heuristic for moral character: Why we attribute moral values to those who work hard and its implications. *Journal of Business Ethics*, *158*(4), 1047–1062. https://doi.org/10.1007/s10551-017-3725-x

Betz, A. L., & Skowronski, J. J. (1997). Self-events and other-events: Temporal dating and event memory. *Memory & Cognition*, *25*(5), 701–714. https://doi.org/10.3758/BF03211313

Bizer, G. Y., Hart, J., & Jekogian, A. M. (2012). Belief in a just world and social dominance orientation: Evidence for a mediational pathway predicting negative attitudes and discrimination against individuals with mental illness. *Personality and Individual Differences*, *52*(3), 428–432. https://doi.org/10.1016/j.paid.2011.11.002

Blasberg, S. A., Rogers, K. H., & Paulhus, D. L. (2014). The Bidimensional Impression Management Index (BIMI): Measuring agentic and communal forms of impression management. *Journal of Personality Assessment*, *96*(5), 523–531. https://doi.org/10.1080/00223891.2013.862252

Bronkhorst, J. (2011). *Karma*. University of Hawai'i Press. https://muse.jhu.edu/book/1739

Callan, M. J., Sutton, R. M., Harvey, A. J., & Dawtry, R. J. (2014). Immanent justice reasoning. In M. P. Zanna & J. M. Olson (Eds.), *Advances in experimental social psychology* (Vol. 49, pp. 105–161). Elsevier. https://doi.org/10.1016/B978-0-12-800052-6.00002-0

Chang, E. C., Asakawa, K., & Sanna, L. J. (2001). Cultural variations in optimistic and pessimistic bias: Do Easterners really expect the worst and Westerners really expect the best when predicting future life events? *Journal of Personality and Social Psychology*, *81*(3), 476–491. https://doi.org/10.1037/0022-3514.81.3.476

Chobthamkit, P., Sutton, R. M., Uskul, A. K., & Chaleeraktrakoon, T. (2022). Personal versus general belief in a just world, karma, and well-being: Evidence from Thailand and the U.K. *Social Justice Research*, *35*(3), 296–317. https://doi.org/10.1007/s11211-022-00393-4

Converse, B. A., Risen, J. L., & Carter, T. J. (2012). Investing in karma: When wanting promotes helping. *Psychological Science*, *23*(8), 923–930. https://doi.org/10.1177/0956797612437248

Correia, I., & Vala, J. (2003). When will a victim be secondarily victimized? The effect of observer's belief in a just world, victim's innocence and persistence of suffering. *Social Justice Research*, *16*(4), 379–400. https://doi.org/10.1023/A:1026313716185

Cotterill, S., Sidanius, J., Bhardwaj, A., & Kumar, V. (2014). Ideological support for the Indian caste system: Social dominance orientation, right-wing authoritarianism and karma. *Journal of Social and Political Psychology*, *2*(1), 98–116. https://doi.org/10.5964/jspp.v2i1.171

Exline, J. J., Wilt, J. A., Stauner, N., Schutt, W. A., Pargament, K. I., Fincham, F. D., & May, R. W. (2023). Supernatural operating rules: How people envision and experience God, the devil, ghosts/spirits, fate/destiny, karma, and luck. *Psychology of Religion and Spirituality*, *15*(4), 504–514. https://doi.org/10.1037/rel0000444

Fitouchi, L., & Singh, M. (2022). Supernatural punishment beliefs as cognitively compelling tools of social control. *Current Opinion in Psychology*, *44*, 252–257. https://doi.org/10.1016/j.copsyc.2021.09.022

Hafer, C. L. (2000). Investment in long-term goals and commitment to just means drive the need to believe in a just world. *Personality and Social Psychology Bulletin*, *26*(9), 1059–1073. https://doi.org/10.1177/0146167202611004

Hafer, C. L., & Rubel, A. N. (2015). The why and how of defending belief in a just world. In J. M. Olson & M. P. Zanna (Eds.), *Advances in experimental social psychology* (Vol. 51, pp. 41–96). Academic Press. https://doi.org/10.1016/bs.aesp.2014.09.001

Heine, S. J., Lehman, D. R., Markus, H. R., & Kitayama, S. (1999). Is there a universal need for positive self-regard? *Psychological Review*, *106*(4), 766–794. https://doi.org/10.1037/0033-295X.106.4.766

Hu, T., Zhang, D., & Ran, G. (2016). Self-serving attributional bias among Chinese adolescents. *Personality and Individual Differences*, *91*, 80–83. https://doi.org/10.1016/j.paid.2015.10.008

Hubner, S., Frese, M., Song, Z., Tripathi, N., Kaschner, T., & Le Kong, X. (2022). An Asia-centric approach to team innovation: Cultural differences in exploration and exploitation behavior. *Journal of Business Research*, *138*, 408–421. https://doi.org/10.1016/j.jbusres.2021.09.009

Hwang, A., Francesco, A. M., & Kessler, E. (2003). The relationship between individualism–collectivism, face, and feedback and learning processes in Hong Kong, Singapore, and the United States. *Journal of Cross-Cultural Psychology*, *34*(1), 72–91. https://doi.org/10.1177/0022022102239156

Jockers, M. L. (2015). *Syuzhet: Extract sentiment and plot arcs from text* [Computer software]. https://github.com/mjockers/syuzhet

Johnson, K. A. (2021). God… Karma, Jinn, spirits, and other metaphysical forces. *Current Opinion in Psychology*, *40*, 10–14. https://doi.org/10.1016/j.copsyc.2020.08.001

Kaliuzhna, M. (2020). Symmetries and asymmetries in the belief in a just world. *Personality and Individual Differences*, *161*, Article 109940. https://doi.org/10.1016/j.paid.2020.109940

Kim, S. J., & Hancock, J. T. (2015). Optimistic bias and Facebook use: Self-other discrepancies about potential risks and benefits of Facebook use. *Cyberpsychology, Behavior, and Social Networking*, *18*(4), 214–220. https://doi.org/10.1089/cyber.2014.0656

Kitayama, S., Markus, H. R., Matsumoto, H., & Norasakkunkit, V. (1997). Individual and collective processes in the construction of the self: Self-enhancement in the United States and self-criticism in Japan. *Journal of Personality and Social Psychology*, *72*(6), 1245–1267. https://doi.org/10.1037/0022-3514.72.6.1245

Kramer, S. (2021, September 21). *Key findings about the religious composition of India*. Pew Research Center. https://www.pewresearch.org/short-reads/2021/09/21/key-findings-about-the-religious-composition-of-india/

This document is copyrighted by the American Psychological Association or one of its allied publishers.
This article is intended solely for the personal use of the individual user and is not to be disseminated broadly.

This document is copyrighted by the American Psychological Association or one of its allied publishers.
This article is intended solely for the personal use of the individual user and is not to be disseminated broadly.

Laurin, K., & Kay, A. C. (2017). The motivational underpinnings of belief in God. In J. M. Olson (Ed.), *Advances in experimental social psychology* (Vol. 56, pp. 201–257). Academic Press. https://doi.org/10.1016/bs.aesp.2017.02.004

Lerner, M. J., & Simmons, C. H. (1966). Observer's reaction to the "innocent victim": Compassion or rejection? *Journal of Personality and Social Psychology*, *4*(2), 203–210. https://doi.org/10.1037/h0023562

Lipkus, I. M., Dalbert, C., & Siegler, I. C. (1996). The importance of distinguishing the belief in a just world for self versus for others: Implications for psychological well-being. *Personality and Social Psychology Bulletin*, *22*(7), 666–677. https://doi.org/10.1177/0146167296227002

Lotterman, J. H., & Bonanno, G. A. (2014). Those were the days: Memory bias for the frequency of positive events, depression, and self-enhancement. *Memory*, *22*(8), 925–936. https://doi.org/10.1080/09658211.2013.856924

Malle, B. F. (2006). The actor-observer asymmetry in attribution: A (surprising) meta-analysis. *Psychological Bulletin*, *132*(6), 895–919. https://doi.org/10.1037/0033-2909.132.6.895

Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, *98*(2), 224–253. https://doi.org/10.1037/0033-295X.98.2.224

Mezulis, A. H., Abramson, L. Y., Hyde, J. S., & Hankin, B. L. (2004). Is there a universal positivity bias in attributions? A meta-analytic review of individual, developmental, and cultural differences in the self-serving attributional bias. *Psychological Bulletin*, *130*(5), 711–747. https://doi.org/10.1037/0033-2909.130.5.711

Musa, M. A. (2023). Singapore's secularism and its pragmatic approach to religion. *Religions*, *14*(2), Article 219. https://doi.org/10.3390/rel14020219

Nadeem, R. (2022, September 13). *How U.S. religious composition has changed in recent decades*. Pew Research Center. https://www.pewresearch.org/religion/2022/09/13/how-u-s-religious-composition-has-changed-in-recent-decades/#fn-70301-6

Nieuwboer, W., van Schie, H. T., Karremans, J. C., & Wigboldus, D. H. J. (2016). Supernatural agency and forgiveness. *Journal for the Cognitive Science of Religion*, *3*(1), 85–110. https://doi.org/10.1558/jcsr.v3i1.18402

Norenzayan, A., & Lee, A. (2010). It was meant to happen: Explaining cultural variations in fate attributions. *Journal of Personality and Social Psychology*, *98*(5), 702–720. https://doi.org/10.1037/a0019141

Norenzayan, A., Shariff, A. F., Gervais, W. M., Willard, A. K., McNamara, R. A., Slingerland, E., & Henrich, J. (2016). The cultural evolution of prosocial religions. *Behavioral and Brain Sciences*, *39*, Article e1. https://doi.org/10.1017/S0140525X14001356

Obeyesekere, G. (2002). *Imagining karma: Ethical transformation in Amerindian, Buddhist, and Greek rebirth*. University of California Press. https://doi.org/10.1525/california/9780520232204.001.0001

Popova, L., & Halpern-Felsher, B. L. (2016). A longitudinal study of adolescents' optimistic bias about risks and benefits of cigarette smoking. *American Journal of Health Behavior*, *40*(3), 341–351. https://doi.org/10.5993/AJHB.40.3.6

Ramsay, J. E., Khong, Z. Y., & Yeo, J. S. E. (2023). The God of big (and good) things: Religious priming, event properties, and supernatural explanations. *The International Journal for the Psychology of Religion*, *33*(2), 89–106. https://doi.org/10.1080/10508619.2022.2097778

Reich, B., & Wang, X. (2015). And justice for all: Revisiting the global Belief in a Just World Scale. *Personality and Individual Differences*, *78*, 68–76. https://doi.org/10.1016/j.paid.2015.01.031

Rentner, T. L., & Alsulaiman, S. A. (2024). "Not me!": Optimistic bias and college students' perceived susceptibility, severity, benefits, and self-efficacy in following COVID-19 preventive guidelines. *Journal of American College Health*, *72*(5), 1428–1437. https://doi.org/10.1080/07448481.2022.2079950

Salvador, C. E., Kamikubo, A., Kraus, B., Hsiao, N. C., Hu, J. F., Karasawa, M., & Kitayama, S. (2022). Self-referential processing accounts for cultural variation in self-enhancement versus criticism: An electrocortical investigation. *Journal of Experimental Psychology: General*, *151*(8), 1904–1918. https://doi.org/10.1037/xge0001154

Savani, K., Markus, H. R., & Conner, A. L. (2008). Let your preference be your guide? Preferences and choices are more tightly linked for North Americans than for Indians. *Journal of Personality and Social Psychology*, *95*(4), 861–876. https://doi.org/10.1037/a0011618

Spilka, B., & Schmidt, G. (1983). General attribution theory for the psychology of religion: The influence of event-character on attributions to God. *Journal for the Scientific Study of Religion*, *22*(4), 326–339. https://doi.org/10.2307/1385771

Stanley, M. L., & De Brigard, F. (2019). Moral memories and the belief in the good self. *Current Directions in Psychological Science*, *28*(4), 387–391. https://doi.org/10.1177/0963721419847990

Stanley, M. L., Henne, P., Iyengar, V., Sinnott-Armstrong, W., & De Brigard, F. (2017). I'm not the person I used to be: The self and autobiographical memories of immoral actions. *Journal of Experimental Psychology: General*, *146*(6), 884–895. https://doi.org/10.1037/xge0000317

Strohminger, N., Knobe, J., & Newman, G. (2017). The true self: A psychological concept distinct from the self. *Perspectives on Psychological Science*, *12*(4), 551–560. https://doi.org/10.1177/1745691616689495

Taylor, E., Clutterbuck, R., Player, L., Shah, P., & Callan, M. (2022). The role of karmic beliefs in immanent justice reasoning. *Psychology of Religion and Spirituality*, *14*(2), 278–282. https://doi.org/10.1037/rel0000368

Taylor, S. E., & Brown, J. D. (1988). Illusion and well-being: A social psychological perspective on mental health. *Psychological Bulletin*, *103*(2), 193–210. https://doi.org/10.1037/0033-2909.103.2.193

Tepe, B., Cesur, S., & Sunar, D. (2020). Just world belief and ethics of morality: When do we derogate the victim? *Current Psychology*, *39*(1), 183–193. https://doi.org/10.1007/s12144-017-9737-y

Van Cappellen, P., Clapp, A. R., & Algoe, S. B. (2024). God of the good gaps: Prevalence, eliciting situations, and demonstrations of gratitude to God as compared to interpersonal gratitude. *The Journal of Positive Psychology*, *19*(1), 66–82. https://doi.org/10.1080/17439760.2023.2190928

White, C. J. M., Johnson, K. A., Mirbozorgi, B., & Farias Martelli, G. (2024). Varieties of gratitude: Identifying patterns of emotional responses to positive experiences attributed to God, karma, and human benefactors. *Journal of Personality and Social Psychology*, *127*(3), 497–517. https://doi.org/10.1037/pspa0000398

White, C. J. M., Kelly, J. M., Shariff, A. F., & Norenzayan, A. (2019). Supernatural norm enforcement: Thinking about karma and God reduces selfishness among believers. *Journal of Experimental Social Psychology*, *84*, Article 103797. https://doi.org/10.1016/j.jesp.2019.03.008

White, C. J. M., & Norenzayan, A. (2019). Belief in karma: How cultural evolution, cognition, and motivations shape belief in supernatural justice. In J. M. Olson (Ed.), *Advances in experimental social psychology* (Vol. 60, pp. 1–63). Academic Press. https://doi.org/10.1016/bs.aesp.2019.03.001

White, C. J. M., Norenzayan, A., & Schaller, M. (2019). The content and correlates of belief in karma across cultures. *Personality and Social Psychology Bulletin*, *45*(8), 1184–1201. https://doi.org/10.1177/0146167218808502

White, C. J. M., & Willard, A. K. (2025). How karma harms and helps generosity towards those in need. *Personality and Social Psychology Bulletin*. Advance online publication. https://doi.org/10.1177/01461672251313829

Willard, A. K., Baimel, A., Turpin, H., Jong, J., & Whitehouse, H. (2020). Rewarding the good and punishing the bad: The role of karma and afterlife beliefs in shaping moral norms. *Evolution and Human Behavior*, *41*(5), 385–396. https://doi.org/10.1016/j.evolhumbehav.2020.07.001

Young, M. J., Morris, M. W., Burrus, J., Krishnan, L., & Regmi, M. P. (2011). Deity and destiny: Patterns of fatalistic thinking in Christian and Hindu cultures. *Journal of Cross-Cultural Psychology*, *42*(6), 1030–1053. https://doi.org/10.1177/0022022110381123

Zell, E., Strickhouser, J. E., Sedikides, C., & Alicke, M. D. (2020). The better-than-average effect in comparative self-evaluation: A comprehensive review and meta-analysis. *Psychological Bulletin*, *146*(2), 118–149. https://doi.org/10.1037/bul0000218

Zhang, Y., & Alicke, M. (2021). My true self is better than yours: Comparative bias in true self judgments. *Personality and Social Psychology Bulletin*, *47*(2), 216–231. https://doi.org/10.1177/0146167220919213

Zhou, A., Li, S., Herbert, C., Xia, R., Xu, K., Xu, Q., Zhu, J., & Ren, D. (2013). Perspective taking modulates positivity bias in self-appraisals: Behavioral and event-related potential evidence. *Social Neuroscience*, *8*(4), 326–333. https://doi.org/10.1080/17470919.2013.807873

Received August 21, 2024
Revision received January 21, 2025
Accepted March 16, 2025 ■

This document is copyrighted by the American Psychological Association or one of its allied publishers.
This article is intended solely for the personal use of the individual user and is not to be disseminated broadly.