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Deity and Destiny:

Patterns of Fatalistic Thinking in Christian and Hindu Cultures

Maia J Young

University of California, Los Angeles

Michael W. Morris and Jeremy Burrus

Columbia University

Lilavati Krishnan

Indian Institute of Technology

Murari Prasad Regmi

Tribhuvan University

Correspondence concerning this article should be addressed to Maia J Young, 110 Westwood Plaza, Collins Center A-411, Box 951481, Los Angeles, CA 90095-1481.

Abstract

The current studies investigate whether different forms of fatalistic thinking follow from the Christian and Hindu cosmologies. We found that fatalistic interpretations of one's own life events center on deity influence for Christians, especially for those high in religiosity; however, Hindu interpretations of one's own life emphasized destiny as much as deity (Study 1). Also, the focus on fate over chance when explaining others' misfortunes depends on the presence of known misdeeds for Christians, but not for Hindus (Study 2). Finally, Christians prefer petitionary prayer over divination as a strategy for managing uncontrollable future risks (Studies 3a and 3c), and preference for these strategies can be primed in bicultural Hindu Americans by a Hindi-accented telephone interviewer (Study 3b).

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No life can be the first, for it is the fruit of previous actions, nor the last, for its actions

must be expiated in the next life following.

—Sri Swami Sivananda

Instant Karma's gonna get you. Gonna knock you right on the head. You better get

yourself together. Or pretty soon you'll be dead. . . . It's up to you, yeah you.

—John Lennon

Fatalism involves construing a person's fortune or misfortune as an outcome 'meant to

be,' rather than as a chance outcome, often moralizing it as the person's deserved reward or

retribution (Pepitone & Saffiotti, 1997). Virtually all religious and cultural traditions incorporate

some notion of higher powers that shape human ends, perhaps because it assuages existential

anxieties about the arbitrariness of human suffering (Geertz, 1979; Pargament, 2001) and

motivates good deeds such as prosocial behavior (Johnson & Kruger, 2004; Johnson, Stopka, &

Knights, 2003; Norenzayan & Hansen, 2006). Traditions differ, however, in their models of the

forces in the cosmos that arrange for people to get what is coming to them. In the present

research, we propose that Christian and Hindu cosmologies engender overlapping yet diverging

forms of fatalistic thinking.

We propose that several differences between Christian and Hindu fatalistic thinking hinge

on cultural assumptions about reincarnation. In the Christian worldview a person has just one

lifetime, whereas in the Hindu worldview a person is reincarnated many times. Hence Hindus differ from Christians in assuming that people have past lives, for which they bear repercussions in this life, and future lives, in which they will be rewarded for merit accrued in this life (Shvetashvatara Upanishad V.11). In short, Hindus assume karmic payback comes with delay, in the next lifetime[1], whereas Christians assume it comes in this lifetime—even instantly. The current studies investigate whether differences in fatalistic thinking follow from these differing premises: differences in attributing outcomes to deities as opposed to destiny, differences in the conditions under which outcomes are interpreted in terms of fate versus chance, and differences in fatalistic strategies for coping with future risks.

<div align="center">Culture and Fatalistic Thinking</div>

The idea that fatalistic thinking differs across cultures[2] has a controversial history. Weber (1958) attributed the rise of capitalism in Europe to Protestantism and its lack in India to more fatalistic religions. Likewise, development economists such as Kapp (1963) traced Indian poverty to Hindu fatalism. Indian scholars have critiqued these works, which relied on secondhand interpretations of theological texts to conflate destiny belief with passivity (Singh, 1975). Researchers closer to the Indian context have demonstrated that Hindu understandings of fate do not preclude a belief in personal agency (Sinha, 1990).

Arguments that some cultures are generally more fatalistic than others have reappeared in recent cultural psychology research. Norenzayan and Lee (2009) found East Asian Canadians to be more fatalistic than European Canadians, and religious Christians more fatalistic than the nonreligious. Intriguingly however, their results also suggest qualitative differences between forms of fatalism: Christian fatalism differed from East Asian fatalism in being more associated with devotion to a deity. The current research aims to subsume prior observations by measuring

qualitatively different patterns of fatalistic thinking that follow from different cosmological premises. On this view, some kinds of fatalistic thinking will be more marked among Christians, and other kinds will be more marked among Hindus.

To compare different kinds of fatalistic thinking, it is useful, at first, to look for common elements. Recent anthropologists of religion (Boyer, 2001) have accounted for commonalities and divergences in religious traditions according to how they appropriate basic cognitive principles. Dennett (1987) distinguished two such principles that may be relevant: the *design stance* and the *intentional stance*. Design is how we interpret the behavior of a mechanical apparatus, we observe regularities in its operations to infer how it is designed to function. Intentionality is how we interpret a person's behavior—we attribute mental states, motives, and reasons. When comprehending nonhuman systems, like a computer, we often shift between stances—when the computer suddenly shuts down, we might interpret this as a function designed to protect the computer, or we might think about it more anthropomorphically, as uncooperative behavior. Across different religious traditions, there are many beliefs about mechanisms for supernatural forces that influence human fortunes: the wheel of destiny, the pull of the stars, the will of God, the scheming of ghosts, and so forth[3]. While each belief is rich in its unique particularities, to a large extent, these varied beliefs fall into two basic categories: design-stance conceptions of cosmic machines that shape human ends and intentional-stance conceptions of personlike agents that influence human lives.

A related distinction was drawn by Fortes (1983) in a classic analysis of similarities and differences between several West African religions in terms of two forms of fatalism: the *Oedipus principle*, that individuals are born with foreordained destinies they cannot escape, and the *Job principle*, that individuals are punished and rewarded for conduct by a watchful, responsive deity.

Other anthropologists have applied this distinction in wider comparisons of cultures (e.g., Horton, 1983). Fortes drew from psychoanalytic rather than cognitive psychology, yet his distinction involves design versus intentional stances toward supernatural power. We can recast these as destiny and deity principles. The destiny principle holds that a person's deserved good or bad fortune comes about from the machinelike functioning of an elaborate cosmic machine or system. The deity principle holds that it comes from rewards and punishments meted out by a watchful person-like being.

While the deity and destiny principles can be described at this abstract level, there is reason to believe that fatalistic beliefs people inherit from their cultural traditions are represented more concretely. Barrett and Keil (1996) found that people's judgments about God follow from concrete conceptions of person rather than abstract theological beliefs. When comprehending elliptical stories about actions (e.g., saving a group of children from drowning), participants drew the same anthropomorphic inferences when the protagonist was God as when it was a person. These inferences ("he ran to the river after hearing the scream") contradicted participants' theological beliefs about God's attributes such as omniscience and omnipotence. In sum everyday thoughts about God's influence on people's lives reflect folk beliefs not abstract theology. The folk beliefs in a cultural tradition are transmitted and remembered largely in terms of stories or narratives (Mankowski & Rappaport, 2000; P. J. Miller & Moore, 1989). Stories shape intuitions because they "order experience, give coherence and meaning to events and provide a sense of history and of the future" (Rappaport, 1993, p. 240). Particularly influential are canonical stories "repeatedly told in the major socializing institutions of a culture (e.g. mass media, schools, churches)" (Mankowski & Rappaport, 2000, p. 482).

Christian and Hindu Narratives

The stories of the Judeo-Christian tradition begin with Old Testament accounts of a watchful deity who punishes sins: "Be not deceived; God is not mocked: for whatsoever a man soweth, that shall he also reap" (Galatians 6:7, King James Version [KJV]). In a foundational story, God smites the people of Sodom and Gomorrah for their behavior, not because of any preordained destiny. This story exemplifies how narratives are recycled across the generations; it is referenced by Israelites to explain Egypt's plagues (Exodus) and by early Christians to explain Rome's burning (Revelations). In the current day, the story is invoked to explain AIDS, Californian earthquakes, and other disasters. It expresses the key belief that people's fortunes are meted out by a sovereign, watchful deity who responds to their actions.

Hinduism is a less formalized and centralized tradition than Christianity, yet the Vedic tradition is equally rich in stories describing systematic cosmic forces that shape human fortunes. The crux of this model is the cycle of birth and death, *samsara*, by which souls are reborn with preordained positive or negative fortunes determined by deeds in past lifetimes. Not all ancient texts agree entirely on the role of divine beings in executing or determining one's karma. The Brahma Sutras emphasize that God plays a role in dispensing destined fortunes (Brahma Sutras III.2.38). The Bhagavad Gita also reinforces God's power and desire to influence human outcomes; in it, Krishna says, "But those who always worship Me with exclusive devotion, meditating on My transcendental form—to them I carry what they lack, and I preserve what they have" (Bhagavad Gita IX.22).

Other Hindu schools portray the force of predetermined karma as inviolate even to gods (Michaels, 1998). A folktale illustrates this presumed inability of gods to override a person's destiny: Lakshmi, the goddess of wealth, is pleading with her husband, Vishnu, to help a beggar. Vishnu replies that it would be futile as "the beggar has nothing in his karma. . . . He has done

nothing virtuous and therefore deserves nothing" (Shweder & Miller, 1991, p. 158). Although Vishnu concedes to placing money under a tree, the beggar turns out to be unable to see the money on the ground before him. Even the intervention of gods, this story tells us, cannot overcome this man's destiny to be poor..

In sum, narratives of the Christian tradition emphasize that human fortunes are buffeted by the rewards and retributions of a jealous, watchful, responsive god. Hindu narratives suggest that fortunes are shaped both through divine intercession and through destinies determined by past lives.

Having analyzed some differences between Christian and Hindu cosmologies and illustrated these with stories that encode and carry these understandings, we now derive some predictions about the habits of fatalistic thought fostered by each worldview.

<div style="text-align:center">Hypotheses</div>

Attributions to Deity and Destiny

Our first prediction is that Christians and Hindus differ in attributing life events to deity versus destiny influence. While deity influence should be available within both traditions, it should be more salient to Christians as it is the exclusive way that they conceptualize karmic rewards. Destiny influence should be more salient to Hindus for whom conceptions of past and future lives articulates a mechanism for understanding how deserved fates could be assigned at birth.

To check our premise, a pilot study investigated beliefs about past lives by comparing students in a Christian majority country (United States) with those in two Hindu majority countries (Nepal and India). Students tend to be less wedded to traditional cultural frameworks than other members of society and hence provide a conservative test of cultural differences (van

de Vijver & Leung, 1997). The participants were asked to rate whether an individual's outcome in life "may reflect karma from a past life" on a 6-point scale ranging from 1 (*definitely disagree*) to 6 (*definitely agree*). In the Hindu countries, students' endorsement of this item was at or near the midpoint of the scale ($M_{India} = 3.51$, $SD_{India} = 1.78$ vs. $M_{Nepal} = 3.36$, $SD_{Nepal} = 1.59$), $F(1, 399) = 0.75$, *ns,* $\eta_p^2 = .00$. In the Christian country, endorsement was near the floor of the scale, a highly significant difference ($M_{Hindu} = 3.45$, $SD_{Hindu} = 1.72$ vs. $M_{Christian} = 1.56$, $SD_{Christian} = 0.95$), $F(1, 513) = 127.19$, $p < .001$, $\eta_p^2 = .20$. Results corroborate our premise that the concept of destinies determined by past lives is made salient by the Hindu tradition, but not the Christian tradition.

Based on this, we can hypothesize that when interpreting life events fatalistically (as meant to be), Christians would refer more exclusively to deity influence whereas Hindus would refer to both destiny and deity influence. This focus for deity influence should especially hold for religious Christians (those for whom religion is important) as opposed to less religious Christians, as they should be more likely to be guided by the Christian worldview in their thoughts.

Explanations in Terms of Fate versus Chance

Several streams of social psychological research have investigated the tendency to explain others' misfortunes as fated or meant to be rather than as accidents or chance. This attribution tendency increases with development from childhood to adolescence, which suggests the role of cultural belief systems (Raman & Winer, 2002). Raman and Winer (2004) implicate the Judeo-Christian cosmology noting that, "the Old Testament is virtually replete with incidents of the Israelites suffering because of various sins" (p. 259). Hindu cultural models may also foster this attribution tendency, as explanations of misfortunes in terms of the victim's misdeeds

or moral failings are just as frequent in Indian contexts as American contexts (Raman & Gelman, 2004; Shweder, Much, Mahapatra, & Park, 1997). Given the evidence that both Christian and Hindu worldviews imply fatalistic interpretations of others' misfortunes, we can ask whether they do so similarly or differently.

A key difference between Christian and Hindu logics may be in what kinds of events evoke fate versus chance explanations. In both cultures, *karma* means supernatural retribution for one's prior deeds. However, while the concept of supernatural retribution is universal, the assumed mechanism by which rewards and punishments are delivered differs. The Hindu model of karmic retribution accords an equal role to destiny influence as deity influence, whereas the Christian model is premised more exclusively on deity influence. Given the difference in presumed time for deity and destiny influence to be enacted—within this lifetime for the Christian model and across multiple lifetimes for the Hindu model— there may be classes of events that are amenable to karmic explanations to Hindus, but not to Christians. One clear candidate would be misfortunes of persons having no known misdeeds. It would be unlikely for Christians to interpret such misfortunes karmically, whereas for Hindus the misfortunes can be interpreted as karmic punishment for unknowable misdeeds in previous lifetimes. In judging whether a misfortune is karma rather than just chance, Christians should be more sensitive to whether it is preceded by a known misdeed in this lifetime.. Thus, Study 2 presents participants with a scenario, manipulating whether a misdeed precedes the misfortunate event. We hypothesize that invoking karma versus chance will depend more on the presence of known misdeeds for Christians than for Hindus, whose model of karma assumes that misfortunes reflect misdeeds in prior lifetimes.   Among Christians, a misfortune can be seen as the deserved

punishment for prior misdeeds in this lifetime, whereas the same misfortune can be seen as deserved punishment for previous lifetimes or this lifetime for Hindus.

Strategies for Managing Future Risks

Fatalistic thinking affects prospective strategies as well as retrospective attributions. Just as belief in deity and destiny can make others' misfortunes seem less arbitrary and frightening, it can also suggest strategies for managing future risks. While these strategies may be superstitious and illusory, they may be adaptive in that they reduce fears and anxieties associated with these risks. How does the difference in religious cosmologies engender differences in favored strategies? The Christian model holds that fatalistic influences are not fixed at birth, but are instead determined by the changeable intentions of a personlike deity. This lends credence to praying for divine intercession, which can be seen in many of the stories in the Bible. King David cries, "Give ear to my prayer, O God, and hide not thyself from my supplication" (Psalms 55:1, KJV). We can test for this expectation in people's willingness to use *petitionary prayer*, requesting that a deity shape future outcomes in specific, desired ways. While prayer and deities are important parts of the Hindu model, the fact that some fortunes are predetermined by karma from past lives suggests that prayer should not be as credible as an across-the-board strategy to Hindus as to Christians.

A fatalistic expectation entailed by the Hindu model is that future misfortunes are discoverable in advance. This follows from the assumption that fortunes are assigned at birth and then unfold in a deterministic, predictable way. Specifically, in the Hindu tradition, individuals are born with their fortunes inscribed in *headwriting*, which is invisible to the layperson but legible, to some extent, by psychics or seers. Because the system of samsara is connected to the stars, astrological expertise also offers clues to an individual's fortunes. Although one's destined

misfortunes cannot be simply escaped, one can minimize the damage by learning what one can

about what is coming and taking precautionary behavior. A south Indian saying compares use of a

soothsayer's forecast to that of a weather forecast: "You can't stop the rain, but you can carry an

umbrella." Ethnographies of Hindu divination practices highlight that astrologers and psychics

not only make forecasts, but also recommend precautions: "Specific instructions about how to act,

and about what to expect . . . [are] worked out through discussion between a specific divine seer

and his local client" (Beck, 1983, p. 64). For instance, someone whose signs suggest bad luck in

March might be advised against a wedding or business venture that month. In some cases, quite

clever strategies are devised to mitigate the downside of a fated outcome. A Hindu folktale tells of

a king who learned that his fortune was to be stabbed by a subject and who responded by

outlawing all but the most miniscule knives from his realm (Hiebert, 1983). By contrast, the

Christian cosmology does not entail that supernatural influences can be predicted years in

advance; for Christians, they stem from a personlike deity's shifting perceptions, emotions, and

intentions, not from a predetermined, predictable design.

The prayer and divination strategies highlight that neither cosmology is a recipe for

passivity. Both Christian and Hindu traditions suggest ways that one's future risks can be

managed. In this way, these practices reflect a belief in *negotiable fate*: the possibility that one

can bring about "desired outcomes through agentic actions" (Chaturvedi, Chiu, & Viswanathan,

2009). Yet the two cultural models differ in the credence they lend to different fate negotiation

tactics—petitionary prayer, on one hand, and divination by astrologers or psychics, on the other.

<div align="center">The Present Research</div>

We investigated several kinds of judgments for differences between Christians and Hindus

hypothesized from different cosmologies. First, Christians should perceive deity influence more

than destiny influence in one's own life events, and Hindus should perceive as much destiny influence as deity influence. Second, when explaining another's misfortunes as fate versus chance, the focus on fate will depend more on the presence of known misdeeds for Christians than for Hindus. Third, in managing future risks, the credence attached to petitionary prayer should be higher in Christian contexts, and the credence attached to consulting with seers should be higher in Hindu contexts.

We test these hypotheses in three studies. Study 1 examines perceptions of deity and destiny influence in shaping an individual's life outcomes among Hindus in India versus Christians in the United States. Study 2 polls Hindus and Christians in the United States and examines explanations for misfortunes, varying whether or not the actor was known to have previously misbehaved. The next study investigates choices between actions for managing future risks among cultural groups within the United States (Study 3a) and among bicultural individuals (Study 3b), and judgments about a target person who uses these strategies among minority and majority group members in India (Study 3c).

Study 1: Deity and Destiny Attributions

Study 1 adapted a task recently-found to elicit people's fatalistic explanations: reflecting on long-ago life events that could have turned out differently (Burrus & Roese, 2006). After describing an event, participants rated the extent of deity and destiny influence. We recruited participants of Christian and Hindu background in countries (United States and India, respectively) where these are the majority faiths. We predicted that fatalistic interpretations of life events would center on deity influence for Christians, especially for individuals high in religiosity, whereas destiny influence would be as highly endorsed as deity influence for Hindus.

Method

Participants. Eighty-one individuals (33 Indian Hindus and 48 American Christians) participated in the study. Indian students were recruited to participate in their dormitories. American participants were self-identified Christians who were recruited via e-mail. Among U.S. participants, the mean age was 23.00 years (*SD* = 6.01); 23 participants were women, and 25 were men. Among Indian participants, the mean age was 17.55 years (*SD* = 1.00); 29 participants were women, and 4 were men. Participants were paid in cash (USD 5, INR 100) for completing the questionnaire, which was administered in English.

Materials. The questionnaire was titled "Events Questionnaire." To encourage participants to think about uncertainty in their own lives, participants were asked to write about a specific event from more than 5 years ago that could have turned out differently (Burrus & Roese, 2006). Then, participants rated the extent to which the event was "influenced by God's/a higher power's role in guiding events" and the extent to which the event was "influenced by your destiny as it was determined before this lifetime" on a 7-point scale, ranging from 1 (*not at all*) to 7 (*a lot*). Other items asked, "How consequential was this event for your life?" and "How meaningful was this event in your life?" Finally, participants filled out their age, gender, and religiosity ("How important is it to you to have a religious practice?" scored on a 6-point scale ranging from 1 [*not at all important*] to 6 [*very much important*]).

Results

The consequentiality of events reported on did not differ between the Indian (*M* = 5.79, *SD* = 1.39) and American groups (*M* = 5.60, *SD* = 1.44) $F(1, 79) = 0.33$, *ns*, $\eta_p^2 = .00$. Americans (*M* = 5.29, *SD* = 1.76) wrote about events that were more meaningful than the Indians (*M* = 4.55, *SD* = 1.73) did, although the difference was marginally significant, $F(1, 79) = 3.55$, *p*

= .06, η_p^2 = .04. On average, the Americans (M = 4.65, SD = 1.49) were more religiously-

identified than the Indians (M = 3.52, SD = 1.62), $F(1, 79)$ = 10.44, p < .01, η_p^2 = .12.

A 2 × 2 (Culture: Hindu Indian, American Christian × Form: Deity, Destiny) mixed-model

analysis of variance (ANOVA), where form is a within-subjects variable, yielded a significant

interaction, $F(1, 79)$ = 4.66, p < .05, η_p^2 = .06. Tests for cultural effects on deity and destiny belief

revealed that American Christian (M = 4.12, SD = 2.23) endorsement of deity was marginally

greater than that of Indian Hindus (M = 3.36, SD = 1.62), $F(1, 79)$ = 2.81, p = .09, η_p^2 = .03, but

there was no cultural difference between American Christians (M = 3.73, SD = 2.06) and Indian

Hindus (M = 3.73, SD = 1.84) in destiny belief, $F(1, 79)$ = 0.00, ns, η_p^2 = .00. To test for simple

effects in each cultural group, a within-participants GLM was conducted on deity and destiny

beliefs. Indian Hindus did not differentially endorse destiny and deity, $F(1, 32)$ = 2.00, ns, η_p^2 =

.06, but American Christians endorsed deity over destiny at a marginally significant level, $F(1,$

47$)$ = 2.91, p = .09, η_p^2 = .06.[4]

Standard regression analysis tested the influence of religiosity and culture and the

interaction of these two variables on form, where religiosity was mean-centered, culture was

dummy coded, and the dependent variable was destiny beliefs subtracted from deity beliefs (Judd,

Kenny, & McClelland, 2001). The overall model was significant, $\widetilde{R}^2$ = .13, $F(3, 77)$ = 4.84, p <

.01. Results revealed a significant main effect of religiosity, such that greater religiosity was

associated with greater emphasis on deity influence, β = 0.43, $t(77)$ = 3.97, p < .001. Results also

revealed an interaction of cultural group and religiosity, which indicates that the two groups

differed in how religiosity related to their deity and destiny beliefs, β = 0.20, $t(77)$ = 1.93, p = .05.

Analyses of simple slopes investigated the source of the two-way interaction (Aiken & West,

1991). Specifically, we examined the effect of religiosity on form (deity minus destiny) for each

of the cultural groups (see Figure 1). Results indicated that the effect was significant for the

Christian group, β= 0.46, t(77) = 3.07, $p < .01$, but not the Hindu group, β = 0.03, t(77) = .16, *ns.*

That is, the more religiously-identified a Christian participant, the more he or she emphasized

deity over destiny in explaining the life event. This pattern was not true of the Hindu participants.

As these differences in social cognitive tendencies seem to depend on the degree of individuals'

involvement with the religious traditions, we have selected for more religiously identified

participants in our subsequent studies by sampling individuals outside of their places of worship.

<div align="center">Study 2: Attributing Others' Misfortunes to Karma versus Chance</div>

In Study 2, we investigated whether different kinds of events evoke karmic explanation

for religious Hindu and Christian participants. Previous work contrasted fate versus

coincidence/chance attributions (Norenzayan & Lee, 2009). We hypothesize that the focus on

fate over chance will depend on the presence of known misdeeds for Christians more than for

Hindus. We also test that labeling the outcome as karma truly implies the judgment that the

person's deeds brought on the misfortune, and that it is not simply a label given to unattributable

outcomes. We hypothesize that karma attributions mediate the effects of religious background on

responsibility judgments.

Method

Participants. Individuals were surveyed outside of a Hindu temple and a Christian church

in New York City. Fifty-seven individuals from the Hindu temple and 64 individuals from the

Christian church agreed to fill out the survey in exchange for a USD 10 donation to their

respective temple or church. The mean age of Christian participants was 45.8 years ($SD = 14.4$),

and the sample included 25 men, 37 women, and 2 who did not fill that item out. The mean age of

Hindu participants was 37.9 years ($SD = 13.2$), and the sample included 30 men, 25 women, and 2

participants who did not fill that item out. There were no statistically significant main effects or interactions involving sex, so this variable will not be discussed further.

Procedure. Participants read a scenario about a traffic accident. There were two conditions of the scenario: One condition included solely the misfortune (misdeed absent), and read, "One day, when K was crossing the street to go to work, she was hit by a car; the driver sped away, while she lay unconscious on the street." The other condition included information about a prior misdeed (misdeed present): "As a child, K rode her bicycle everywhere. One day, she accidentally hit a neighbor boy with her bike; he was knocked down, and K rode quickly away in fear of being caught."

Measures. After reading the scenario, participants read, "If you were to explain this story, which of the following elements might apply to the explanation?" and responded to each of the following items on a 6-point scale ranging from 1 (*does not apply at all*) to 6 (*very much applies*): will, luck, chance, and karma. Another item tapped responsibility judgment: "Is there any way that K's deeds may have brought on the misfortune?" Reponses were given on a 6-point scale ranging from 1 (*very much no*) to 6 (*very much yes*). At the end of the survey, participants filled out their age and gender.

Results

Following Norenzayan and Lee (2008), we tested our hypothesis focusing on the comparison between fatalistic (*karma*) and chance explanations. We conducted a $2 \times 2 \times 2$ (Religion: Hindu, Christian $\times$ Misdeed: Absent, Present $\times$ Attribution: Chance, Karma) mixed-model ANOVA, where attribution was a repeated measure. The only significant main effect was that of attribution such that chance ($M = 4.15$, $SD = 1.79$) was endorsed more overall than karma ($M = 2.63$, $SD = 2.00$), $F(1, 112) = 33.52$, $p < .001$, $\eta_p^2 = .23$. The significant main effect was

qualified by an observed three-way interaction, $F(1, 112) = 6.57$, $p < .05$, $\eta_p^2 = .06$.

We investigated this interaction by running a 2×2 (Misdeed: Absent, Present $\times$ Attribution: Chance, Karma) mixed-model ANOVA for each religious group (Christian, Hindu). Among Christians, there was a main effect for attribution such that chance ($M = 4.55$, $SD = 1.49$) was endorsed more than karma ($M = 2.15$, $SD = 1.67$), $F(1, 60) = 64.64$, $p < .001$, $\eta_p^2 = .52$. This main effect was qualified by a significant Misdeed $\times$ Attribution interaction, $F(1, 60) = 9.46$, $p < .01$, $\eta_p^2 = .14$. Simple effects tests revealed that there were no differences between the misdeed-absent ($M = 4.67$, $SD = 1.51$) and misdeed-present ($M = 4.30$, $SD = 1.57$) conditions for chance explanations, $F(1, 60) = 0.89$, ns, $\eta_p^2 = .01$. However, Christians endorsed karma more in the misdeed-present ($M = 2.97$, $SD = 1.99$) than in the misdeed-absent condition ($M = 1.42$, $SD = 0.87$), $F(1, 60) = 16.29$, $p < .001$, $\eta_p^2 = .21$. Among Hindus, there was no main effect of attribution, $F(1, 52) = 1.59$, ns, $\eta^2 = .03$, nor was there a Misdeed $\times$ Attribution interaction, $F(1, 54) = 0.47$, ns, $\eta_p^2 = .02$ (see Table 1 for means by religious group and misdeed condition).

Ascribing responsibility

Although we have found that Hindus were as likely to see an event as fated when misdeeds are absent or present, and Christians are more likely to see an event as fated when misdeeds are present than absent, it is still an open question as to how fatalistic attribution relates to responsibility judgments. That is, is seeing someone's misfortune as karma a way to blame them for what happened, or is it in fact the opposite—a way to absolve them from blame? And, importantly, is karma conceptually equivalent among Hindu and Christian participants? One way to establish equivalence is to demonstrate that the measured construct "has the same pattern of theoretically meaningful correlations with measures of other constructs in each target culture" (Chiu & Hong, 2006, p. 312). If karma indicates supernatural retribution, then it should be

positively correlated with responsibility judgments among Hindus and Christians. Ascribing the event to karma was correlated with responsibility for both Hindus ($r = .53$, $p < .001$) and Christians ($r = .55$, $p < .001$); thus, in both cultures, karma attributions are associated with ascriptions of responsibility rather than exoneration.

A 2 × 2 (Religious Group × Misdeed) ANOVA on the responsibility judgment yielded a main effect of religion, such that Hindus rated this item more highly than Christian participants did, ($F(1,117) = 10.79$, $p < .01$, $\eta_p^2 = .08$). Furthermore, there was a marginally-significant interaction such that Hindus considered K to have more responsibility when the misdeed is absent ($M = 3.63$, $SD = 1.65$) than present ($M = 3.15$, $SD = 1.83$), but Christians see K as having more responsibility when the misdeed is present ($M = 2.70$, $SD = 1.74$) than absent ($M = 2.12$, $SD = 1.34$), $F(1,117) = 3.19$, $p = .07$, $\eta_p^2 = .03$).

Test for mediation

In the Misdeed Absent Condition, Hindus ($M = 3.63$, $SD = 1.65$) saw Kate having more responsibility for the outcome than Christians did ($M = 2.12$, $SD = 1.34$, $F(1, 62) = 16.39$, $p < .001$, $\eta_p^2 = .21$). Selecting for those who were in this condition then, does making fatalistic attributions mediate the relationship between religious background and responsibility? To test for mediation, we adopted the multiple regression procedure of Baron and Kenny (1986). In the first step in our test of mediation, religious background predicted responsibility judgment ($\beta = 0.46$, $t (62) = 4.05$, $p < .001$). In the second step, religious background predicted karma attributions ($\beta = 0.49$, $t (62) = 4.25$, $p < .001$). In the third step, responsibility was regressed on both religious background and karma attribution. As expected, karma attribution had a significant unique effect on responsibility ($\beta = 0.44$, $t (57) = 3.48$, $p = .001$), but the relationship between the religious background and responsibility was not significant ($\beta = 0.22$, $t (57) = 1.65$,

ns). Therefore, the relationship between religious background and responsibility judgment was fully mediated by participants' use of karma attributions (Sobel test, $z = 3.19$, $p < .01$).

Discussion

Study 2 shows that Christians make more karma attributions when misdeeds are known to be present than when they are not. There was no such difference among Hindus. The findings suggest that between the Christian and Hindu traditions, there are differences in the conditions under which someone's misfortune is seen as the enactment of fate. Among Christians, a misfortune can be seen as fated when preceded by misdeeds in this lifetime, whereas for Hindus, the same misfortune can be seen as fated even when no misdeeds are known. Importantly, the study goes further in investigating the ramifications of using karmic attributions: *karma* was shown to mediate the effects of religious background on responsibility, suggesting that karma attributions play an important role in judgments of responsibility. Thus, these data provide another look into the psychology of victim derogation. Given their conception of a watchful and retributive deity, Christians interpreted a target's misfortunes as karmic retribution only if they knew of prior misdeeds. Conversely, Hindus did so even when they didn't know of a prior misdeed, suggesting that the scope of victim blaming may be even broader for Hindus than Christians.

Although it is always desirable to use multiple items to assess constructs, we used single items to assess attributions to chance and karma as well as responsibility judgments, as the items have a high degree of face validity.

In sum, the second study builds on the evidence of difference from the first study by elucidating how Christian versus Hindu worldviews potentiate karmic interpretations for different

kinds of events. Our final study extends the evidence for influences of religious worldviews on social judgments by exploring how they support different strategies for managing future risks.

Study 3: Strategies for Managing Risks

As mentioned in the introduction, cultural models of deity and destiny influence should be associated not only with different attributions for past outcomes but also different expectations about how to manage uncertain future events. Specifically, we argued that Christians would be more likely than Hindus to endorse the strategy of petitionary prayer and that Hindus would be more likely than Christians to endorse the strategy of divination.

An alternative explanation that arises with regard to cross-national differences in choices is that they reflect differences in what is objectively available in different settings, rather than differences in what options seem plausible or credible. The institutional, ecological, and economic conditions of North America versus the Indian subcontinent vary dramatically. There may be more institutionalized opportunities for petitionary prayer in Western religious services, and there may be a greater supply of seers and astrologists in India than in the United States. Even measuring religiosity does not eliminate the ambiguity as more religious Americans may have routines that bring them to services more often, and more religious Indians may have more seers in their social networks. The question is whether differences lie in which options people find psychologically plausible or merely in which options people can access from their environments.

To this end, we employed several different research strategies in Study 3 for identifying effects of Christian versus Hindu worldviews on preferences for strategies. In Study 3a, we sample religious Christians and Hindus in the United States, and we ask them to take the role of people choosing either prayer or divination as a strategy. In Study 3b, we manipulate the salience of Hindu identity among bicultural Indian Americans to check that it shifts their strategy

preferences. In Study 3c, we examine whether endorsement of strategies differs between Christian and Hindu groups within India.

Study 3a: Preferences for Petition and Divination Strategies

Method

Participants. Individuals were recruited from a Hindu temple and a Protestant church in New York City. Fifty Hindus and 33 Christians participated. The mean age of Hindu participants was 39.4 years ($SD = 13.0$), with 32 men and 17 women. The mean age of Christian participants was 32.2 years ($SD = 11.1$), with 15 men and 18 women. There were no statistically significant main effects or interactions involving sex, so this variable will not be discussed further. The participants were paid USD 5 for their help.

Procedure. Individuals were approached by a female experimenter to fill out a written questionnaire, which was administered in Hindi or in English, based on the participant's cultural background. The instructions asked participants to imagine being in the same position as the actor in each of four scenarios and to rate the extent to which they themselves would employ the petition or divination practices listed on a 7-point scale ranging from 1 (*I would absolutely not employ this practice*) to 7 (*I would certainly employ this practice*). Thus, for each scenario, participants rated both their willingness to pray for intervention and their willingness to seek divination. The study design was $2 \times 2 \times 4$ (Religion × Strategy × Scenario), where religion was the only between-subjects variable.

Results

We hypothesized that the petitionary prayer strategy would be endorsed more by Christians and the divination strategy more by Hindus. Means by religion and strategy are presented for each scenario in Table 2. Summary variables for petition ($\alpha = .84$) and divination (α

= .73) were created for each participant. Consistent with the hypothesis a 2 × 2 (Religion: Hindu, Christian × Strategy: Petition, Divination) mixed design ANOVA with strategy as a within-subjects factor detected a significant interaction, $F(1, 82) = 155.90$, $p < .001$, $\eta_p^2 = .65$. Analyses of simple effects indicated that Christians ($M = 6.24$, $SD = 0.75$) endorsed prayer more than Hindus did ($M = 4.35$, $SD = 1.56$), $F(1, 82) = 41.62$, $p < .001$, $\eta_p^2 = .34$, but Hindus ($M = 2.54$, $SD = 1.32$) endorsed divination more than Christians did ($M = 1.20$, $SD = 0.46$), $F(1, 82) = 31.32$, $p < .001$, $\eta_p^2 = .28$.

While these group differences were in the predicted direction, it should be noted that prayer was preferred to divination by both Hindus ($M = 4.35$, $SD = 1.56$ vs. $M = 2.54$, $SD = 1.32$), $F(1, 50) = 184.30$, $p < .001$, $\eta_p^2 = .67$, and Christians ($M = 6.24$, $SD = 0.75$ vs. $M = 1.20$, $SD = 0.46$), $F(1, 32) = 893.61$, $p < .001$, $\eta_p^2 = .96$.

Discussion

Again, the difference between traditions seems to lay chiefly in Christians' rejection of destiny-based fatalism than in Hindus' rejection of deity-based fatalism. These findings indicate that Christians prefer a petitionary strategy more than Hindus, while Hindus prefer a divination strategy more than Christians. Within both groups, petition is favored over divination, but the difference in endorsement is much greater among Christians than among Hindus. By sampling Christian and Hindu participants from the same city, Study 3a provides evidence that the differences in coping strategy preference are not merely reflections of the different institutional, ecological, or economic conditions of North America versus the Indian subcontinent. In establishing that preference for these superstitious strategies rests on cultural frameworks, rather than merely reflecting different environments, the comparison of Hindu and Christian groups in New York provides more incisive evidence than a cross-national comparison. Yet a

skeptic might counter that Hindu and Christian groups in New York do not effectively live in the same city: They attend different houses of worship in different neighborhoods, so their objective environments make available different options for coping with risks, for example, a Hindu neighborhood may contain more astrologists, and a Christian service may offer more institutionalized occasions for petitionary prayer.

To provide further evidence, our next study sampled bicultural individuals and manipulated the salience of Western versus Hindu identities to check whether it would shift preference for strategies. Ross, Xun, and Wilson (2002) found that Chinese Canadian students shifted between different patterns of self-judgment depending on the language, Chinese or English, in which they were questioned by the experimenter. Yet unexpected and blatant cultural cues can have other effects. Bond (1983) found a reactance, rather than assimilation, response when an experimenter addressed participants in an unexpected language. We adapted the language priming manipulation to a variation that would be natural for our population. After recruiting individuals who were fluent in Hindi and English, participants were then randomly assigned to one of two telephone survey conditions: the standard American accent condition and the Hindi accent condition. Hindi-accented phone interactions are not, of course, uncommon, so the prime was not blatant. We predicted that participants addressed in a standard American accent would respond more favorably to the petition strategy compared to those participants addressed in a Hindi accent, and the opposite would be true for the divination strategy.

Study 3b: Identity Salience Manipulation with Bicultural Individuals

Method

Participants. Twenty-five (11 women and 14 men)[5] Hindu Americans were recruited from a Hindu community center in the northeastern United States to participate in a study titled

"Coping With Risk and Uncertainty." The mean age of participants was 46 years, and the mean number of years lived in the United States was 21. Because the sex of the participants did not produce any statistically significant main effects or interactions, this factor is not discussed further.

Procedure. A female experimenter obtained permission from the Hindu community center's director to solicit participants for the study. Each participant provided his or her name, phone number, and years lived in the United States on a sign-up sheet. Later, another experimenter called potential participants, administering the questionnaire verbally either in a Hindi accent or a standard American accent, based on random assignment. The questionnaire followed the same format as the questionnaire of Study 3a; the same four scenarios were employed, and participants verbally indicated their willingness to engage in petition or divination strategies for each scenario on a 7-point scale ranging from 1 (*absolutely not*) to 7 (*certainly*). The design of the study was thus a 2 × 2 × 4 (Accent: Hindu, American × Strategy: Petition, Divination × Scenario) ANOVA, where condition was the only between-subjects factor.

Results

After testing for sufficient intercorrelation of the petition items ($\alpha = .65$)[6] and the divination items ($\alpha = .78$), we constructed summary variables for petition and divination endorsement for each participant. We then employed a 2 × 2 (Accent: Hindu, American × Strategy: Petition, Divination) ANOVA, where strategy was a within-subjects factor. As predicted, the Accent × Strategy interaction was significant, $F(1, 21) = 4.36$, $p < .05$, $\eta_p^2 = .17$. Participants' endorsements of petition as a strategy were higher in the standard American accent condition ($M = 4.11$, $SD = 1.92$) than in the Hindi accent condition ($M = 2.40$, $SD = 1.01$), $F(1, 21) = 7.76$, $p < .05$, $\eta_p^2 = .27$. However, there were no differences for mean endorsement of

divination as a strategy when comparing the American ($M = 2.58$, $SD = 1.76$) and Hindi accent conditions ($M = 2.36$, $SD = 1.10$), $F(1, 21) = 0.14$, ns, $\eta_p^2 = .00$.

Discussion

The findings show that bicultural individuals' preferences for superstitious strategies shift depending on which cultural identity is made salient by the situation. The shift as a function of linguistic primes suggests that preferences for superstitious control strategies are undergirded by culturally associated constructs.

The shift was observed for petitionary prayer, but not for divination. Why did the American accent create increased endorsement for petition, while the Hindi accent did not create increased endorsement for divination? Recall that both manipulations were in English. It is possible that the Hindu norms were not primed as fully because the language was English, despite the accent used; that is, if the study compared American English to Hindi, the manipulation might be stronger in priming Hindi cultural concepts.

Study 3c: Cultural Worldviews, Norms, and Social Judgments

We have argued in Studies 3a and 3b that endorsement of petitionary prayer and divination as strategies for managing uncertainty differs as a function of cultural mindsets. Study 3c builds on these studies by exploring how perceivers evaluate target people who choose these strategies. We propose that targets choosing strategies compatible with the perceiver's cultural conceptions would be perceived as competent whereas those choosing incompatible strategies would be perceived as superstitious or lacking in good judgment. For instance, Christian perceivers would evaluate target persons choosing petitionary prayer more highly than those choosing divination.

Study 3c sampled Indian Hindus and Indian Christians to examine the impact of Christian

religious worldviews from other aspects of Indian culture. Though composing less than 5% of

the population, Christian communities have been established in India since the first century A.D.

Our study sampled students at a university with large Hindu and Christian populations.

Participants were presented with a vignette about a woman who was planning to marry but

unsure of whether the timing was right. Some participants read that her strategy for handling this

uncertainty was consulting an astrologer for divination, and others read that she chose petitionary

prayer. Then they were asked about their impressions of this target person and about the strategy

she used. We predicted that Indian Christians would favor targets choosing petitionary prayer

over those choosing divination, whereas Indians Hindus would accept target persons choosing

either strategy.

This prediction is interesting in light of classic person perception findings that negative

evaluations and dispositional inferences are evoked by actions that violate societal norms (Jones

& Davis, 1965; Jones & McGillis, 1976; Kanouse & Hanson, 1972). Cultural compatibility is

not equivalent to adherence to societal norms. While for the majority culture perceivers the

societal prevalence of a behavior is a good proxy for its cultural compatibility, this is not so for

minority culture perceivers. Because majorities are reflected in societal norms, they may be more

inclined to use the counter-normativity of behavior as cue for negative attributions, such as

incompetence. However, given that cultural minorities spend their lives swimming against the

tide of mainstream societal conventions, they should be less likely to use counter-normativity as

a cue to negative attributions. Hence, Indian Hindus and Christians should differ in the

relationship between perceived counter-normativity of strategies and perceived competence of

the targets who choose them. Among Indian Hindus, the more counter-normative the practice is

seen to be, the less competent the target should be perceived. This relationship should not hold

for minority group members, Indian Christians.

Method

   Participants. One hundred eighty-nine individuals (80 Indian Hindus, 109 Indian

Christians) participated in the study. Indian students were recruited to complete the survey in a

cafeteria at a university with large Hindu and Christian populations; they received INR 100 for

participation. Among Indian Hindu participants, the mean age was 18.11 years ($SD = 1.38$); 72

participants were women, and 8 were men. Among Indian Christian participants, the mean age

was 17.77 years ($SD = 1.40$); 90 participants were women, and 19 were men.

   Materials. The questionnaire was administered in English. Each participant read a short

scenario about a woman named Monica, who received a marriage proposal from a man whom

she had dated for 2 years. The scenario stated that although she loved her boyfriend very much,

she was having a difficult time deciding whether to get married within a few months or after a

year because she was not sure that she was ready for the responsibilities of marriage. Participants

were told, "Monica's parents approve of her boyfriend and do not mind whether she gets married

now or later." Monica decided to "consult an astrologer to decide the date of the marriage"

(divination condition) or "pray that she makes the best decision" (prayer condition). The design

of the study was thus a 2 × 2 (Cultural Group: Indian Hindu, Indian Christian × Strategy: Prayer,

Divination) between-subjects design.

   Participants then rated whether they saw Monica as competent ($\alpha = .83$)—"Monica acted

sensibly," "Monica made good choices," "Monica handled this decision recklessly" (reversed),

"Monica made an overly hasty decision" (reversed), and "Monica acted in a careless manner"

(reversed)—on a 7-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Three

subsequent items tapped perceived counter-normativity (α= .57) [7]—"Monica is unconventional", "Monica is nontraditional", and "Monica is unusual"—on a 7-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

Results

Hypotheses about determinants of perceived competence were tested with a 2 × 2 (Cultural Group: Indian Hindu, Indian Christian × Strategy: Prayer, Divination) ANOVA. This revealed a main effect of strategy such that those in the prayer condition ($M = 4.45$, $SD = 1.28$) saw the bride as more competent than those in the divination condition ($M = 3.82$, $SD = 1.18$), $F(1, 185) = 9.98$, $p < .01$, $\eta_p^2 = .05$. This main effect was qualified by the predicted two-way interaction, $F(1, 185) = 4.71$, $p < .05$, $\eta_p^2 = .03$, reflecting that the preferential judgment was stronger for Christians than Hindus (see Figure 2). Follow-up, within-cultural group tests revealed that Christians judged more competence in target persons who used prayer ($M = 4.56$, $SD = 1.36$) compared to divination ($M = 3.60$, $SD = 1.14$), $F(1, 107) = 16.09$, $p < .001$, $\eta_p^2 = .13$, whereas Hindus judged equal competence in persons who chose prayer ($M = 4.30$, $SD = 1.17$) and divination ($M = 4.12$, $SD = 1.20$), $F(1, 78) = 0.45$, *ns*, $\eta_p^2 = .00$.

A 2 × 2 (Culture × Strategy) ANOVA on perceived counter-normativity of the strategies did not yield a significant main effect or interaction, suggesting that participants rated these items with regard to the norms of Indian society generally, not their specific religious communities.

Standard regression analysis tested the influence of religious background, strategy, and counter-normativity and all possible interactions of the three variables on competence, where counter-normativity was mean-centered and strategy and religious background were dummy coded. The overall model was significant, $R^2 = .12$, $F(7, 181) = 3.49$, $p < .01$. Results revealed a

significant two-way interaction of cultural group and perceived counter-normativity. This indicates that the two groups differed in how they judged Monica's competence in relation to her perceived counter-normativity, $\beta = 0.25$, $t(181) = 1.95$, $p = .05$.

Analyses of simple slopes investigated the source of the two-way interaction (Aiken & West, 1991). Specifically, we examined the effect of counter-normativity on competence for each of the cultural groups (see Figure 3). Results indicated that the effect was marginally significant for the Hindu group, $b = -.20$, $t(185) = 1.80$, $p = .07$, and it was not significant for the Christian group, $b = .07$, $t(185) = .67$, *ns.*

Discussion

Study 3c highlights that differences in fatalistic expectations have important consequences in person perception. People engaging in strategies that are more likely to be incompatible with the perceiver's cultural model are dismissed as lacking good judgment or competence in making decisions. Indian Christians accepted a person who prays for divine intercession whereas they were dubious of a person who consults an astrologer. Indian Hindus judged both strategies equally favorably.

Additionally, Study 3c explored the relationship of these cultural group tendencies to perceptions about the counter-normativity of these strategies. Recent research highlights that cultural differences in judgment are perpetuated by individuals responding in the ways they assume to be conventional or consensual (Chiu, Morris, Hong, & Menon, 2000; Fu et al., 2007). The typical patterns of thinking associated with cultural traditions are exhibited most by those individual members who perceive that these traditional patterns remain consensual (Zou et al., 2009). Given the diversity of the backgrounds of our participants, some of whom grew up in cosmopolitan Mumbai and some in more traditional cities and villages, there were individual

differences within cultural groups in their perceptions of the counter-normativity of prayer and

divination practices. However, our interaction effect suggests intriguing differences in the role

that perceived counter-normativity plays for majority and minority cultural groups. Like other

majority groups studied previously (Zou et al., 2009), Hindus (>60%) in India rely on their

perception of what is conventional in Indian society when evaluating the practice or, more

specifically, a person who uses it. By contrast, Indian Christians do not base their evaluations on

their perceptions of the consensuality of the practice. This may point to general difference in

judgmental heuristics of cultural majorities and minorities. Minorities may experience the cost of

greater effort expended in evaluating practices and people because they do not use the consensus

heuristic, yet they may also experience the benefit of freedom from limited, conventional ways of

thinking.

General Discussion

In this article, we have investigated fatalistic judgments hypothesized to differ as a

function of Christian and Hindu worldviews. Study 1 found that fatalistic self-attributions

centered on deity influence for Christians, especially for individuals high in religiosity. In Study

2, we found that fatalistic attributions for others' outcomes by Christians and Hindus were

evoked for different kinds of events. Among Christians, a misfortune was seen as fated when it

was preceded by misdeeds in this lifetime, whereas among Hindus, the same misfortune was

seen as fated even when no misdeeds were known. Study 3 examined prospective judgments

about managing uncontrollable risks. The Christian cultural context was associated with reliance

on praying for divine intercession, rather than consulting fortune-tellers (Studies 3a and 3b), and

judging others as competent to the extent that they cope with risks in this same way (Study 3c).

While no single study irrefutably proves that cultural worldviews condition fatalistic judgments, evidence from the mix of complementary methods in these studies lends credence to the argument. Some studies made use of the typical method of comparing students sampled from different nations (Study 1). Others compared members of different religious communities within the same country (Studies 2, 3a, and 3c). One study used the method of experimentally manipulating cultural primes (Study 3b). While the quasi-experimental comparisons are high in external validity, the priming experiment is high in internal validity.

Implications

The current findings speak to the literature on cultural differences, in particular, research programs comparing Hindu Indian samples to samples in Western settings. Psychological studies have primarily elucidated how Hindu social conceptions influence explanations for wrongdoing and judgments about justice (J. G. Miller & Bersoff, 1992; Shweder & Miller, 1991). Consistent with prior work (Shweder et al., 1997), we turn the focus toward Hindu conceptions of destiny and how they underlie interpretations of others' misfortunes. As we have introduced, this is a topic on which past generations of social scientists took the position that Hindus are generally more fatalistic in their behavior than Western cultural groups (Weber, 1958; Kapp, 1963). Our analysis and our findings suggest that the difference is more qualitative than quantitative; Hindus and Christians favor different forms of fatalism. For example, in Study 3a the Christian group indicated greater likelihood of engaging in petitionary prayer. In Study 3b, we found that the language condition associated with American Christian culture (as opposed to the language condition associated with Indian Hindu culture) induced a greater willingness to pray. Hence these results disconfirm the notion of Hindu cultures as generally more fatalistic than Christian cultures.

Moreover, the current findings highlight conceptual limitations to traditional Western discussions of karma within Hindu culture. The Weberian tradition tends to equate Hindu belief in karma with passivity and pessimism (Singh, 1975), but more informed ethnographers have emphasized that *karma*—literally, "action" or "deeds"—means that individuals actively create their outcomes (Daniel, 1983); belief in karma does not mean that perceivers simply absolve themselves, or others, from responsibility for a deed. Our results contribute to this point. In other words, the current results do not support the notion that the Hindu emphasis on destiny involves a passive view of persons and corresponding disinclination to assign responsibility. Both Hindus and Christians believe that individuals have volition in life's outcomes; Hindus must take action to minimize the unfavorable life outcomes inscribed in their destiny, whereas Christians must pray and carry out positive deeds so the deity will grant them favorable life outcomes.

The current findings also speak to findings on justice perceptions. In several streams of research, it has been found that perceivers judge others to have brought their misfortunes on themselves. In some cases, perceivers undoubtedly assume that justice is delivered through natural means, for example, a wrongdoer angers other people, who eventually retaliate. However, in other cases, there is no obvious natural mechanism that brings the negative reward to the wrongdoer. Piaget (1932/1965) referred to expectations that misdeeds will incur misfortunes as *immanent justice*. While Piaget saw this as a form of magical thinking in children, more recent evidence suggests that this tendency increases with enculturation (Raman & Winer, 2004) and persists in adults (Callan, Ellard, & Nicol, 2006). The term *immanent justice* highlights that Christians expect karmic retribution to arrive swiftly. If delivered by a personlike deity, retribution is just a lightning strike away—instant karma, in other words.. On the other hand, Hindus expect karmic justice to be delivered in the next life. Hence Piaget may have erred

not only in mistaking a cultural tendency for magical thinking, but also in mistaking the Western version of this tendency for a universal human tendency.

A related literature is research on victim blaming. The key variable in this literature is the degree to which the perceiver derogates the victim by ascribing negative attributes (Lerner & Miller, 1978; Lerner & Simmons, 1966). It is possible that perceivers judge that these attributes are inflicted, along with misfortunes, through the mechanisms of deity or destiny influence. This might explain why Western perceivers' derogation of a victim increases when there is information about past misbehavior of the victim (Hafer & Bégue, 2005). A hypothesis that could be tested in future research is that prior misbehavior is a stronger cue to victim blaming for Christian than for Hindu perceivers.

The current research also contributes to the emerging literature on prayer. The current analysis suggests that one psychological function of prayer is bolstering the sense that future risks are manageable. In our analysis, petitionary prayer is a fatalistic strategy, in which people seek to indirectly gain control through ingratiating a responsive deity.. Future research may further investigate other types of prayer, such as ritual prayer, which entails repetition of religious verses without specific personal requests and which is more common in Hindu communities (Poloma & Gallup, 1991). Moreover, our findings suggest that prayer is not the only fatalistic strategy that may function to make the future more controllable. In the context of Hindu culture, seeking divination is a strategy that involves accepting the external constraints of fatalistic forces while looking for areas of personal control that enable mitigating measures.

Limitations and Future Directions

The current research is an initial effort to analyze and measure patterns of fatalistic judgment across two cultural–religious traditions. As with many initial efforts, it has several

limitations. For example, the current research relies on self-reported measures. It is possible that people espouse more willingness to engage in practices related to traditional religious beliefs than they actually exhibit. That said, it is also possible that self-report bias cuts the other way, that people engage in traditional behavior more than they espouse it. The clearest picture of cultural differences will come when the current findings are supplemented by research that measures the frequency of fatalistic behaviors in real-world contexts. Furthermore, this should be supplemented by sociological research on the institutions that support these practices such as organized religions, legal proceedings, and medical and therapeutic regimes.

One limitation pertains to the scope of our studies concerning fatalistic expectations about the utility of prayer and divination. The studies focused on outcomes that cannot be directly controlled, such as accidents, but people may also make fatalistic judgments about domains in which they have some degree of direct control over outcomes. Research has linked fatalistic orientations to participants' adherence to health precautions such as proper diet, safe sex, and exercise (Chavez, Hubbell, Mishra, & Valdez, 1997; Goodwin et al., 2002; Greene, Lewis, Wang, Person, & Rivers, 2004). It remains to be seen whether varying cultural models have consequences in these domains as well.

Another limitation is that we have not sought a comprehensive model of the consequences of the fatalistic beliefs of the Hindu and Christian traditions. We have not even tried to analyze all Hindu beliefs about karma, which vary in their details from region to region; instead, we have focused on an invariant belief that deeds in one life determine an individual's fortune in future lives (Babb, 1975; Beck, 1983). Likewise, we have not analyzed all Christian beliefs about the deity, which vary from sect to sect, but have focused instead on the common denominator: the belief that rewards for bad behavior come through responses of a deity, not

through the workings of destiny. (Christian concepts of heaven and hell are an important part of the notion of fate, but they were not examined here because they are not relevant to the social judgments we studied,explanations or expectations of outcomes in this life.) It will be important for future research to explore other beliefs associated with these worldviews. Of course, another important direction for future research is investigating fatalistic beliefs in other religious cultural traditions such as Islam, Buddhism, and so forth.

Finally, the present research suggests insights about how to influence people's decisions about practical problems, especially problems that involve reasoning about the future. This does not mean that fatalism solves problems; however, exposing cultural frameworks may help people understand the bases of their conventional approaches, and in turn to imagine novel approaches. For instance, the technique of scenario analysis, which has figured in corporate strategic planning since the 1980s, was developed by a Shell executive who had studied traditional Hindu techniques for envisioning the future as partly fixed and partly undetermined (Wylie, 2002). A current social problem in all countries is how to persuade the current generation to make sacrifices in terms of environmentally damaging consumption for the sake of generations in the remote future (Marmor, Smeeding, & Greene, 1994). The Hindu worldview provides a framework for construing an individual's actions in this lifetime as connected to future generations through the person's own reincarnation into these generations (Daniel, 1983). If nothing more, the notion of being reborn may give people greater awareness of and concern for the problems of future generations. Hence, the Hindu worldview may be a useful lens to introduce as people deliberate about problems of intergenerational justice..

Conclusion

Findings from the present research demonstrate that different patterns of fatalistic thinking are associated with the Christian and Hindu cosmologies. The studies use different, complementary methods to rule out alternative accounts. These findings represent an important step in understanding how cultural models of fate enactment can affect everyday thinking.

References

Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions.* Newbury Park, CA: Sage.

Babb, L. A. (1975). *The divine hierarchy: Popular Hinduism in central India.* New York: Columbia University Press.

Babb, L. A. (1983). Destiny and responsibility: Karma in popular Hinduism. In C. F. Keyes & E. V. Daniel (Eds.), *Karma: An anthropological inquiry* (pp. 163–184). Berkeley: University of California Press.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173-1182.

Barrett, J. L., & Keil, F. C. (1996). Conceptualizing a nonnatural entity: Anthropomorphism in God concepts. *Cognitive Psychology, 31,* 219–247.

Beck, B. F. (1983). Fate, karma, and cursing in a local epic milieu. In C. F. Keyes & E. V. Daniel (Eds.), *Karma: An anthropological inquiry* (pp. 63–82). Berkeley: University of California Press.

Bond, M. H. (1983). How language variation affects inter-cultural differentiation of values by Hong Kong bilinguals. *Journal of Language and Social Psychology, 2,* 57–66.

Boyer, P. (2001). *Religion explained: The evolutionary origins of religious thought.* New York: Basic Books.

Burrus, J., & Roese, N. J. (2006). Long ago it was meant to be: The interplay between time, construal and fate beliefs. *Personality and Social Psychology Bulletin, 32,* 1050–1058.

Callan, M. J., Ellard, J. H., & Nicol, J. E. (2006). The belief in a just world and immanent justice reasoning in adults. *Personality and Social Psychology Bulletin, 32*, 1646–1658.

Chaturvedi, A., Chiu, C.-Y., & Viswanathan, M. (2009). Literacy, negotiable fate, and thinking style among low income women in India. *Journal of Cross-Cultural Psychology, 40,* 880-893.

Chavez, L. R., Hubbell, F. A., Mishra, S. I., & Valdez, R. B. (1997). The influence of fatalism on self-reported use of papanicolaou smears. *American Journal of Preventive Medicine, 13,* 418–424.

Chiu, C.-Y., & Hong, Y. (2006). *Social psychology of culture.* New York: Psychology Press.

Chiu, C.-Y., Morris, M. W., Hong, Y.-Y., & Menon, T. (2000). Motivated cultural cognition: The impact of implicit cultural theories on dispositional attribution varies as a function of need for closure. *Journal of Personality and Social Psychology, 78,* 247–259.

D'Andrade, R. G., & Strauss, C. (1992). *Human motives and cultural models.* Cambridge, England: Cambridge University Press.

Daniel, S. B. (1983). The tool box approach of the Tamil to the issues of moral responsibility and human destiny. In C. F. Keyes & E. V. Daniel (Eds.), *Karma: An anthropological inquiry* (pp. 27–61). Berkeley: University of California Press.

Dennett, D. C. (1987). *The intentional stance.* Cambridge, MA: MIT Press.

Fortes, M. (Ed.). (1983). *Oedipus and Job in West African religion.* Cambridge, England: Cambridge University Press.

Fu, H.-Y., Morris, M. W., Lee, S.-L., Chao, M., Chiu, C.-Y., & Hong, Y.-Y. (2007). Epistemic motives and cultural conformity: Need for closure, culture, and context as determinants of conflict judgments. *Journal of Personality and Social Psychology, 92,* 191–207.

Geertz, C. (1979). Religion as a cultural system. In W. A. Lessa & E. Z. Vogt (Eds.), *Reader in comparative religion: An anthropological approach* (pp. 204–216). New York: Harper and Row.

Goodwin, R., Allen, P., Nizharadze, G., Emelyanova, T., Dedkova, N., Saenko, Y., et al. (2002). Fatalism, social support, and mental health in four former Soviet cultures. *Personality and Social Psychology Bulletin, 28,* 1166–1171.

Greene, B. L., Lewis, R. K., Wang, M. Q., Person, S., & Rivers, B. (2004). Powerlessness, destiny, and control: The influence of health behaviors of African Americans. *Journal of Community Health, 29,* 15–27.

Hafer, C. L., & Bégue, L. (2005). Experimental research on just-world theory: Problems, developments, and future challenges. *Psychological Bulletin, 131,* 128–167.

Hiebert, P. G. (1983). Karma and other explanation traditions in a south Indian village. In C. F. Keyes & E. V. Daniel (Eds.), *Karma: An anthropological inquiry* (pp. 119–130). Berkeley: University of California Press.

Horton, R. (1983). Social psychologies: African and Western. In M. Fortes (Ed.), *Oedipus and Job in West African religion* (pp. 41–93). Cambridge, England: Cambridge University Press.

Johnson, D. D. P., & Kruger, O. (2004). The good of wrath: Supernatural punishment and the evolution of cooperation. *Political Theology, 5,* 159–176.

Johnson, D. D. P., Stopka, P., & Knights, S. (2003). The puzzle of human cooperation. *Nature, 421,* 911–912.

Jones, E. E., & Davis, K. E. (1965). From acts to dispositions: The attribution process in person

    perception. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 2,

    pp. 219-266). New York: Academic Press.

Jones, E. E., & McGillis, D. (1976). Correspondent inferences and the attributions cube: A

    comparative reappraisal. In J. Harvey, W. Ickes, & R. Kidd (Eds.), *New directions in*

    attribution research (Vol.1, pp. 390-420). Hillsdale, NJ: Lawrence Erlbaum.

Judd, C. M., Kenny, D. A., & McClelland, G. H. (2001). Estimating and testing mediation and

    moderation in within-subjects designs. *Psychological Methods, 6,* 115-134.

Kanouse, D. E., & Hanson, L. R. (1972). *Negativity in evaluations*. New York: General Learning

    Press.

Kapp, K. W. (1963). *Hindu culture, economic development and social planning in India.* New

    York: Asia.

Keyes, C. F. (1983). Merit-transference in the karmic theory of popular Theravada Buddhism. In

    C. F. Keyes & E. V. Daniel (Eds.), *Karma: An anthropological inquiry* (pp. 261–286).

    Berkeley: University of California Press.

Lerner, M. J., & Miller, D. T. (1978). Just world research and the attribution process: Looking

    back and ahead. *Psychological Bulletin, 85,* 1030–1051.

Lerner, M. J., & Simmons, C. H. (1966). Observer's reaction to the innocent victim: Compassion

    or rejection? *Journal of Personality and Social Psychology, 4,* 203–210.

Lieberman, M. D. (2000). Introversion and working memory: Central executive differences.

    Personality and Individual Differences, 28, 479–486.

Lieberman, M. D., Gaunt, R., Gilbert, D. T., & Trope, Y. (2002). Reflection and reflexion: A

    social cognitive neuroscience approach to attributional inference. *Advances in*

    Experimental Social Psychology, 34, 199–249.

Mankowski, E. S., & Rappaport, J. (2000). Narrative concepts and analysis in spiritually based

    communities. *Journal of Community Psychology, 28,* 479–493.

Marmor, T. R., Smeeding, T. M., & Greene, V. L. (1994). *Economic security and*

    intergenerational justice: A look at North America. Lanham, MD: University Press of

    America.

Michaels, A. (1998). *Hinduism: Past and present.* Princeton, NJ: Princeton University Press.

Miller, J. G., & Bersoff, D. M. (1992). Culture and moral judgment: How are conflicts between

    justice and interpersonal responsibilities resolved? *Journal of Personality and Social*

    Psychology, 62, 541–554.

Miller, P. J., & Moore, B. B. (1989). Narrative conjunctions of caregiver and child: A

    comparative perspective on socialization through stories. *Ethos, 4,* 428–449.

Norenzayan, A., & Hansen, I. G. (2006). Belief in supernatural agents in the face of death.

    Personality and Social Psychology Bulletin, 32, 174–187.

Norenzayan, A., & Lee, A. (2009). *It was meant to happen . . . Religious devotion and causal*

    complexity explain cultural variation in fate attribution. Unpublished manuscript.

Nunnally, J. C. (1978). *Psychometric theory* (2nd ed.). New York: McGraw-Hill.

Pargament, K. I. (2001). *The psychology of religion and coping: Theory, research, practice.* New

    York: Guilford Press.

Pepitone, A., & Saffiotti, L. (1997). The selectivity of nonmaterial beliefs in interpreting life

    events. *European Journal of Social Psychology, 27,* 23–25.

Piaget, J. (1965). *The moral judgment of the child.* London: Kegan, Paul, Trench, Trubner.

(Original work published 1932)

Poloma, M. M., & Gallup, G. H., Jr. (1991). *Varieties of prayer: A survey report.* Philadelphia:

Trinity Press International.

Raman, L., & Gelman, S. A. (2004). A cross-cultural developmental analysis of children's and

adults' understanding of illness in South Asia (India) and the United States. *Journal of*

Cognition and Culture, 4, 293–317.

Raman, L., & Winer, G. A. (2002). Children's and adults' understanding of illness: Evidence in

support of a coexistence model. *Genetic, Social, and General Psychology Monographs,*

128, 325–355.

Raman, L., & Winer, G. A. (2004). Evidence of more immanent justice responding in adults than

children: A challenge to traditional developmental theories. *British Journal of*

Developmental Psychology, 22, 255–274.

Rappaport, J. (1993). Narrative studies, personal stories, and identity transformation in the

mutual help context. *Journal of Applied Behavioral Science, 29,* 239–256.

Ross, M., Xun, W. Q. E., & Wilson, A. E. (2002). Language and the bicultural self. *Personality*

and Social Psychology Bulletin, 28, 1040–1050.

Shweder, R. A., & Miller, J. G. (1991). The social construction of the person: How is it possible?

In R. A. Shweder (Ed.), *Thinking through cultures: Expeditions in cultural psychology*

(pp. 156–195). Cambridge, MA: Harvard University Press.

Shweder, R. A., Much, N. C., Mahapatra, M., & Park, L. (1997). The "big three" of morality

(autonomy, community, divinity) and the "big three" explanations of suffering. In A.

Brandt & P. Rozin (Eds.), *Morality and health* (pp. 119–169). Stanford, CA: Stanford University Press.

Singh, A. (1975). Hindu culture and economic development in India. *Indian Social and Psychological Studies Publications, 1,* 89–108.

Sinha, J. (1990). *Work culture in the Indian context.* New Delhi: Sage.

Sperber, D. (1996). *Explaining culture: A naturalistic approach.* Oxford, England: Blackwell.

van de Vijver, F., & Leung, K. (1997). *Methods and data analysis for cross-cultural research.* Thousand Oaks, CA: Sage.

Weber, M. (1958). The social psychology of the world religions. In H. H. Gerth & C. W. Mills (Eds.), *From Max Weber: Essays in sociology* (pp. 267–301). New York: Oxford University Press.

Wylie, I. (2002, July). There is no alternative. *Fast Company,* p. 106.

Zou, X., Tam, K.-P., Morris, M. W., Lee, S.-L., Lau, I. Y., & Chiu, C.-Y. (2009). Culture as common sense: Perceived consensus vs. personal beliefs as mechanisms of cultural influence. *Journal of Personality and Social Psychology, 97,* 579-597.

Footnotes

[1]Of course, there is considerable heterogeneity in the beliefs about karma across different Hindu communities. Regional groups differ in the extent to which they use karma to explain causes and effects within the same lifetime as well as across lifetimes (Babb, 1983; Daniel, 1983; Keyes, 1983).

[2]In keeping with contemporary cultural psychology (Chiu & Hong, 2006) and anthropology (D'Andrade & Strauss, 1992; Sperber, 1996), *culture* is defined as a knowledge tradition associated with a community. Cultural models of a domain, such as fatalism, are represented collectively in the tradition's texts, discourses, practices, and institutions. On this view, the influence of cultural models on an individual's judgments and actions does not run through the individual's explicit, conscious beliefs; rather, it comes from the individual's immersion in a community where the model is implicitly taken for granted. Extensive exposure to representations of the model lead it to become internalized in judgments (Lieberman, 2000; Lieberman, Gaunt, Gilbert, & Trope, 2002). Also, models serve as frames of reference that enable smooth communication and epistemic closure (Fu et al., 2007). Recent studies of numerous well-established cultural differences in social cognition confirm that they are not mediated by participants' personal beliefs in the relevant cultural models so much as by their perceptions that the respective models are consensually shared within their societies (Zou et al., 2009). This point has been made specifically in the ethnographic literature on fatalism. Babb (1983) argued that although some Hindus interviewed by ethnographers express skepticism about karma from past lives, "skepticism is not the same thing as ignorance" (p. 165)—even individuals who overtly reject the contents of traditional beliefs still communicate and think in terms of them (Daniel, 1983).

[3]Each of these can also be understood to work through more physical mechanisms, e.g., it is thought that karma can be inherited through the blood, through other bodily substances, or through eating food cooked by someone else (Daniel, 1983).

[4]Although the proportion of females was higher in the Indian group, the culture effect was not merely a reflection of a gender effect. Our major finding of a Culture × Form interaction held when selecting only female participants, $F(1, 52) = 6.76$, $p < .05$, $\eta_p^2 = .11$. Among females, Indian Hindus equally endorsed destiny ($M = 3.57$, $SD = 1.81$) and deity ($M = 3.29$, $SD = 1.67$), $F(1, 27) = 1.14$, ns, $\eta_p^2 = .04$, and American Christians endorsed deity ($M = 4.38$, $SD = 2.29$) over destiny ($M = 3.73$, $SD = 2.18$), $F(1, 25) = 7.33$, $p < .05$, $\eta_p^2 = .23$. A 2 × 2 (Gender × Form: Deity, Destiny) ANOVA for the American sample was not significant, $F(1, 47) = 0.87$, ns, $\eta_p^2 = .02$; nor was it significant in the Hindu sample, $F(1, 31) = 0.34$, ns, $\eta_p^2 = .01$.

[5]At the time these data were being collected, a tsunami hit Southeast Asia, affecting nine countries (including India) and causing tremendous devastation to the coasts of these affected countries. We did not collect any further data after the tsunami because of the sensitive nature of one of the scenarios, which involved a hurricane striking a hotel by the sea.

[6]Although 0.7 is the usual standard for acceptable reliability coefficients (Nunnally, 1978), we used a slightly lower threshold because we presented a relatively small number of items and because the items reflected several types of petition and divination.

[7]Using the Spearman Brown Prediction Formula, $\alpha = .73$ given six items in the scale, rather than three.

Table 1

Explanations for Others' Misfortunes by Culture and Condition (Study 2)

	Hindu		Christian	
	Misdeed absent	Misdeed present	Misdeed absent	Misdeed present
Karma	3.19 (2.18)	3.08 (2.24)	1.42 (0.86)	2.97 (1.99)
Chance	3.33 (2.04)	4.00 (1.93)	4.67 (1.65)	4.41 (1.47)

Note. Larger numbers indicate stronger endorsement. Standard deviations are reported in parentheses.

Table 2

Willingness to Use Petition and Divination Strategies by Culture (Study 3a)

	Hindu	Christian
Parents of a bride plan a large outdoor wedding in July.		
Pray to request that the wedding events go smoothly.	5.67 (1.75)	6.76 (0.79)**
Consult an expert on horoscopes to choose the best day.	4.37 (2.37)	1.09 (0.53)***
An investor has an opportunity to buy part of Company A, which has run into legal troubles.		
Pray to ask that Company A is spared from bankruptcy.	3.72 (2.29)	6.15 (1.39)***
Arrange to meet with a psychic to see into the future and decide whether to buy.	1.80 (1.28)	1.09 (0.38)**
Partners who run a hotel want to buy a mansion by the sea to convert it to an inn. Twice in the last century, a hurricane had directly hit the building, causing great damage.		
Pray that God will avert the hurricane from the area.	3.22 (2.15)	5.73 (1.74)***
Consult with a local psychic about whether another hurricane will come to the area.	1.55 (1.04)	1.00 (0.00)**
A young couple's first child is born prematurely.		
Reaffirm devotion to God and ask that the child grow up healthy and safe.	4.94 (2.02)	6.94 (0.24)***
Consult with a diviner to learn whether the child will grow up healthy and safe.	2.59 (1.98)	1.55 (1.66)*

Note. Asterisks denote significant differences between cultures. Standard deviations are reported in parentheses. Larger numbers mean stronger endorsement for the attribution.

*$p \leq .05$. **$p \leq .01$. ***$p \leq .001$.

Figure Captions

Figure 1. Predicting deity and destiny belief by religiosity and culture (Study 1).

Figure 2. Endorsement of prayer and divination strategies by cultural condition (Study 3c).

Figure 3. Judged competence as a function of perceived counter-normativity and cultural group

(Study 3c).

Figure 1

Figure 2

Figure 3