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Forms of fatalism:

Christian and Hindu approaches to attributing misfortune and coping with risks

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Abstract

The authors argue that Christian and Hindu cultural traditions give rise to different conceptions of supernatural forces and, hence, to differences in everyday fatalistic thinking. Differences between the Christian deity-centered and Hindu destiny-centered worldviews were predicted in fatalistic attributions for misfortune and strategies for coping with risk. Attributing others' misfortunes to supernatural causes should depend on prior information about the others' misdeeds for Christians but not for Hindus. Regarding strategies for coping with future risk, Christians should prefer petitionary prayer whereas Hindus should prefer divination. Evidence for these hypotheses was found in cross-national comparisons of matched groups (Study 1), and comparisons between religious groups in the same US city (Studies 2, 3). Study 4 found that fatalistic thinking of bicultural individuals could be shifted when addressed in a Hindi versus a standard American accent.

Keywords: fate, culture, religion, blame, coping

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Beliefs in supernatural powers that shape human ends are posited by virtually all of the world's cultural traditions, whether in formal religions or folktales (Boyer, 2001). One account for the ubiquity of these ideas is that people need to assuage existential anxieties about the inequality of human suffering and the inscrutability of future risks (Geertz, 1979; Pyszczynski, Greenberg, & Koole, 2004). Conceptions of supernatural powers enable us to believe that others' misfortunes are not arbitrary and undeserved, and the risks in our own futures are knowable and manageable. Note that fatalism, in this sense, doesn't imply the absence of control over life outcomes; rather, it implies that's outcomes are controlled by supernatural forces (Gilbert, Brown, Pinel, & Wilson, 2000). Fatalistic belief systems enable people to believe that life outcomes can be interpreted and managed by means of these forces.

To say that all cultures think fatalistically, however, is not to say that they all think fatalistically in the same way. The current research probes some basic differences between the Christian conception of the supernatural that predominates in North America and the Hindu conception that predominates in the Indian subcontinent. It should be noted at the outset that the question of fatalism with regard to Hindu culture is a loaded subject. Western scholars from Weber onwards have traced Indian economic underdevelopment to a purported passivity in Hindu fatalism (Singh, 1975). Yet these arguments have been disavowed by Indian scholars given their reliance on second-hand ethnographic data rather than direct studies of Hindu thought patterns (Sinha, 1990). Studies that have actually measured thought patterns find Hindu Indian samples to be as high in perceived personal control as Western Christian samples (Carment,

1974; Furnham & Rajamanickam, 1992).

The current research takes a different approach from past work that has compared fatalism in India to Western settings. Rather than arguing that Hindus are generally more fatalistic, we argue that there are different forms of fatalistic thinking in Christian as opposed to Hindu cultures. Though “fatalistic” colloquially means submitting to inevitability, its technical meaning is belief in supernatural influence, which does not preclude some degree of personal control. There is evidence that belief in personal control is compatible with many specific cultural conceptions of fate control. A recent study found, across a broad sample of countries, that general belief in fate control is not inversely correlated with belief in personal control (Leung et al, 2002). Taking this a step further, we argue that different forms of fatalism support different strategies for seeking control.

Two Cultural Conceptions of Fate

Before discussing how Christian and Hindu conceptions of supernatural forces differ, it is worth reviewing some ways in which they are the same. Recent research highlights that there are underlying universals in ways people think about supernatural forces, despite cultural diversity in religious and superstitious beliefs (Boyer, 2001). Two basic structures follow from the interpretive modes that Dennett called (1987) the intentional stance and the design stance. The intentional stance leads to conceptualizing supernatural forces as like persons--as agents who act on the basis of perceptions and intentions. Studies of people’s inferences about supernatural agents, such as deities or angels, indicate that these thoughts draw on the concept of the person (Barrett & Keil, 1996). On the other hand, the design stance leads to conceptualizing supernatural forces as like machines or agencies that operate in predictable ways, according to fixed laws. An example of a supernatural force that people conceptualize this way is destiny.

In recent survey research Young and Morris (2005) have found that students in the US, a culture with a predominantly Christian worldview, and Nepal, a culture with a predominantly Hindu worldview, understand both kinds of supernatural forces—the notion of a person-like deity and of a machine-like system of destiny. The factor structure of the data indicates that these beliefs in supernatural influences are distinct from each other and from belief in personal control. Endorsement of these belief categories differed across cultures. Americans give comparatively more credence to the influence of a deity, whereas individuals from Nepal give comparatively more credence to the influence of destiny.

Past research suggests that the Christian and Hindu worldviews differ with regard to the salience of beliefs in deity and destiny influences, and that they both support belief in personal control. Yet past research has not probed the patterns of fatalistic thinking that follow from each kind of supernatural belief and contribute to perceived personal control. In the current research, we aim to identify some differences between the forms of fatalistic thinking that reflect these two worldviews. To develop hypotheses, we start by examining canonical stories in these religious traditions concerning supernatural influences on human lives. Stories are a crucial carrier of cultural traditions, because they are accessible and memorable (Sperber, 1996), while also providing frames for interpreting new events and making decisions (Schank & Abelson, 1977).

Christian Fatalism

In the primary stories of the Bible, the notion that God watches over human actions and responds with swift retribution is a particularly salient theme. In the Garden of Eden story, for example, God notices that Adam and Eve have violated his prohibition and promptly responds by exiling them. This image of a person-like deity whose perceptions, emotions, and intentions give rise to intercession in the world recurs in the message given to Moses on the mountaintop:

“They have provoked me with their worthless idols... I will heap calamities upon them ...” (Deut. 32: 21-23; New International Version). Although there are Biblical stories in which misfortunes are suffered by the innocent (Job), there are many more stories about misfortunes as punishment for wrongdoing. The key point is that in these Christian stories the payback for wrongdoing is mediated by a person-like deity rather than an impersonal system of destiny¹.

Stories of fatalistic retribution carry forward in a cultural tradition when they are used as analogies to support supernatural interpretations of current misfortunes. Consider the most famous Biblical tale of retribution: the punishment of the decadent cities of Sodom and Gomorrah with a rain of fire and brimstone. This story was adapted by the Israelites to explain the plagues on Egypt (Exodus) and later by early Christians to explain the burning of Rome (Revelations). It is invoked in contemporary Christian American discourse about events such as Californian earthquakes and the AIDS epidemic.

Importantly, Christian stories of supernatural influence do not imply the absence of personal control over life outcomes. On the contrary, the notion of a responsive deity enables strategies for coping with otherwise unmanageable risks. That is, if God is like a person, then one can influence God’s actions—by avoiding behavior that displeases God and through direct verbal appeals. This notion implies that one can minimize the chances of misfortune through one’s behavior and through direct petitions. This strategy of seeking control through the deity’s response is distilled in Christian sayings such as “The Lord helps those who help themselves.”

Hindu Fatalism

By Hindu tradition we refer to the worldview that has emerged from Vedic texts in the Indian subcontinent. Although the Hindu tradition is rich with stories of deities interceding in human affairs, even more prevalent are stories about the role of destiny in delivering cosmic

rewards and punishments. This is salient in stories emphasizing that deities cannot intercede to change a person's karma. A portion in the epic *The Mahabharata* tells of a story in which the God Krishna sees his nephew Abhimanyu entering a *vyuha*—a type of maze from which he will not be able to escape. Although Krishna cares for his nephew very much, he knows that it is Abhimanyu's fate to die in the *vyuha*; so, he can only observe with sadness.

The theme that deities cannot override destiny recurs in Hindu folktales, albeit in different versions within different regional traditions (Shweder, Much, Mahapatra, & Park, 1997). For example, Shweder and Miller (1991) relate a traditional Oriya tale in which the goddess of wealth Lakshmi pleads with her husband, the god Vishnu, to help a beggar. Vishnu replies that attempts to help would be futile, as “the beggar has nothing in his karma. . . he has done nothing virtuous and therefore deserves nothing.” After Lakshmi's repeated pleas, Vishnu eventually concedes to placing money under a tree, so that Lakshmi can direct the beggar to it. Yet when the beggar arrives to the tree, he cannot see the money on the ground before him. The story ends with Vishnu's comment to his spouse: “Have you seen that? It is not in his karma.”

Of course, as with the Christian tradition, there is a wealth of diversity in the stories concerning supernatural influences in the Hindu scriptures and folktales. The above stories obviously do not cover all the variations. However, they do emphasize a theme that is starkly different from that in Christian stories; namely, that human life fortunes are determined by fore-ordained destinies that cannot be changed even through divine intercession. The Hindu concept of karma is merit accrued in past lifetimes. Through the system of *samsara*, or the cycle of rebirth, each person is born with headwriting--an invisible inscription on the forehead that dictates when and where they will meet good and bad fortune, based on their karma. While the fixed, mechanistic nature of this system through which fortunes are assigned means that they

cannot be changed, it also means that they are potentially discoverable in advance. One can seek control through the strategy of hearing one's fortune and then adapting one's actions to minimize its consequences. Consistent with this, Hindus give credence to the notion that seers or psychics can discover a person's fortune from signs, such as the astrological conditions of the person's birth.

Having described some key differences between the Christian and Hindu worldviews in how supernatural forces are assumed to influence human fortunes, now let us derive hypotheses about aspects of everyday thinking that may be affected by these conceptions of fate.

Coping with Observed Misfortunes

One way that we cope with misfortunes is victim blaming: under certain conditions, we make sense of news of another person's misfortune by surmising that it is somehow deserved. The logic involved in these victim-blaming inferences is rather loose. Consider, for instance, the explanation given to a rape victim (Raine, 1998) that she might have brought on her fate, in that she had a "negative attitude' that might have 'attracted' more 'negativity'" (p. 91). Attribution theorists argue that victim blaming tendency serves a motive of the perceiver--not a motive of malice, but a motive to maintain a sense of the world as fair.

Victim blaming was originally identified as a reaction that occurs when one is confronted by a victim who is fated to prolonged suffering and when one has no way to redress the suffering (Lerner & Simmons, 1966). Subsequent studies, many of them by applied researchers interested in the plight of victims, have identified such tendencies in reactions to victims of illness, accident, and crime (Lerner & Miller, 1978). In the past two decades, a major theme has been identifying the critical features of an event that elicit this blaming reaction (see Hafer & Begue, 2005). One key factor is whether there is information about prior negative

behavior by the victim (Hammock & Richardson, 1998; Karuza & Carey, 1984; Lodewijk, Wildschut, Nidjstad, Savenije, & Smit, 2001; Murray & Stahley, 1987). For example, stalked women are blamed more if they had a past relationship with their stalker (Sheridan, Gillett, Davies, Blaauw, & Patel, 2003); AIDS victims are blamed more if their lifestyle had features matching the stereotyped gay lifestyle (Triplet, 1992). Victim blaming does not require solid evidence that the victims have caused their own suffering; it just requires that there is a cue to see victim's past as negative and hence as deserving of punishment.

Research on victim blaming has not delineated the steps of inference that bring attributors to their uncharitable conclusions. That is, previous research has documented that the general concept of “just punishment” is widely known in the United States and in India (Pepitone & Saffiotti, 1997). Yet past findings do not describe people's ascriptions for *how* wrongdoers are assigned their appropriately negative outcomes. We propose that these inferences are channeled, in many cases, by conceptions of fate. Both Christian and Hindu conceptions of fatalism could explain how misfortunes are delivered to the deserving—by the hand of a deity or the machinating of destiny.

What differences might we expect about the conditions for victim blaming through Christian versus Hindu lenses? The Christian conception of a responsive deity leads to a schema for explaining misfortunes that follow negative behavior. This idea is expressed in terms such as “divine retribution” and “just deserts.” And, since the mid-19th century, the borrowed-term “karma” has been used in English to capture this notion. Interestingly, karma in the Hindu tradition is understood differently. For Hindus, a person's karma in this life is primarily determined by their unknowable deeds in past lifetimes². Whereas the term is used in the West to explain cosmic payback for misdeeds within the same lifetime, karma in Hindu tradition refers to

a much slower process of cosmic compensation. The Western version was perhaps best expressed by John Lennon (1975) who wrote: “Instant Karma's gonna get you/Gonna knock you right on the head/You better get yourself together/Pretty soon you're gonna be dead. . . /It's up to you, yeah you.”

We hypothesized that Christians and Hindus would differ accordingly in the kinds of events that would evoke karmic explanation; for Christians, evidence of negative behavior by the target person would be a prerequisite. We tested our hypotheses in an experiment where participants read a scenario about a severe misfortune that befell a target person. In one condition, participants read only about the unfortunate outcome. In the other condition, participants first read about a “pre-cursor” event—a prior misdeed by the target person. We hypothesized that Christians would apply karmic explanations only in the condition when they are informed about prior misdeeds; in contrast, Hindus would apply karmic attributions in both conditions, even without evidence of prior misdeeds.

Coping with Future Risks

In addition to explaining past misfortunes, fatalistic thinking is also used to cope with future risks. People gain a sense of control over future outcomes and attempt to manage these outcomes through their supernatural beliefs. One such fatalistic coping strategy is petitionary prayer, which entails requesting for specific needs (Poloma & Gallup, 1991). The Christian conception of fate administered by a person-like deity lends credence to petition. Indeed, direct requests for divine intercessions occur frequently in the Bible, perhaps most memorably in King David’s words: “Listen to my prayer, O God, do not ignore my plea” (*Psalms* 55:1). The Hindu tradition is rich in ritual prayers, those that involve repetition of written or memorized prayers, and that make no direct requests (Poloma & Gallup, 1991). We argue that the Hindu conception

of fate as primarily determined before one's lifetime by an implacable system does not lend credence to petition.

Another fatalistic coping strategy is divining one's fortune in order to adapt. We assert that the Hindu conception of fate lends credence to this strategy. Although Hindus do not believe one can escape one's fortune, they do believe that one can learn one's fortune from a seer and that one can act to minimize its negative consequences. The logic of this strategy is expressed in popular a South Indian saying about divination: "If you know when it will rain, you can carry an umbrella." Ethnographers have emphasized that seers not only tell their Hindu clients about aspects of the fortune that are fixed but also make recommendations about what they can do about it—"specific instructions about how to act, and about what to expect, must always be worked out through discussion between a specific divine seer and his local client" (Beck, 1983). For instance, someone whose signs suggest bad luck in March might be advised against a wedding or business venture that month. In some cases, the strategies for navigating one's fortune are clever. A Hindu folktale tells of a King who learned he was fated to be stabbed by a subject; his response was to outlaw all but the most miniscule knives from his country, so that his fortune could occur without lethal consequences (Hiebert, 1983). Although belief in astrology and other forms of divination exist in Christian cultures, we argue that they are not as supported by the Christian conception as they are by the Hindu conception of fate.

In sum, neither Christian nor Hindu fatalism is a recipe for passivity. Each belief system engenders strategies for coping with future risks by working with supernatural forces. Yet there should be a difference in which coping strategies are preferred as a function of the associated deity or destiny centered worldview.

The first study offers an initial examination of fatalistic explanations for misfortune and coping with future risks in cross-national samples. The subsequent three studies replicate these patterns of judgment in samples drawn from the United States and explore alternative explanations for these initial findings. Specifically, Study 2 focuses on fatalistic explanations for misfortune. Studies 3 and 4 both focus on fatalistic strategies for coping with future risks.

Study 1: Cross-national Comparison of Student Samples

Our first study used a cross-national comparison. We compared groups of participants differing in their national culture yet matched on other dimensions. Specifically, we compared students at a selective university in the United States, a culture dominated by the Christian religious tradition, with students at selective universities in India and Nepal, cultures dominated by the Hindu tradition.

We administered a survey with two parts, which probed our hypotheses about fatalistic explanations and fatalistic coping strategies. The first part involved an experimental design. Participants read a story about a character who suffers a misfortune; in one condition the story described solely the misfortune whereas in the other condition the story first reported an instance of prior negative behavior. This design allowed us to test our hypothesis that fatalistic explanations would hinge on evidence of prior misbehavior for Christian-culture participants but not Hindu-culture participants. Ethnographic studies suggest that supernatural explanations, such as karma, exist in the cognitive toolbox with other explanatory frames such as natural causes and chance (Daniel, 1983). Hence, we designed the response format for the dependent variable to allow participants to be inclusive; participants rated each explanation for its potential role in creating the outcome, rather than choosing one explanation.

The second part of the survey probed fatalistic strategies for coping with future risks by

examining participants' willingness to engage in practices premised on working with supernatural forces. This allowed us to test our hypothesis that Christian-culture participants (henceforth "Christians") would favor the petitionary prayer strategies (seeking divine intercession in future events) whereas Hindu-culture participants (henceforth "Hindus") would favor divination strategies (seeking to learn one's fortune so as to minimize its consequences). Within the two relevant categories of fatalistic strategies, we included several slightly different items to capture a range of contexts in which petition and divination strategies might be chosen. Although both strategies exist in both cultural settings, we expected that Christians would be higher in preference for petition strategies and Hindus would be higher in preference for divination strategies. Our survey measured preferences directly in participants' willingness to use the strategy and, more indirectly, in their judgments about other people who use the strategies.

Method

Participants

We surveyed 114 American students (48 males, 66 females) from a competitive West Coast university, 152 Nepali students (82 males, 70 females) from the country's leading university, and 260 Indian students (129 males, 131 females) from two colleges in Uttar Pradesh—a region that borders Nepal³. The mean age of participants was 19 years. There were no statistically significant main effects or interactions involving sex or age, so these variables will not be discussed further. The participants received cash payment for their time.

Procedure

Part I—explaining misfortunes. Participants were randomly assigned one of two vignettes—one about a traffic accident and another about a birth defect. There were two conditions of each story: one condition included solely the misfortune (misbehavior information

absent); the other condition included information about a pre-cursor event before the misfortune (misbehavior information present). For example, the first condition of the traffic accident story said, “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 second (misbehavior information present) condition of the story is as follows.

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.

Several decades later, 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 birth defect story is as follows. In the first (misbehavior information absent) condition, participants read, “L and his wife became pregnant; their son was born with a muscular disease, and he never learned to walk.” In the second (misbehavior information present) condition, participants read, “When he was a young man, L openly made fun of people who have physical disabilities. Years later, when he and his wife became pregnant, their son was born with a muscular disease, and he never learned to walk.”

After reading the vignette, participants then read, “If you were to explain this story, which of the following elements might apply to the explanation?” Participants rated each of the following items on a six-point scale, where 1 = *does not apply at all* and 6 = *very much applies*: karma, luck, chance, accidents, personality, and other persons. In pre-testing, we found that ‘karma’ and to a lesser extent ‘luck’ were understood by both cultures as references to supernatural forces that deliver deserved fortunes. The other items were included to distinguish supernatural accounts from those in terms of natural personal causality and those in terms of chance. In sum, the study used a mixed design of 2 (Culture: Christian, Hindu) × 2 (Misbehavior

Information: Absent, Present) \times 6 (Explanation Content: Karma, Luck, Chance, Accidents, Personality, and Other persons), where Explanation Content was a within-subjects factor.

Part II—coping with future risks. Participants read instructions that stated, “People in different positions take many different kinds of measures to handle uncertainty. Some practices that people have chosen are listed below. In the case of each item, please make three ratings: a) Imagine you are in the same position as the actor described in the item. How likely would you be to choose this practice? (1 = not at all likely, 6 = very likely), b) What is your impression of a person/organization that engages in this practice? (1 = odd/weird, 6 = reasonable/sensible), c) Would you associate with a person/ organization that engages in this practice? (1 = I would avoid association, 6 = I would associate).” The items were concrete examples of petition and divination strategies in different everyday risk contexts. The order of the items was randomized along with filler items describing other ways of coping that do not involve working with supernatural forces. The items are listed in the Appendix.

Results

Part I-- Explanations for Misfortune

Distinguishing types of explanation. To explore whether fatalistic explanations are distinct from other kinds, we conducted a principal components analysis of the six explanation ratings. Pooling across the accident and birth defect stories, participant groups, and misbehavior information conditions, a clear three-factor solution emerged, accounting for 63% of the total variance. Personal causality (*personality* and *other persons*) was the first factor; supernatural force (*karma* and *luck*) was the second factor; and chance (*chance* and *accident*) was the third. See Table 1 for factor loadings. Similar structures emerge when the data is separated by conditions. This result supports our premise that fatalistic explanations are distinct from accounts

that a victim has personally caused his or her misfortune (through natural means) and from accounts in terms of chance.

Cultural differences. Before testing the specifically predicted patterns, we first tested the omnibus interaction among the three experimental factors, to detect culturally differential dependence on prior misbehavior information that is specific to particular kinds of explanatory content. Looking first for differences between our two Hindu-culture groups, we conducted a 2 (Group: Indian, Nepal) \times 2 (Misbehavior Information: Absent, Present) \times 6 (Explanation Content: Karma, Luck, Chance, Accidents, Personality, and Other persons) MANOVA. Findings showed no three-way interaction ($F(5, 358) = 1.14, ns$), suggesting that there was no such difference between our two Hindu-culture groups. Then we pooled these two groups to form the Hindu cultural group and tested for culturally differential responses in a 2 (Culture: Hindu, Christian) \times 2 (Misbehavior Information: Absent, Present) \times 6 (Explanation Content) MANOVA. This time, there was a three-way interaction (Culture \times Misbehavior Information \times Explanation Content) consistent with the hypothesized differential dependence on prior misbehavior information $F(5, 470) = 2.26, p < .05$.

Next we focused on the explanation predicted to vary culturally, and we compared ratings of the fatalistic explanation as a function of culture and story structure. The relevant means for the two scenarios are shown in Table 2. Differential dependence on prior misbehavior information for Christians was tested with the planned contrast (-3, 1, 1, 1) across the Christian-absent, Christian-present, Hindu-absent, and Hindu-present cells, respectively. For ratings of *karma* in the traffic accident vignette, this contrast was highly significant ($F(1, 154) = 8.65, p < .01$). In the birth defect story, it was again supported ($F(1, 152) = 13.80, p < .001$).

Part II--Coping with Future Risks

Willingness to use strategies. Participants rated the likelihood that they would choose petition and divination approaches in several contexts. Inter-correlation of the petition items ($\alpha = .78$) and the divination items ($\alpha = .60$)⁴ permitted construction of summary variables (see Table 3 for mean scores by culture).

We first tested the Culture \times Coping Strategy interaction in an ANOVA with Culture as a between subjects factor and Coping Strategy as a within subjects factor. The interaction effect was highly significant ($F(1, 518) = 134.69, p < .001$). To explore this, we compared scores between cultures. Unexpectedly, Christians were no higher than Hindus in petition willingness ($M_{\text{Christian}} = 3.61, SD = 1.50$ vs. $M_{\text{Hindu}} = 3.61, SD = 1.07; t(518) = .04, ns$). As expected, Hindus were far higher than Christians in divination willingness ($M_{\text{Christian}} = 1.90, SD = .88$ vs. $M_{\text{Hindu}} = 3.35, SD = .93; t(507) = -14.93, p < .001$). We also tested simple effects within each culture, which revealed that Christians favored petition over divination strategies ($F(1, 113) = 163.08, p < .001$), and Hindus favored divination over petition strategies ($F(1, 405) = 13.08, p < .001$).

Acceptance of Strategies. Participants also indicated their view of others who use each practice. Summary scores were again created for petition ($\alpha = .79$), and divination ($\alpha = .58$). A 2 (Culture: Hindu, Christian) \times 2 (Strategy: Petition, Divination) mixed ANOVA, showed a significant interaction effect ($F(1, 517) = 250.58, p < .001$). Results show the predicted cultural differences in petition acceptance ($M_{\text{Christians}} = 4.23, SD = 1.14$ vs. $M_{\text{Hindu}} = 3.42, SD = .95; t(517) = 7.67, p < .001$) and divination acceptance ($M_{\text{Christians}} = 2.32, SD = .97$ vs. $M_{\text{Hindu}} = 3.31, SD = .84; t(518) = -10.74, p < .001$). Simple effects within culture revealed that Christians favor petition over divination ($F(1, 113) = 281.01, p < .001$), and Hindus favor divination over petition ($F(1, 404) = 5.09, p < .05$).

Finally, participants also rated their willingness to associate with others engaging in petition ($\alpha = .80$) and divination strategies ($\alpha = .59$). Again, the 2 (Culture: Hindu, Christian) \times 2 (Strategy: Petition, Divination) interaction was statistically significant ($F(1, 517) = 92.06, p < .001$). In comparisons between cultures, the predicted difference was seen for the second indirect measure of petition strategy acceptance ($M_{\text{Christian}} = 4.59, SD = 1.14; M_{\text{Hindu}} = 3.61, SD = 1.11; t(517) = 7.76, p < .001$). Yet, there was no difference in the measure of divination strategy acceptance ($M_{\text{Hindu}} = 3.39, SD = .98; M_{\text{Christian}} = 3.20, SD = 1.24; t(517) = -.88, p = \text{ns}$). The simple effects within culture showed the familiar pattern: Christians were more willing to associate with those engaging in petitionary prayer than those seeking divination ($F(1, 113) = 115.36, p < .001$), and the opposite was true for Hindus ($F(1, 404) = 4.97, p < .01$).

Discussion

Results from both parts of the survey revealed cultural differences in forms of fatalism. The first part experimentally revealed different conditions for karmic explanations for misfortune. Christians were more likely to attribute misfortune to supernatural punishment for a target person who had misbehaved earlier in life, whereas Hindus invoked supernatural force without needing evidence that the victim had misbehaved earlier in life. Recall that ratings were only assertions that an explanation was relevant—not that it was the best explanation. This inclusive response format makes the Christians' rejection of *karma* when information about prior misbehaviors was absent all the more striking.

A standard criticism of cross-cultural studies is that concepts are not equally familiar in both cultures. For example, a critic might argue that the term *karma* is more familiar in Hindu than Christian cultures, and therefore the cultural difference may simply reflect that Christians have a more nebulous understanding of when to apply karmic explanations. Yet if this were the

case, then it should follow that Christians would apply the term more loosely. Our results did not support this view, however, in that Christians showed a more specific, circumscribed application of karmic explanations than Hindus did.

The second part of the survey revealed that fatalistic coping strategies differ. As predicted, Christians generally favored petition whereas Hindus generally favored divination strategies. It should be noted that some petition and divination practices exist in both cultural settings. For example, in parts of India people seek intervention of deities by undertaking a *vrata*--a vow--“to influence some deity to come to one’s aid,” although the aid may not be expected until one’s next lifetime (Wadley, 1993). Likewise, Americans employ a large number of psychics, astrologers, and other experts with mystical credentials who claim to predict people’s futures. Despite the availability of these strategies in both cultural settings, there was a clear difference in which practices participants endorsed.

Study 2: Cross-Group Comparison within the Same Country--Explanations

Cross-national differences, such as those found in Study 1, are susceptible to alternative explanations. Extra-cultural differences between the nations, such as economic dimensions and legal institutions, may contribute to differences in explanation patterns and coping decisions. For example, the preference for divination versus petition as strategies may reflect the objective supply of astrologists or seers available to students. Regarding explanations to cope with observed misfortunes, the greater tendency of students in the Indian subcontinent to interpret misfortune of an innocent victim as cosmic punishment may reflect the haphazard legal environment that has shaped individual experiences. Studies 2 and 3 address the concerns that accompany the cross-national method by employing a cross-community group method--comparing Christian and Hindu groups in the same city to hold constant the economic and legal

environment. The cross-community method also lends itself to non-student samples, which may adhere more strongly to their cultures than do students. Additionally, because the sample is drawn solely from the United States, the study can be run in English for both groups, eliminating concerns about translation.

Study 2 methodologically replicated the experiment in Study 1. A measure of blame was added to check that karma implies blame in both cultures. Another addition was measures of judgeability (Yzerbyt, Schadron, Leyens, & Rocher, 1994) that enables us to check an alternative account for the pattern in Study 1. Yzerbyt et al (1994) found that social judgments vary according to how much individuating information perceivers feel they have received, and hence how “judgeable” the situation is. Previous research has not explored whether this phenomenon applies in Hindu cultures. Perhaps the information-based manipulation increased judgeability for Americans but not Hindus. By measuring judgeability, we can check this alternative account.

Method

Participants

Individuals were recruited to participate in a study on “Facing Uncertain Situations.” They were surveyed outside of a Hindu temple and a Christian church in New York City. Fifty-four individuals from the Hindu temple and 61 individuals from the Christian church agreed to fill out the survey in exchange for a \$10 donation to their respective temple or church. The mean age of participants was 43 years, and the sample included 49 men, 46 women, and 4 individuals who chose not to reveal their sex. There were no statistically significant main effects or interactions involving sex, so this variable will not be discussed further.

Procedure

The written questionnaire was administered to all participants in English. Similarly to

Study 1, participants read one of two versions of the traffic accident story: the first version (misbehavior information absent) included a single, focal event and the second version (misbehavior information present) included a pre-cursor event as well as the focal event. Thus, the study used a 2 (Religion: Hindu, Christian) \times 2 (Misbehavior Information: Absent, Present) design, where the information condition was randomly assigned.

Measures

After reading the vignette, participants then read, “If you were to explain this story, which of the following elements might apply to the explanation?” Participants rated their endorsement of each the following items on a six-point scale (where 1 = *does not apply at all* and 6 = *very much applies*): karma, personality, luck, and chance. To assess whether participants felt able to make judgments about the short scenario, they also rated: “Do you feel that your experience in life entitles you to interpret a situation like this?” where 1 = *not at all entitled* and 6 = *very much entitled*, and “Do you feel able to judge what happened to K?” where 1 = *not at all* and 6 = *able to judge*. Finally, to assess the extent to which participants blamed the victim for what happened to her—that is, seeing her as instrumental in bringing about her own negative outcomes--they rated, “In a story like this is there any way that K’s deeds may have brought on the misfortune?” where 1 = *very much no* and 6 = *very much yes*.

Results

In replicating the findings of Study 1, we predicted that Christians apply karmic explanations when informed about misbehavior earlier in the target person’s lifetime, but Hindus apply karmic attributions even without information about prior misbehavior.

Fatalistic Explanations for Misfortune

We employed a 2 (Religious Background: Hindu, Christian) \times 2 (Misbehavior

Information: Absent, Present) \times 4 (Explanation Content: Karma, Personality, Luck, Chance) MANOVA on the three explanations ratings which yielded significance in a three-way interaction ($F(3, 112) = 2.57, p = .05$). We then tested the specifically predicted pattern of lower karma attributions in the Christian 1-part cell by contrasting this with the other three cells (Christian present, Hindu absent, Hindu present) and found a highly significant effect ($F(1, 115) = 19.10, p < .001$). Please see Table 4 for complete means by culture and condition.

Ratings on the Judgeability of the Situation

One item measured how entitled participants felt to make judgments about the situation, and another item assessed whether participants felt “able to judge what happened.” Because the ratings on these two items were significantly correlated ($\alpha = .50, p < .001$), we created a summary score of judgeability. The score did not produce any main effects or interactions: $M_{\text{Hindu \& Information Absent}} = 3.51 (SD = 1.35)$; $M_{\text{Hindu \& Information Present}} = 3.09 (SD = 1.43)$; $M_{\text{Christian \& Information Absent}} = 2.78 (SD = 1.42)$; $M_{\text{Christian \& Information Present}} = 3.02 (SD = 1.63)$. Hence, the differential dependence of Christians on prior information did not seem a by-product of their sense of judgeability.

Ascribing responsibility

Although we replicated the pattern of karmic attributions from Study 1, in which Hindus were as likely to apply the word *karma* when misbehavior information is absent or present, one might question whether they are truly blaming the victim. That is, is are Hindu references to karma a way to blame the target, or is it the opposite--a way to absolve the target from responsibility? This was assessed with an item that asked whether the target brought about her misfortune. We found a main effect of religion, such that Hindus made higher responsibility ratings than Christian participants did ($F(1, 110) = 7.82, p < .01$). Furthermore, there was a

marginally-significant Religious Background \times Misbehavior Information interaction such that Hindus considered K more responsible when misbehavior information is absent ($M_{absent} = 3.52$ ($SD = 1.67$) v. $M_{present} = 3.15$ ($SD = 1.83$), but Christians see K as more responsible in the 2-part story ($M_{absent} = 2.18$ ($SD = 1.35$) v. $M_{present} = 2.76$ ($SD = 1.74$), interaction $F(1,110) = 2.83$, $p = .09$). Taking Hindus and Christians together, karma was correlated with explanatory references to personality ($r = .21$, $p < .05$) and with responsibility ratings ($r = .58$, $p < .01$); overall, karmic explanations seem associated with blame rather than exoneration (see Table 5 for correlations among all variables).

Test for mediation

In the conditions where the misbehavior information was absent, Hindus ($M = 2.18$) rated K as responsible than Christians did ($M = 3.52$, $t(57) = 3.79$, $p < .001$). Does karmic attribution mediate the relationship between religious background and responsibility assignment, in this condition? To test for mediation, we adopted the multiple regression procedure of Baron and Kenny (1986), in which mediation is established when: 1. the independent variable (religious background) predicts the dependent variable (responsibility), 2. the independent variable predicts the potential mediator (karmic explanation), and 3. when the dependent variable (responsibility) is regressed on the independent variable simultaneously with the potential mediator, the potential mediator relates to the dependent variable. In this last step, the effect of the independent variable on the dependent variable should be weaker than in the first equation and potentially reduced to non-significance.

Regarding the first step in the test for mediation, religious background predicted victim responsibility ratings ($beta = .457$, $t = 4.05$, $p < .001$). In the second step, *karma* qualified as a potential mediator, because religious background predicted use of karmic explanations ($beta =$

.487, $t = 4.25$, $p < .001$). In the third step of the test for mediation, karma and victim blame were simultaneously regressed on religious background, and karmic explanations had a significant independent effect on victim responsibility ($beta = .435$, $t = 3.58$, $p = .001$). Also, in this last equation, the relationship between the independent variable (religious background) and the dependent variable (victim responsibility) was not significant ($beta = .206$, $t = 1.65$, $p = ns$), suggesting that the relationship between religious background and victim blame was accounted for by participants' use of karmic explanations.

Discussion

Study 2 provides a within-U.S. replication of the pattern found in the cross-national study (Study 1), showing that Christians invoke karmic explanations for misfortunes that follow misbehavior, and Hindus invoke karmic explanations even without the misbehavior information. This pattern was not found to be a function of differences in perceived judgeability (Yzerbyt et al, 1994) of the situation. Importantly, the study goes further in investigating the ramifications of karmic explanations: linking them to ascriptions of responsibility. These findings suggest that religious conceptions underlie some victim blaming tendencies.

Study 3: Cross-Group Comparison within the Same Country--Coping Strategies

Our cross-national comparison of coping strategies (Study 1) found a preference in Hindu culture for divination over petition strategies and vice versa in Christian culture. Our next study investigated whether this pattern holds in the comparison between cultural groups in the same U.S. city. We also controlled more carefully the types of risks that were paired with each example of the respective strategies.

Method

Participants

Individuals were recruited from a Hindu temple and a Protestant church in the Northeastern United States; they were asked to participate in a study on people's strategies for coping with uncertain situations. Forty-eight Hindu individuals and 32 Christian individuals participated. The mean age of all participants was 36 years (46 males and 33 female). There were no statistically significant main effects or interactions involving sex, so this variable will not be discussed further.

Procedure

Individuals were approached by a female experimenter to participate in the study. The written questionnaire was administered in Hindi or in English, based on the participants' cultural background. The instructions asked participants to read each situation described and the practices for handling uncertainty in each situation. They were instructed to imagine being in the same position as the actor in the scenario and rate the extent to which they themselves would employ the petition or divination practices listed (where 1= *I would absolutely not employ this practice* and 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 divination⁵. The study design was thus 2 (Religion) × 2 (Strategy) × 4 (Scenario), where culture is the only between-subjects variable.

To encourage freedom of ratings, the instructions also stated:

Many people use *several* practices to handle uncertainty—not just one. Given this, rating one of the practices high or low does not necessarily mean that you should rate other practices high or low as well (i.e. there is no need to “rank” the practices within each situation).

Finally, the participants completed a short demographics questionnaire and were paid \$5

for their help.

Results

We hypothesized that for each of the four scenarios presented, Hindu participants would be more likely to seek divination than the Christian participants. Similarly, Christian participants would be more likely to pray for intervention than would their Hindu counterparts. Because the petition strategy items were inter-correlated ($\alpha = .84$), as were the divination strategy items ($\alpha = .73$), summary variables for petition and divination were created for each participant. The hypothesized pattern was confirmed in a 2 (Religion: Hindu, Christian) \times 2 (Strategy: Petition, Divination) ANOVA, where strategy was a within-subjects factor. Overall, the Christians ($M = 6.39$, $SD = .79$) endorsed petition as a strategy to cope with future risks more than Hindus did ($M = 4.40$, $SD = 1.63$; $F(1, 82) = 42.07$, $p < .001$). Conversely, Hindus ($M = 2.61$, $SD = 1.62$) endorsed divination more than Christians did ($M = 1.18$, $SD = .46$; $F(1, 82) = 35.41$, $p < .001$). The materials and means for each item by religion are presented in Table 6.

Discussion

Consistent with findings from Study 1, these findings indicate a preference for the petitionary strategy among Christians and the divination strategy among Hindus. It should be noted that the cross-group comparison (Study 2) produced stronger differences than the cross-national (Study 1) comparison. One account for this is that the participants sampled from community groups in Study 2 are more immersed in their cultural-religious traditions than the college students sampled in Study 1. Although the community participants were adult professionals living in a cosmopolitan city, they were members of religious organizations.

Hence, they may be more affected by their religious-cultural heritage than is the average college student.

Another interpretation is suggested by the work of Heine, Lehman, Peng and Greenholtz (2002), who found that differences between immigrant groups living in the same country are greater than those between groups sampled in their respective countries. This seems to reflect that people use the average of their surrounding society as a reference point or baseline when describing themselves. Applying this argument to the current findings, it might be the case that Hindu participants in the US (Study 2) implicitly compare themselves to the US baseline and hence describe their willingness to use divination as considerable, whereas Hindu participants in India (Study 1) implicitly compare themselves to the Indian baseline and hence describe their willingness to use divination more moderately.

Regardless of why the effects in Study 3 are stronger than in Study 1, the strength and consistency of the difference between these otherwise matched Christian and Hindu groups is impressive. Compared with the student samples in Study 1, these community groups may be less *representative* of larger societies dominated by Christian and Hindu traditions, yet they are more closely *matched* to each other on noncultural dimensions. By sampling Christian and Hindu participants from the same city region, Study 3 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.

Yet a skeptic might, nevertheless, argue that the two groups sampled in Study 3 live in different neighborhoods, so environmental variables are not fully controlled. This is an inherent problem with quasi-experimental evidence. There may be some noncultural factor in the

environments of the two groups that produces the differing responses, something other than culturally conferred conceptions of fate. Study 4 uses a different method to rule out this limitation.

Study 4: Priming bicultural individuals

In a final study we adopted the method of priming bicultural individuals with culturally laden stimuli to see whether their fatalistic thinking shifts in response. If the forms of fatalistic thinking truly hinge upon culturally associated conceptions, then exposure to American versus Indian cultural stimuli should shift the responses of Indian-Americans. The strengths of the priming methodology complement the previous cross-national and cross-community group studies. Although experimental manipulation is more artificial, it has provides evidence for the causal relationship with a higher degree of internal validity.

One method of cultural priming involves the language in which the experimenter addresses participants. Recent studies by Ross, Xun, and Wilson (2002) have found that bicultural Chinese-Canadian participants shifted between different culturally-based modes of self-description depending on the language in which they were addressed. It's crucial, however, that the prime not be blatant; Bond (1983) found a reactance rather than assimilation response when an experimenter addressed participants in an unexpected language. Taking this into account, we adapted the language priming method to fit the population of Indian-Americans. 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 phoned with a standard American accent would respond more favorably to the petition strategy, compared to those who

were phoned with a Hindi accent, and the opposite would be true regarding the divination strategy.

Method

Participants

Twenty-five (11 female and 14 male), Hindu-Americans were recruited from a Hindu community center in the Northeastern United States to participate in a study entitled “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 years. 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. Participants provided their name, phone number, and years lived in the United States on the sign-up sheet. Later, another experimenter called potential participants, administering the questionnaire verbally either in a Hindi accent or standard American accent. The questionnaire followed the same format as that of Study 3; the same four scenarios were employed, and participants verbally indicated their willingness to engage in petition or divination strategies for each scenario, where 1 = *absolutely not* and 7 = *certainly*. The design of the study was thus a 2 Condition (Accent: Hindu, American) \times 2 (Strategy: Petition, Divination) \times 4 (Scenario), where condition was the only between subjects factor.

Results

After testing for sufficient inter-correlation of the petition items ($\alpha = .65$)⁴ and the divination items ($\alpha = .78$), we constructed summary variables for petition and divination endorsement for each participant. We then employed a 2 (Accent: Hindu, American) \times 2

(Strategy: Petition, Divination) MANOVA, where strategy was a within-subjects factor. As predicted, the Accent \times Strategy interaction was significant ($F(3, 19) = 4.21, p = .05$).

Participants' endorsements of petition as a strategy were higher in the American accent condition ($M = 5.03, SD = 1.59$) than in the Hindi-accent condition ($M = 3.29, SD = 1.22$). However, there were no differences for mean endorsement of divination as a strategy, comparing the American ($M = 2.69, SD = 1.7$) and the Hindi accent condition ($M = 2.43, SD = 1.15$). Means for each item are presented in Table 7, with simple effects of language indicated.

Discussion

The findings suggested that coping strategy preferences could be shifted, depending on whether bicultural individuals were addressed in a Hindi accent versus a standard American accent. The shift based on cultural prime suggests that preferences for strategies are carried by mental constructs related to culture.

However, 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, because the language was English, despite the accent. That is, if the study compared American English to Hindi that manipulation might be stronger in priming Hindi cultural concepts.

General Discussion

In this research, we have introduced a distinction between two conceptions of fate, which are associated with markedly different patterns of judgment regarding others' misfortunes and strategies to cope with future risks. Hindus and Christians were given the opportunity to cope with observed misfortune by blaming the victim—that is, explaining the outcome as karmic

payback (Studies 1 and 2), as well as making more explicit judgments of victim responsibility (Study 2). Results showed that Hindus and Christians applied karmic attributions under different conditions, depending on whether information about prior misbehavior was available, and that these explanations mediated the more explicit blaming judgments.

Regarding strategies to cope with future risks, Christians sought control over risks through petition (persuading the person-like agent to intervene), whereas Hindus sought control through divination (learning one's fixed fortune in order to navigate appropriately). We found evidence for these hypotheses in cross-national comparisons of student samples (Study 1), as well as in comparisons of samples from religious communities within the same U.S. metropolis (Studies 2 and 3). Finally, selecting bicultural participants, Study 4 found a shift toward petition as a strategy to cope with future risks, when participants were culturally primed with a Hindi accent as opposed to a standard American accent in a phone survey.

Overall, the results show that different forms of fatalistic thinking result from the conceptions of supernatural control in Christian and Hindu cultural traditions. Although any one of the methods used is open to critique, the combination of findings from differing complementary methods provides evidence for the association of these thinking styles with the cultural traditions.

Implications for social psychological research

The current findings contribute novel insights to several disparate literatures in social psychology--victim blaming attribution tendencies, religion as a coping strategy, and Western versus Hindu cultural differences.

First, the current findings suggest that models of victim blaming attributions may have overlooked an important and culturally variant component. Just world studies have found that

perceivers, under certain conditions, judge victims to be responsible for their own negative outcomes (Lerner & Simmons, 1966, Lerner & Miller, 1978). These judgments matter because they discourage perceivers from acting to help victims or prevent future recurrences (Rubin & Peplau, 1975, Andre & Valesquez, 1990). A limitation in current models, however, is the specification of how perceivers think the world arranges for wrongdoers to receive their punishment. In some cases perceivers undoubtedly assume that this happens through natural mechanisms, 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.

The current findings suggest that social perceivers may construe others' misfortunes as punishments by implicitly assuming a supernatural mechanism. Depending on their cultural background, perceivers may implicitly posit the mechanism of a responsive, retributive deity or a mechanical law of destiny. The current finding our Christian cultural groups, compared to Hindus, depend more on knowledge of past misbehavior is consistent with their use of a deity-based logic. This would explain the many past findings in the literature with Western participants in which information about past misbehavior of the victim is an important cue to victim blaming (Hafer & Begue, 2005). A question for future research is whether there are cues to victim blaming that are more salient for Hindu participants than Christian participants.

Second, the present investigation may contribute insights to the literature on religion and coping strategies (see Pargament, 2001, Hood, Spilka, Hunsberger, & Gorsuch, 1996). Previous research suggests that prayer can be an aid in coping with negative life outcomes and stress (Pargament, Koenig, Tarakeshwar, & Hahn, 2004, Witter, Stock, Okum, & Haring, 1985). Others have linked the prayer to coping with psychological conditions such as depression (Smith,

McCullough, & Poll, 2003). However, it is not clear in past research how prayer functions psychologically. In particular, how can prayer, with its acceptance of external control, produce the positive coping outcomes that are generally associated with the sense of internal, personal control.

The current analysis suggests that one psychological function of prayer is bolstering the person's sense of the future as controllable or manageable. In our analysis, prayer is a fatalistic strategy in which people seek to indirectly gain control through working with supernatural forces. Moreover, our findings suggest that prayer is not the only fatalistic coping practice that functions this way. In the context of Hindu culture, seeking divination seems to be another coping strategy that involves the same blend of seeking personal control while accepting the external control of supernatural forces.

Third, the current findings speak to the literature on cultural differences, in particular research programs comparing Hindu Indians samples to those in Western settings. Psychological studies have primarily elucidated how Hindu social conceptions influence explanations for wrongdoing and judgments about justice (Shweder & Miller, 1991; Miller & Bersoff, 1992). Consistent with recent directions (Shweder et al, 1997), we turn the focus toward Hindu conceptions of fate and how they underlie interpretations of others' misfortunes. As we have introduced, this is a topic where past generations of social scientists took the position that Hindus are generally more fatalistic in their behavior than Western cultural groups (e.g. Kapp, 1963). Our analysis suggests that the difference is more qualitative than quantitative. Overall we have found that Hindus and Christians hold different conceptions of fate that engender different patterns of fatalistic thinking. Within this general pattern, we find that some kinds of fatalistic thinking are more closely associated with Christian culture than Hindu culture. For example, in

Study 3, which measures use of petition and divination coping strategies controlling for the outcome being coped with, the Christian group indicate greater likelihood of engaging in prayer as a coping strategy. In Study 4, we found that the language condition associated with American culture (as opposed to the one associated with Hindu culture) induced a greater willingness to use prayer as a coping strategy. Hence, the current results disconfirm the notion in prior social science 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. Scholars in the Weberian tradition tended to equate Hindu belief in karma with passivity and pessimism (Singh, 1975). More recent ethnographers have emphasized that karma—literally “action” or “work”—does not mean that negative outcomes are simply accepted passively (Daniel, 1983). That is, a perceiver’s belief in karma does mean the perceiver simply absolves others from responsibility for social outcomes. Our results contribute to this point. We find that Hindu perceivers hold a person responsible for misfortunes that are judged to be their karmic rewards. In other words, the current results do not support the notion that Hindu fatalism involves a passive view of persons and corresponding disinclination to assign responsibility.

Limitations and Future Directions

The current research is an initial effort to analyze and measure forms of fatalistic thinking that vary across two cultural-religious traditions. There are many limitations of the current studies that can be addressed in future research. For instance, our studies of coping focused on outcomes that cannot be directly controlled, such as accidents and disasters. People may also think fatalistically about domains where 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; Green, Lewis, Wang, Person, & Rivers, 2004). It remains to be seen whether cultural variations in fate conceptions have consequences in these domains as well.

Another limitation is that we have not strived for a comprehensive model of the consequences of the supernatural beliefs in 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, but instead we have focused on the most invariant Hindu beliefs in *samsara karma*, the conception that deeds in one life determine one's fortune in future lives. Likewise, we have not analyzed all Christian beliefs about the deity, which vary from sect to sect, but instead we have focused on the general conception of the human's relationship to the deity, which runs throughout the Judeo-Christian tradition. It will be important for future research to explore other beliefs associated with Christian and Hindu worldviews. Of course, another important direction is for future research investigating fatalistic beliefs in other religious cultural traditions such as the Islam.

A methodological limitation of the current research is the reliance 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. On the other hand, it is quite possible that self-report bias cuts the other way—that people would engage in more traditional behavior than they espouse. 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. Further, this should be supplemented by sociological research on the institutions that support these practices, such as organized religions, legal proceedings, medical and therapeutic regimes, and so forth.

Another direction for future research may be insights about new approaches to challenging practical problems, especially those that involve reasoning about the future. This does not mean that fatalism itself is practical, but exposing the underlying frameworks may help people understand the bases of their conventional approaches and may lead them to develop novel approaches. For instance, the technique of scenario analysis that has dominated 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 generations in the remote future (Marmor, Smeeding, & Greene, 1994). The Hindu worldview provides a framework for construing one's actions in this lifetime as connected to one's own state in future generations (Daniel, 1983). As a Rawlsian thought experiment if nothing more, the notion of being reborn again in future generations may help people think fairly about problems of intergenerational justice.

Conclusion

Findings from the present research reveal two different ways of conceiving supernatural control—as a person-like deity or as a machine-like destiny. The two conceptions are associated with distinct patterns in fatalistic attributions for misfortune and fatalistic strategies for coping with risk. Findings from studies using different, complementary methods ruled out alternatives to the account that these patterns reflect culturally conferred conceptions of fate. These findings represent an important step in understanding how implicit conceptions of supernatural control can affect everyday judgment.

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Appendix: Study 1 Materials: Coping with Future Risk

Petition Items

1. The owner of a business going bankrupt prays that profits will suddenly increase.
2. A student prays to make good things happen in the future.
3. An athlete prays before a game that no team members will get hurt.
4. A worker in a dangerous factory prays that no more accidents will occur.
5. A person prays to ask that his child's terminal disease recedes.

Divination Items

1. A bride and groom choose an auspicious wedding date based on horoscopes.
2. The developer of a new hotel consults an expert about how to position the rooms in order to create positive energy.
3. A shopkeeper goes to a palm reader before making an important decision.
4. A businessman with world wide investments consults a psychic to hear of any possible disasters that may be coming soon.

Footnotes

¹ It is worth noting that the conceptions of supernatural influence in Christian and Hindu stories do not perfectly correspond to those in more formal theological writings. For example, the notion of swift divine retribution in the stories of the Bible, and contemporary American Christian discourse, does not correspond to the explicit theological teachings of most Christian sects concerning divine intercession. We think that the narrative themes of scripture and folktale are more psychologically consequential than more abstract theological teachings. Past research suggests that people's abstract theology-based conceptions of God do not guide their on-line inferences about God (Barrett, 1998).

² Some ethnographers document that in particular parts of India, "karma" is used to explain causes and effects within the same lifetime (Babb, 1983; Daniel, 1983; Keyes, 1983).

³ College students were recruited to attain matched samples (van de Vijver & Leung, 1997). Although elite students tend to be less adherent to cultural-religious traditions than many others, that simply makes for a conservative test of cultural differences. We did check our participants' adherence to the critical fate beliefs with a few items at the end of the survey. One item asked them to judge whether a person's outcome in life "may reflect karma from a past life" (1=*definitely disagree* and 6=*definitely agree*). Hindu samples endorsed this statement equally ($M_{\text{India}} = 3.51$ v. $M_{\text{Nepal}} = 3.36$, $F(1, 399) = .75$, ns), and it was endorsed by these participants from Hindu cultures to a much greater extent than by the participants from the Christian culture ($M_{\text{Hindu}} = 3.46$ v. $M_{\text{Christian}} = 1.56$, $F(1, 513) = 127.19$, $p < .001$).

⁴ Although 0.7 is one 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.

⁵ The word “psychic” was used on the English questionnaire, but the word for “astrologer” was used on the Hindi questionnaire, because translation procedures showed that they are more culturally equivalent.

Table 1. Factor Pattern Matrix Following the Promax Rotation from the Principal Components Analysis (Study 1)

Explanation	Factor 1	Factor 2	Factor 3
Karma	.799	-.117	.286
Luck	.703	.170	-.233
Chance	.122	.564	-.328
Accidents	.04	.843	.271
Personality	.146	.115	.720
Other Persons	-.05	.250	.792

Table 2. Mean Endorsement of Explanatory Factors by Culture and Condition (Study 1)

	Hindu Setting		American Setting	
	Misbehavior Information Absent	Misbehavior Information Present	Misbehavior Information Absent	Misbehavior Information Present
	Traffic Accident Story			
Karma	3.08 (1.88)	3.55 (1.76)	2.11 (1.31)	3.33 (1.81)
Luck	3.72 (1.79)	3.85 (1.68)	3.68 (1.70)	4.40 (1.38)
Chance	3.64 (1.71)	3.54 (1.70)	4.36 (1.45)	4.87 (1.50)
Accidents	4.43 (1.74)	4.44 (1.74)	4.96 (1.07)	4.80 (1.27)
Personality	2.70 (2.00)	2.66 (1.95)	2.57 (1.66)	2.53 (1.25)
Other Persons	3.40 (1.76)	3.30 (1.67)	4.50 (1.45)	4.00 (1.49)
Birth Defect Story				
Karma	3.12 (1.82)	3.72 (1.75)	1.74 (1.29)	3.00 (2.00)
Luck	3.91 (1.70)	3.88 (1.61)	3.41 (1.69)	4.44 (1.78)
Chance	3.01 (1.82)	3.44 (2.09)	4.81 (0.92)	5.11 (1.05)
Accidents	3.81 (1.63)	3.89 (1.75)	3.15 (1.54)	3.04 (1.81)
Personality	2.40 (1.68)	2.37 (1.67)	2.37 (1.55)	1.30 (0.72)
Other Persons	2.68 (1.58)	2.42 (1.67)	2.41 (1.45)	1.85 (1.54)

Note. Standard deviations are reported in parentheses.

Table 3. Attitudes toward Petition and Divination Strategies by Culture (Study 1)

	Hindu	American
Petition Strategy		
Willingness to use	3.67 (1.07)	3.61 (1.50)
Impressions of others who use	3.48 (0.95)	4.23 (1.14) ^{***}
Willingness to associate with others use	3.61 (1.11)	4.59 (1.14) ^{***}
Divination Strategy		
Willingness to use	3.22 (0.89)	1.89 (0.88) ^{***}
Impressions of others who use	3.18 (0.81)	2.32 (0.96) ^{***}
Willingness to associate with others who use	3.31 (0.94)	3.20 (1.24)

Note. Asterisks denote significant differences between cultural settings. Standard deviations are reported in parentheses.

+ $p \leq .1$, ** $p \leq .001$.

Table 4. Explanations for Other's Misfortunes by Culture and Condition (Study 2)

	Hindu		Christian	
	Misbehavior Information Absent	Misbehavior Information Present	Misbehavior Information Absent	Misbehavior Information Present
Karma	3.19 (2.18)	3.18 (2.27)	1.45 (0.88)	2.97 (1.99)
Luck	3.15 (1.97)	3.15 (1.88)	3.16 (1.99)	3.21 (1.86)
Chance	3.33 (2.04)	3.92 (1.94)	4.74 (1.39)	4.41 (1.48)
Personality	1.96 (1.48)	1.89 (1.15)	1.64 (1.31)	2.38 (1.59)

Note. Standard deviations are reported in parentheses.

Table 5. Correlations among explanations for misfortune (Study 2)

	1	2	3	4	5
1. Karma	--	-.02	-.16	.21*	.58**
2. Luck		--	.29**	-.03	-.03
3. Chance			--	.05	-.24*
4. Personality				--	.13
5. Responsibility					--

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

Table 6. Willingness to Use Petition and Divination Strategies by Culture (Study 3)

	Hindu	Christian
<i>Parents of a bride plan a large outdoor wedding in July.</i>		
Pray to request that the wedding events go smoothly for the start of a happy marriage.	5.67 (1.75)	6.76 (0.79)**
Consult an expert on horoscopes in order to choose the best day for a harmonious wedding that starts a happy marriage.	4.37 (2.37)	1.09 (0.53)***
<i>An investor has an opportunity to buy part of company A that has run into legal troubles. If A recovers he will become very rich, but if A goes bankrupt he will lose most of his money.</i>		
Pray to ask that Company A be spared from bankruptcy and that it grows financially.	3.72 (2.29)	6.15 (1.39)***
Arrange to meet with a psychic to see into the future and decide what to do.	1.80 (1.28)	1.09 (0.38)**
<i>The partners who run a hotel in the city want to buy a mansion by the sea to convert it into an inn. Yet they learn that twice in the last century, a hurricane has directly hit the building causing great damage.</i>		
Pray that God will avert the hurricane from the area if they buy they decide to buy.	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)**
<i>A young couple's first child is born pre-maturely and the doctors are concerned about the baby's health.</i>		
Reaffirm devotion to God and ask that the child grows 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 culture. Standard deviations are reported in parentheses.

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

Table 7. Study 4: Priming Cultural Norms of Petition and Divination

	Hindi Accent	Standard American Accent
<i>Parents of a bride plan a large outdoor wedding in July.</i>		
Pray to request that the wedding events go smoothly for the start of a happy marriage.	2.79 (2.19)	4.33 (1.94)*
Consult an expert on horoscopes in order to choose the best day for a harmonious wedding that starts a happy marriage.	3.21 (2.01)	3.11 (2.76)
<i>An investor has an opportunity to buy part of company A that has run into legal troubles. If A recovers he will become very rich, but if A goes bankrupt he will lose most of his money.</i>		
Pray to ask that Company A is spared from bankruptcy and that it grows financially.	2.64 (1.78)	4.77 (2.49)*
Arrange to meet with a psychic to see into the future and decide what to do.	1.93 (1.49)	2.33 (2.39)
<i>The partners who run a hotel in the city want to buy a mansion by the sea to convert it into an inn. Yet they learn that twice in the last century, a hurricane has directly hit the building causing great damage.</i>		
Pray that God will avert the hurricane from the area if they buy they decide to buy.	2.07 (1.38)	4.22 (2.44)*
Consult with a local psychic about whether another hurricane will come to the area.	1.79 (1.42)	1.89 (1.96)
<i>A young couple's first child is born pre-maturely and the doctors are concerned about the baby's health.</i>		
Reaffirm devotion to God and ask that the child grows up healthy and safe.	5.64 (1.78)	6.78 (0.44)*
Consult with a diviner to learn whether the child will grow up healthy and safe.	2.79 (2.08)	3.44 (2.40)

Note. Asterisks denote between cultural setting effects. Standard deviations are reported in parentheses.

* $p \leq .05$.