Consumer Expectations and Culture: The Effect of Belief in Karma in India

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In the customer expectations arena, relatively little attention has been paid to the impact on expectations of variation in cultural variables unique to a country. Here we focus on one country, India, and a major cultural influence there—the extent of belief in karma. Prior research in the United States suggests that disconfirmation sensitivity lowers expectations. Here we examine whether belief in karma and, consequently, having a long-term orientation, counteracts the tendency to lower expectations in two studies that measure and prime respondents' belief in karma. Results show that the extent of belief in karma, operating largely through its impact on long-run orientation, does moderate (decrease) the effect of disconfirmation sensitivity on expectations. These findings suggest that it is important to tailor advertising messages by matching them with customer expectations and their cultural determinants.

This research is based on three simple premises. First, because lower expectations often lead to greater satisfaction, individuals in general, and especially those who are sensitive to the gap between performance and expectations, have the incentive to and actually do "strategically" lower their expectations (Kopalle and Lehmann 2001). Second, individuals with a long-term orientation are likely to be less inclined to lower expectations in the hope of temporarily feeling better. Third, long-term orientation and the tendency to lower expectations are at least partially driven by cultural factors. In India, belief in karma, with its emphasis on a longer-term orientation, will therefore to some extent counteract the tendency to lower expectations. The empirical results support our logic; those who believe more strongly in karma are less influenced by disconfirmation sensitivity and therefore have higher expectations.

Consumers make choices based on expectations of how alternative options will perform (i.e., expected utility). Expectations about the quality of a product also play a central role in subsequent satisfaction (Anderson and Sullivan 1993; Parasuraman, Zeithaml, and Berry 1994). These expectations may be based on a number of factors, including the quality of a typical brand in a category, advertised quality, and disconfirmation sensitivity (Goering 1985; Kopalle and Lehmann 1995; van Raaij 1991). Recent evidence suggests that consumers who are more disconfirmation sensitive (i.e., consumers who are more satisfied when products perform better than expected or more dissatisfied when products perform worse than expected) have lower expectations (Kopalle and Lehmann 2001; Monga and Houston 2006). However,
there is little research concerning the role of culture-specific variables in expectation formation, particularly how they relate to the impact of disconfirmation sensitivity on consumer expectations.

Here we examine how consumer expectation formation is influenced by a fundamental element in Indian culture—the extent of belief in karma (Business Week 2006). Belief in karma has four key aspects (Bernard 1981; Bowes 1978; King 1999; Saxsena 1970; Sharma 1991): (i) the spiritual nature of the universe in which we live; (ii) the continuous cycle of the universe; (iii) the consequences of good (bad) actions in the present leading to good (bad) outcomes in the future either in this life or in the hereafter; and (iv) reincarnation or rebirth, where one becomes better due to good actions and worse due to bad actions. According to the concept of karma, although an individual’s current experience is determined by what he/she has done in the past, a person is free to choose what to do in the present or the future (Bernard 1981; King 1999). The extent of belief in karma (hereafter simply referred to as belief in karma) has an important influence on many aspects of life in India, including purchase decisions. Importantly, we hypothesize and empirically show that a cultural variable, that is, belief in karma, has implications for consumer expectations as well. Karma’s implications for expectations largely stem from statement iii, which suggests that actions have consequences in the future, and statement iv, which suggests that consequences can be long-lasting.

We hypothesize that (1) belief in karma will diminish the impact of disconfirmation sensitivity in lowering consumer expectations and, hence, lead to generally higher expectations. Although a person may be helpless at a point in time in determining their current situation, so far as his/her future is concerned, he/she has complete freedom to regulate his/her actions and hence conduct himself/herself in a manner that leads to a better future. In other words, the philosophy of karma is one of ownership for a person’s actions or deeds where each is responsible for his/her actions and he/she alone has to bear the consequences in the future (Bernard 1981; King 1999). A strong belief in karma makes responsibility for one’s own behavior in the present more prominent due to its impact in the future in this life or hereafter (due to reincarnation).

We concentrate on India for two reasons. First, the majority of Indian society believes in karma. Second, India is an emerging economy that is in the process of major economic growth. With over 1 billion people, it is interesting in its own right.

BACKGROUND

Consumer expectations and satisfaction also affect purchase decisions. The relationship between expectations and satisfaction is a central topic in marketing (Anderson and Sullivan 1993; Bolton and Lemon 1999; Boulding, Kalra, and Staelin 1999; Mittal, Ross, and Baldasare 1998; Oliver 1997). Expectations are defined as beliefs about a product’s or service’s attributes or performance at some time in the future (Rust et al. 1999; Spreng, MacKenzie, and Olshavsky 1996) and are a key determinant of satisfaction (Kumar, Kalwani, and Dada 1997; Oliver and Winer 1987). Research has found a diminishing effect of the gap between performance and expectations on consumer satisfaction (Anderson and Sullivan 1993; Mittal et al. 1998).

Consumers at times are “strategic” in their behavior (Wer- tenbroch 1998). In the context of consumer expectations, Kopalle and Lehmann (2001) and Monga and Houston (2006) found that consumers lower expectations to enhance satisfaction (when a product performs better than expected) or diminish disappointment (when products perform worse than expected). Moreover, individuals whose satisfaction is more sensitive to the gap between performance and expectations are more likely to lower expectations about product quality in order to improve satisfaction or reduce disappointment. Monga and Houston’s (2006) research also suggests that such strategic lowering of expectations occurs as the time to experience a product grows nearer.

Purchase decisions are also influenced by cultural factors (Aaker and Maheswaran 1997; Briley and Aaker 2006; Triandis 1989), and consumer behavior is often motivated by the fundamental culture in which the consumers operate (Aaker and Williams 1998; de Mooij 2003). For example, cultural orientation can influence product evaluation through the much-researched country-of-origin effects (Gurhan-Canli and Maheswaran 2000). In terms of consumer behavior, measurable aspects of Confucian culture have been shown to vary significantly within a country (Tan and Farley 1987), affecting evaluation of both products and advertising.

In this research, we focus on the impact of belief in karma on expectations. A central tenet of karma focuses on the “results or consequences of actions or fruits of action.” The doctrine of karma links current conduct to future consequences either in this life or in the next (Herman 1976, 73, 131). Importantly, actions may not necessarily lead to immediate consequences but, rather, to consequences that appear sometime in the future.

There are three essential tenets in the doctrine of karma according to Krishan (1997): First is the notion of rebirth, where actions in a particular life may bear fruit either in the current life or the next. More specifically, the consequences of actions taken in this life do not, as a rule, emerge in this life but rather get accumulated, and the results may be seen in a later life or lives. A second tenet is that actions can be broadly classified into appropriate (good) and inappropriate (bad). Finally, good actions in the present lead to good outcomes in the future, and inappropriate current actions lead to bad outcomes in the future.

The extent of belief in karma does not, contrary to some popular conceptions, rely on predestination or on fatalism, where all that happens is preordained due to previous actions. Although a person may be helpless at a point in time in determining their current situation, so far as his/her future is concerned, he/she has complete freedom to regulate his/her actions and hence conduct himself/herself in a manner that leads to a better future. In other words, the philosophy of karma is one of ownership for a person’s actions or deeds where each is responsible for his/her actions and he/she alone has to bear the consequences in the future (Bernard 1981; King 1999). A strong belief in karma makes responsibility for one’s own behavior in the present more prominent due to its impact in the future in this life or hereafter (due to reincarnation).
In essence, a stronger belief in karma makes one oriented toward the future and leads one to have a longer-term view of life, that is, a long-term orientation (Bearden, Money, and Nevins 2006; Hofstede 2001). The concept of long-term orientation (LTO) has been discussed by Hofstede and Hofstede (2005), who suggest that such an orientation fosters behavior oriented toward future rewards. They argue that long-term orientation is closer to Eastern thinking, where searching for virtue is key. Bearden et al. (2006) suggest that LTO is a salient aspect of national cultural values that influences consumers’ decision-making processes. We argue that stronger belief in karma makes a person more long term oriented so that they will be more concerned with the future consequences of their current decisions. “Artificially” lowering expectations is a short-term-oriented action that ignores the truth. Consequently, those with karma-induced long-term orientation will be less prone to decreasing their expectations.

We next present a model of expectation formation and relevant hypotheses. Hypothesis 1 suggests that results on expectations found in the United States will qualitatively replicate in India. Our main interest lies in hypotheses 2 and 3, which suggest that the extent of belief in karma will significantly moderate the effect of disconfirmation sensitivity on consumer expectations in India and that the moderating impact operates largely through long-term orientation.

**EXPECTATION FORMATION**

Expectations about the quality of a product or service \(E_i\) for consumer \(i\) may come from a variety of sources, including advertising, “expert” sources such as Consumer Reports, the quality of a typical brand in a category (Kopalle and Lehmann 1995, 2001; Meyer and Sathi 1985), or personal experience (Goering 1985). Here we focus on the quality of a typical brand, which leads to the following (fairly obvious) hypothesis:

**H1a:** The higher the expected quality of a typical brand in a category, the higher expectations will be.

A number of researchers have examined expectation formation (Boulding et al. 1999; Meyer and Sathi 1985; Mittal et al. 1998). For example, Boulding et al. (1999) identified two types of expectations: will and should. Here we focus on how will expectations are altered in order to increase future satisfaction (Kopalle and Lehmann 2001). Based on their work, therefore, we hypothesize the following:

**H1b:** The higher the disconfirmation sensitivity, the lower expectations will be.

The main focus here is to examine the impact of belief in karma, which has particular relevance in India, on expectations. Specifically, we examine the interaction (moderating) effect of belief in karma on expectations. The finding that disconfirmation sensitivity lowers expectations suggests that some individuals take a short-term orientation and artificially deflate their expectations in order to feel happier in the present, without regard to consequences in the future. However, for those who believe in karma, artificially lowering expectations so as to feel better in the present is not appropriate in the long term and therefore could lead to worse outcomes in the future (Chinmayananda 2006; Krishan 1983; Swami 2002). Belief in karma thus should counteract the tendency to artificially lower expectations since it leads one to have a more long-term orientation and hence set more realistic expectations. In other words, a stronger belief in karma should reduce the effect of disconfirmation sensitivity on expectations, thus acting as a moderator.

**H2:** The effect of disconfirmation sensitivity on expectations will be less negative for those who are higher in belief in karma, that is, belief in karma moderates the impact of disconfirmation sensitivity on expectations.

We capture the hypothesized effects in a model that extends Boulding et al. (1993, 1999) and Oliver and Winer (1987). Although not hypothesized, we also estimate the main effect of belief in karma on consumer expectations for completeness. The following regression model includes all the relevant variables and serves as a basis for our analysis.

\[
E_i = \beta_0 + \beta_1(\text{Typical}_i) + \beta_2(\text{DS}_i) + \beta_3(\text{BK}_i) + \beta_4(\text{DS}_i)(\text{BK}_i) + \sum_{k=1}^4 \beta_{4k} \text{Cov}_{ik} + e_{ij},
\]

where \(\text{Typical}_i\) is consumer \(i\)’s expected quality of a typical brand; \(\text{DS}_i\) = disconfirmation sensitivity of consumer \(i\); \(\text{Cov}_{ik}\) = involvement, expertise, perfectionism of consumer \(i\); \(\text{BK}_i\) = belief in karma of consumer \(i\); and \(e_{ij}\) ~ normal \((0, \sigma_i^2)\). In addition to perfectionism, involvement, and expertise, we also examined optimism, need for cognition (Inman, Peter, and Raghurub 1997; Kopalle and Lehmann 2001), individualism-collectivism (Hofstede 2001; Singelis et al. 1995), and demographic variables as potential covariates. Because none of them proved to be significant, we dropped them from the analyses and do not discuss them further.

Finally, having a long-term orientation is fundamental to belief in karma. Such an orientation makes short-run outcomes such as satisfaction with a particular purchase less important. The reduced importance of short-run outcomes, should, in turn, decrease the desirability of establishing artificially low expectations for the purpose of being satisfied in the short run. In other words, belief in karma leads to a long-term orientation which in turn decreases the tendency to set lower expectations, that is, long-term orientation mediates the impact of belief in karma on expectations. Therefore we hypothesize that:
In study 2, we employ an expanded scale that includes the monious a scale as possible to minimize respondent burden. Since the item directly asked about good and bad behavior, we felt there was a chance it would have a demand. Coefficient alpha was .84 and unidimensionality was confirmed via factor analysis. One item was “Good (bad) actions in the present lead to good (bad) outcomes in the future either in this life or in the hereafter.” After pretesting, we deleted it in study 1 for three reasons: (1) the item was largely redundant with the included items ($R^2 = .83$); (2) since the item directly asked about good and bad behavior, we felt there was a chance it would have a demand effect on responses; and (3) we wanted to have as parsimonious a scale as possible to minimize respondent burden. In study 2, we employ an expanded scale that includes the above item. In addition, we primed belief in karma in study 2 instead of relying on its measured value.

A. C. Nielsen–India conducted personal interviews with respondents in New Delhi. The survey instrument was first translated into Hindi, then back-translated to English to ensure accuracy. The sample of 200 respondents was recruited at shopping malls and screened to make sure that respondents were automobile drivers. Most (96%) of the respondents were in the 20–50-year age range. Forty-three percent had some college education, 72% had bought tires in the last year, and the average income was about 17,500 Rupees per month (approximately US$438.00).

## Results

**Convergent and Discriminant Validity.** To examine the convergent and discriminant validity of the various constructs, we conducted exploratory factor analysis on the specific items. As expected, there were five factors with eigenvalues greater than one corresponding to the five constructs: disconfirmation sensitivity, belief in karma, expertise, perfectionism, and involvement. The respective percentages of variance explained by the factors were 16.12%, 13.24%, 12.30%, 12.24%, and 10.12%. All the items loaded on the expected factor. Further, as shown in appendix B, coefficient alphas for all the constructs exceed .70 (Nunnally 1978). The average interconstruct item-item correlations are very low (range of .01–.30), and the majority of these correlations are significantly different from zero ($p < .05$, two-tailed) and shown in bold.

### Study 1

#### Method

Study 1 examines consumers’ reactions to car tires in India and tests hypotheses 1 and 2. Car tires are a reasonably high involvement product category, and how long a tire lasts is both an important quality and an experience attribute. (Consumers’ Research 1991). We focus on Orion, a fictional brand unknown to the consumers as described in a brand that has been in business for 50 years. Respondents were presented with a scenario (see app. A) similar to that of Kopalle and Lehmann (2001). After answering an initial set of questions regarding their expectations about the life of a typical brand of car tires, respondents read a scenario and then indicated how long they expected a set of Orion tires would last them (in kilometers).

Individual trait variables were measured on the multi-item 7-point scales shown in appendix B. Measures for disconfirmation sensitivity, involvement, expertise, and perfectionism were obtained from Kopalle and Lehmann (2001). Following Churchill (1979), we used a multistage process to build the scale for belief in karma. First, we constructed a five-item scale based on the fundamental beliefs in the Indian culture discussed earlier. To assess content/fac validity, we discussed the belief in karma scale with five scholars in Indian philosophy and, based on their comments, reworded the items. The revised scale was then pretested with a sample of 25 respondents in India for clarity and relevance. Coefficient alpha was .84 and unidimensionality was confirmed via factor analysis. One item was “Good (bad) actions in the present lead to good (bad) outcomes in the future either in this life or in the hereafter.” After pretesting, we deleted it in study 1 for three reasons: (1) the item was largely redundant with the included items ($R^2 = .83$); (2) since the item directly asked about good and bad behavior, we felt there was a chance it would have a demand effect on responses; and (3) we wanted to have as parsimonious a scale as possible to minimize respondent burden. In study 2, we employ an expanded scale that includes the above item. In addition, we primed belief in karma in study 2 instead of relying on its measured value.

### Study 1: Means, Standard Deviations, and Correlations

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean (M)</th>
<th>SD (SD)</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Quality expectations (’0000 kilometers)</td>
<td>4.615</td>
<td>1.467</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2. Quality of typical brand (’0000 kilometers)</td>
<td>4.295</td>
<td>1.467</td>
<td>.84</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Disconfirmation sensitivity (1–7 scale)</td>
<td>6.12</td>
<td>.59</td>
<td>−.08</td>
<td>−.04</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Expertise (1–7 scale)</td>
<td>4.72</td>
<td>1.29</td>
<td>.07</td>
<td>−.03</td>
<td>.08</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Involvement (1–7 scale)</td>
<td>5.91</td>
<td>1.05</td>
<td>.09</td>
<td>.05</td>
<td>.30</td>
<td>.06</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Perfectionism (1–7 scale)</td>
<td>1.80</td>
<td>.53</td>
<td>.01</td>
<td>−.01</td>
<td>.10</td>
<td>.41</td>
<td>−.13</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>7. Belief in karma (1–7 scale)</td>
<td>5.65</td>
<td>.97</td>
<td>.03</td>
<td>−.05</td>
<td>.24</td>
<td>.32</td>
<td>.01</td>
<td>.33</td>
<td>1</td>
</tr>
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</table>

Note: n = 200; all values > .15 or < −.15 are significant ($p < .05$, two-tailed) and shown in bold.
Perfectionism, which had an impact in the United States, was low in India (1.80 on a 7-point scale), whereas respondents’ belief in karma was significantly (p < .01) higher, with a mean of 5.65. Expertise, involvement, and disconfirmation sensitivity had respective means of 4.7, 5.9, and 6.1, suggesting that respondents were both involved and sensitive to disconfirmation. Note that although the correlation between disconfirmation sensitivity and belief in karma is significant, it is low (.24), indicating they are distinct constructs. Importantly, the high level of disconfirmation sensitivity means that participants have a strong motivation to lower their expectations. Consequently a strong force is needed to counter that tendency. Therefore, finding a significant impact of karma on expectations here would be strong evidence of its importance.

Main Results. We estimated equation (1) via regression (see table 2). Disconfirmation sensitivity and belief in karma were mean centered in forming the interaction between them. Of the covariates, since only involvement and expertise were significant, the other covariates were not included in the reported analyses. We also estimated the interaction effects of belief in karma with the expected life of a typical brand, perfectionism, expertise, and involvement. Because none of these were significant, they were also deleted from the analyses.

The consumer expectations model fits well (R² = 0.74, p = .000). The expected life of a typical brand is an important and significant (p < .01) determinant of quality expectations with a standardized regression coefficient (β) of .83, supporting hypothesis 1a. Similarly, supporting hypothesis 1b, disconfirmation sensitivity significantly (p < .05) lowers expectations (β = −.11). On the other hand, the effect of perfectionism on expectations is not significant (p > .50), whereas expertise and involvement both significantly raise expectations (β = .07 and .09, respectively).

The hypothesized model (eq. 1) significantly outperforms a nested model that does not include the main and interaction effects of belief in karma (F(2, 192) = 6.5, p < .01). The interaction of belief in karma and disconfirmation sensitivity is significantly positive (β = .11, p < .01), supporting hypothesis 2. Thus, in India, those who have a higher level of belief in karma are less likely to reduce expectations due to disconfirmation sensitivity. It appears that belief in karma counteracts the temptation to artificially deflate one’s expectations in order to either enhance satisfaction or avoid being disappointed in the future. In study 2, we examine the process of the impact of karma on expectations by investigating the mediating role of consumers’ long-term orientation. It is interesting that the extent of belief in karma also has a smaller but significant (p < .05) positive main effect on expectations (β = .08), a result we did not expect. In study 2 we find that the main effect of belief in karma on expectations is not significant.

Interestingly, perfectionism, a trait found to have a significant positive impact on expectations in the United States, is not significant in India. Whereas karma is a central belief in India (M = 5.65), perfectionism is not (M = 1.80). It is possible that the cultural variables that influence behavior differ across cultures and, further, that they may have an impact only at high levels. In other words, belief in karma has more influence in shaping consumer expectations in India where its relatively high mean suggests that it is a key cultural element.

The results in study 1 are based on measured values of belief in karma. One would obviously like to manipulate a variable to further assess its impact. However, belief in karma is a major cultural belief in India and hence not easily manipulated. Accordingly, in the next study we manipulate consumers’ salience of belief in karma and analyze its effect on expectations as well as test for the mediating effect of long-term orientation on consumer expectations.

### STUDY 2

Study 2 focused on understanding the process by which belief in karma leads to different expectations, that is, in addition to examining hypotheses 1 and 2, we test hypothesis 3. We primed (made more salient) respondents’ belief in karma (see app. D) to examine its effect on consumer expectations and to test whether long-term orientation mediates the effect of belief in karma. In addition to disconfirmation sensitivity and customer expectations, belief in karma, locus of control (Rotter 1966), self-deception (Roth and Ingram 1985), and long-term orientation (Bearden et al. 2006) were
also measured. In a different condition we primed respondents’ long-term orientation to check whether the impact of disconfirmation sensitivity on expectations disappears in that condition.

Method

One hundred eighty participants were recruited at shopping malls in Mumbai, India. We again used A. C. Nielsen–India to conduct personal interviews with consumers who owned a car. Of the 180 respondents, 60 were randomly assigned to a control (no manipulation) condition, 60 received a prime to increase the salience of belief in karma, and 60 received a long-term orientation prime (see app. D). Note that we only need the first two conditions to determine whether the effect of karma operates through (is mediated by) long-term orientation. We included the third condition to examine whether long-term orientation has a similar impact on the effect of disconfirmation sensitivity on expectations. The results further strengthen our argument that it mediates the effect of belief in karma.

Participants in all conditions first read a paragraph corresponding to that condition (see app. D). The paragraphs were matched in terms of number of words and reading difficulty. In the karma condition, respondents read a short paragraph regarding the concept of karma and its key aspects. In the long-term orientation condition, the paragraph stressed the importance of thinking about the future and long-term consequences. Finally, in the control condition, respondents read about how life is full of routine activities and how we engage in these activities in our day-to-day life. They were then asked to describe three things, each one in a separate sentence, related to the paragraph they had read. In the karma condition, they were asked, “Please think of three situations in your life where a belief in karma caused you to act in a particular way.” In the control condition, we asked them to list three of their common evening activities and the time spent on each of them. In the long-term orientation condition, participants thought of three instances in their life in which they took actions that involved sacrifice at the time but proved to be beneficial in the longer term. Finally, in each condition, we asked the respondents to pick one of the items they mentioned and describe it in more detail. Overall, our method of priming was based on Lerner’s emotion induction procedure (see, e.g., Small, Lerner, and Fischhoff 2006).

Participants then responded to multi-item scales that measured belief in karma and long-term orientation as well as self-deception, locus of control, expertise, and involvement (app. E). Given the importance of the consequences of actions and the continuous nature of the universe according to karma, we included three additional items in study 2 in our belief in karma measure: (1) good actions in the present lead to good outcomes in the future either in this life or in the hereafter, (2) bad actions in the present lead to bad outcomes in the future either in this life or in the hereafter, and (3) there is no beginning or end to the universe. The measure of belief in karma thus included seven items. We also added one item each for expertise and involvement. The scales had reasonably high levels of reliability, with coefficient alphas of .74, .72, .75, .73, .83, and .71, respectively for belief in karma, long-term orientation, locus of control, disconfirmation sensitivity, expertise, and involvement. Finally, to measure consumer expectations, we employed the same scenario of Orion tires used in study 1 (see app. A).

As in study 1, most (91%) of the respondents were in the 18–50-year age range. Seventy-one percent had some college education, 68% had bought tires in the last year, and average income was about Rupees 17,708 per month (approximately US$380).

Results

Manipulation Checks. The manipulations were successful. Belief in karma was significantly ($p < .01$) higher in the condition that primed karma compared to the control (neutral prime) condition (table 3). Similarly, the long-term orientation condition significantly ($p < .01$) increased respondents’ average long-term orientation. The manipulations had no significant ($p > .15$) main effect on disconfirmation sensitivity, self-deception, or locus of control, which rules out changes in these as alternative explanations for any results that emerge. Further, and more importantly, whereas priming belief in karma significantly ($p < .01$) increases long-term orientation, priming long-term orientation has a smaller and insignificant ($p > .15$) impact on belief in karma.

Main Results. Although average expectations were slightly lower in the control condition, they did not differ significantly ($p > .15$) across the three conditions (table 3). However, there was a significant impact of disconfirmation sensitivity on consumer expectations. As highlighted in figure 1, expectations differ significantly ($p < .01$) between those with lower and higher disconfirmation sensitivities (split at the median) in the neutral control condition but not in the karma ($p > .10$) or the long-term orientation condi-

<table>
<thead>
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<th>TABLE 3</th>
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<tbody>
<tr>
<td><strong>STUDY 2: CONSTRUCT MEANS AND STANDARD DEVIATIONS</strong></td>
</tr>
<tr>
<td>Control condition ($n = 60$)</td>
</tr>
<tr>
<td><strong>M</strong></td>
</tr>
<tr>
<td><strong>Disconfirmation sensitivity</strong></td>
</tr>
<tr>
<td><strong>Belief in karma</strong></td>
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<tr>
<td><strong>Locus of control</strong></td>
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<td><strong>Long-term orientation</strong></td>
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<td><strong>Self-deception</strong></td>
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<td><strong>Expectations (0000 km)</strong></td>
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***Significantly different from control condition at $p < .01$. **
tions. In other words, in the control condition, those with higher disconfirmation sensitivity have significantly lower expectations relative to those with lower disconfirmation sensitivity, whereas there is no such significant difference in the condition that primed belief in karma (or long-term orientation). Further, when disconfirmation sensitivity was lower, there was no significant ($p > .10$) difference in expectations across the control, karma, and long-term orientation conditions. However, for individuals whose disconfirmation sensitivity was higher, expectations in the control condition were significantly ($p < .10$) lower than in the karma and the long-term orientation conditions.

Table 4 shows the results of regressing consumer expectations versus the life of a typical brand and disconfirmation sensitivity, as well as involvement and expertise, for the three conditions. (As in study 1, perfectionism did not have a significant impact in any of the three conditions and so it was dropped from the analysis.) Disconfirmation sensitivity has a significant ($p < .05$) negative impact on expectations in the control condition but not when belief in karma is high, thus supporting hypothesis 2. When respondents are primed to think about karma, they focus more on the life of a typical brand versus disconfirmation sensitivity ($b = .60$ vs. $-.01$), that is, they are "unbiased" in their expectations. Absent such stimulus (i.e., the control condition), however, disconfirmation sensitivity plays an important role in expectations ($b = -.28$ vs. $.38$ for the typical brand), with those who are most sensitive having the lowest expectations. With respect to the covariates, expertise has a significant ($p < .01$) positive impact on expectations in the control condition, whereas involvement’s impact is significant ($p < .10$) and positive in the karma condition.

We also examined the impact of the long-term orientation prime. As in the case of belief in karma prime, there is no significant effect of disconfirmation sensitivity on expectations in the long-term orientation condition, as seen in figure 1. In table 4, the results for those respondents receiving the long-term orientation prime also show a strong effect ($p < .01$) of the life of a typical brand ($\beta = .78$). We find that there is a negative, but not significant, effect of disconfirmation sensitivity on expectations ($\beta = -.08$, $p > .25$). In terms of the covariates, expertise has no significant ($p > .10$) impact on expectations and involvement is significant ($p < .05$) in the long-term orientation condition.

We hypothesized a general causal path from belief in karma to long-term orientation to expectations (hypothesis 3). To examine hypothesis 3, we used the 60 participants in the control (neutral) condition and the 60 in the belief in karma condition. Since we have already established that the belief in karma condition affects expectations, we conducted a mediation test (Baron and Kenny 1986) to examine whether long-term orientation mediates the impact of priming belief in karma on expectations. Consistent with hypothesis 2, model 1 in table 5 shows that belief in karma has the effect of basically canceling out the negative effect of disconfirmation sensitivity on expectations (the variables in the interaction terms in table 5 were again mean centered and the main effects were included for model completeness). In model 2, the interaction of long-term orientation with disconfirmation sensitivity has a significant ($p < .01$) effect on expectations. Also, when both long-term orientation and belief in karma are included (model 3), the interaction of the long-term orientation term with disconfirmation sensitivity is significant ($p < .05$), and the interaction effect of belief in karma and disconfirmation sensitivity drops noticeably in magnitude and becomes insignificant ($p > .10$). Thus, our results suggest that heightened long-term orientation is a major process by which belief in karma affects expectations. Interestingly, unlike in study 1, there is no direct
TABLE 4
STUDY 2: DETERMINANTS OF EXPECTATIONS (REGRESSION RESULTS)

<table>
<thead>
<tr>
<th></th>
<th>Control condition coefficients</th>
<th>Belief in karma coefficients</th>
<th>Long-term orientation coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unstandardized</td>
<td>Standardized</td>
<td>Unstandardized</td>
</tr>
<tr>
<td>Intercept</td>
<td>5.63***</td>
<td>NA</td>
<td>1.22</td>
</tr>
<tr>
<td></td>
<td>(2.8)</td>
<td></td>
<td>(1.1)</td>
</tr>
<tr>
<td>Life of typical brand</td>
<td>.18***</td>
<td>.38***</td>
<td>.40***</td>
</tr>
<tr>
<td></td>
<td>(3.3)</td>
<td>(3.3)</td>
<td>(6.1)</td>
</tr>
<tr>
<td>Disconfirmation sensitivity</td>
<td>-.80**</td>
<td>-.28**</td>
<td>-.01</td>
</tr>
<tr>
<td></td>
<td>(-2.3)</td>
<td>(-2.3)</td>
<td>(-.01)</td>
</tr>
<tr>
<td>Involvement</td>
<td>.12</td>
<td>.06</td>
<td>.22*</td>
</tr>
<tr>
<td></td>
<td>(.50)</td>
<td>(.50)</td>
<td>(1.6)</td>
</tr>
<tr>
<td>Expertise</td>
<td>.42***</td>
<td>.30***</td>
<td>.08</td>
</tr>
<tr>
<td></td>
<td>(2.6)</td>
<td>(2.6)</td>
<td>(.7)</td>
</tr>
<tr>
<td>Sample size</td>
<td>60</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.31</td>
<td>.53</td>
<td>.74</td>
</tr>
<tr>
<td>Adjusted $R^2$</td>
<td>.26</td>
<td>.49</td>
<td>.72</td>
</tr>
</tbody>
</table>

NOTE.—$t$-statistics in parentheses; significant results shown in bold.
*p < .1, two-tailed tests.
**p < .05, two-tailed tests.
***p < .01, two-tailed tests.

TABLE 5
STUDY 2: MEDIATION TEST

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>5.89***</td>
<td>1.59</td>
<td>3.61**</td>
</tr>
<tr>
<td></td>
<td>(3.6)</td>
<td>(1.4)</td>
<td>(2.0)</td>
</tr>
<tr>
<td>Life of typical brand</td>
<td>.22***</td>
<td>.20***</td>
<td>.21***</td>
</tr>
<tr>
<td></td>
<td>(5.3)</td>
<td>(5.0)</td>
<td>(5.0)</td>
</tr>
<tr>
<td>Disconfirmation sensitivity</td>
<td>-.78***</td>
<td>-.43**</td>
<td>-.76***</td>
</tr>
<tr>
<td></td>
<td>(-2.8)</td>
<td>(-2.2)</td>
<td>(-2.5)</td>
</tr>
<tr>
<td>Belief in karma</td>
<td>.29</td>
<td>.07</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.5)</td>
<td></td>
<td>(3.7)</td>
</tr>
<tr>
<td>Belief in karma × Disconfirmation sensitivity</td>
<td>.81**</td>
<td>.54</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(2.3)</td>
<td></td>
<td>(1.4)</td>
</tr>
<tr>
<td>Long-term orientation</td>
<td>.50***</td>
<td>.48***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(3.3)</td>
<td>(3.0)</td>
<td></td>
</tr>
<tr>
<td>Long-term orientation × Disconfirmation sensitivity</td>
<td>.66***</td>
<td>.50**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(2.9)</td>
<td>(2.0)</td>
<td></td>
</tr>
<tr>
<td>Involvement</td>
<td>.13</td>
<td>.08</td>
<td>.08</td>
</tr>
<tr>
<td></td>
<td>(1.0)</td>
<td>(.65)</td>
<td>(.62)</td>
</tr>
<tr>
<td>Expertise</td>
<td>.29***</td>
<td>.24***</td>
<td>.25***</td>
</tr>
<tr>
<td></td>
<td>(3.0)</td>
<td>(2.6)</td>
<td>(2.7)</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.35***</td>
<td>.39***</td>
<td>.41***</td>
</tr>
<tr>
<td>Adjusted $R^2$</td>
<td>.31</td>
<td>.36</td>
<td>.36</td>
</tr>
</tbody>
</table>

NOTE.—$t$-statistics in parentheses; significant results shown in bold.
**p < .05, two-tailed tests.
***p < .01, two-tailed tests.

impact of belief in karma on expectations—presumably the direct effect is captured by the impact of long-term orientation.

DISCUSSION

This research examines whether a basic consumer behavior process, expectation formation, is influenced by cultural variables. Although the same basic process evident in the United States that drives people to lower their expectations appears to operate in India, it also is significantly affected by a key cultural variable, belief in karma. Consistent with prior research in the United States, disconfirmation sensitivity significantly lowers consumer expectations. Individuals who are more satisfied (or dissatisfied)
when products perform better (or worse) tend to have systematically lower expectations. In India, interestingly, belief in karma counters the lowering of expectations via a significant positive moderating effect on the impact of disconfirmation sensitivity on expectations. By contrast, a number of other variables, including individualism-collectivism, optimism, need for cognition, self-deception, and locus of control have no significant impact on expectations in India. It thus appears that not all cultural influences (and individual differences) influence expectation formation (and by implication any particular aspect of consumer behavior). Rather, it takes the combination of a deeply held cultural belief and a particular behavior that is logically linked to the cultural belief for the impact of the cultural belief to manifest itself.

It appears that both disconfirmation sensitivity and belief in karma offer somewhat subtle mechanisms for preservation of ego. Whereas consumer disconfirmation sensitivity lowers expectations, in India belief in karma significantly moderates the impact of disconfirmation sensitivity on consumer expectations. In effect, the results suggest that belief in karma causes consumers in India to set higher expectations. Following Kopalle and Lehmann (2006), one can show that the optimal level of advertised (promised) claims may be lower for those Indian consumers who have a higher belief in karma.

The results presented here are based on a country in which belief in karma is a fundamental value for a substantial fraction of the population. To determine whether belief in karma is also a determinant of expectations in a country in which karma is a less central construct, we studied China because of its large population, current rapid economic growth (and hence importance), and proximity to India. We collected data from 200 individuals in China, specifically in Shanghai, to match the urban sample used in India via shopping mall intercept interviews. About half had some college education, and 54% had bought tires in the previous year, making the sample from China slightly less educated and less recently experienced in tire purchasing relative to our Indian sample in study 1. When the hypothesized model of expectations (eq. 1) was estimated in China, most of the results matched those in India. The impact of expected life involvement were again positive and significant (p < .01 and p < .10, respectively), and the effect of disconfirmation sensitivity was again negative and significant (p < .05). Further, as in India, perfectionism did not have a significant impact on expectations.

However, although belief in karma and its interaction with disconfirmation sensitivity had the same directional effect as in India (i.e., positive), the effects were not significant. Also, importantly, the impact of belief in karma is much weaker in China, where its effect fails to reach significance. The lack of significance may be due to the less central role belief in karma plays in China, where other competing cultures are strongly in evidence (e.g., Confucianism, Buddhism). The lack of significance of the impact of belief in karma may be interpreted as follows. The importance of a cultural variable may manifest itself only in a culture in which it is a substantial force. Indeed, belief in karma in China (M = 4.45) was significantly (p < .01) lower than in India. Further, in India for 64% of the sample in study 1 belief in karma was 6 or higher on a 7-point scale, versus 10.5% in China.

It is also interesting that perfectionism, which had been significantly linked to expectations in the United States, had no significant impact in India (or China). Given that perfectionism is more prevalent in the United States than in India or China (M = 3.67 vs. 1.80 and 1.77, respectively), we argue that culturally related variables have an impact when they are fairly central to the culture.

In terms of process, belief in karma appears to have its impact largely through its influence on/promotion of a long-term orientation. A long-term orientation decreases the importance of momentary happiness and hence the drive to “delude” oneself by artificially lowering expectations in order to be satisfied with a particular decision. With a long-term orientation, even those individuals who are most unhappy when a product fails to live up to their expectations of it have limited incentive to artificially lower their expectations and hence have higher (and more accurate/realistic) expectations.

LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

There are limitations, of course, to our research. The results are based on urban samples from two cities in India and involve one product category (car tires). Further, although our research examines a number of individual difference variables, other sociopsychological variables may influence expectations. In addition, other religious or cultural beliefs might also have an important impact on expectations.

Our research demonstrates that those who believe in karma in India set different expectations than those who do not and suggests that the process operates through an impact on long-term orientation. Examining exactly how the above process works seems to be fertile ground for subsequent research. For example, do believers set higher expectations in order to reap rewards or to avoid punishment; that is, are they promotion or prevention focused (Higgins, Friedman, and Shah 1997)? More generally, are individuals aware that they are focusing on the short versus long term and if so, do they do so intentionally (strategically) or are they simply unable to control themselves? Further, if they are aware of what they are doing, are they willing to indicate so or will some form of social desirability bias cause them to hide their behavior?

Future research that makes individuals aware of their short-/long-term orientation could also be of interest. For example, it would be interesting to examine whether the impact of belief in karma on expectations disappears if individuals’ short-term orientation is made more salient. Examining the impact of moderators such as time pressure and public revelation of expectations also seems potentially useful. In addition, it may be that consumers have “meta-cog-
nitions” about manufacturers’ behavior based on what they think their belief in karma is and that, for example, might lead them to infer greater or lesser honesty in their advertising.

Overall, our results support the general feasibility of the measurement of specific cultural factors and assessment of their impact on behavior. Further, our research underscores the importance of incorporating salient local cultural variables in extending models to different cultures and countries and being cautious about generalizing their effects on variables of interest.

In summary, our results suggest that key aspects of culture (e.g., belief in karma in India) can lead to interesting differences in consumer behavior, in particular in the fundamental process of expectations formation. Our research is also a modest beginning in directing more research effort toward countries with relatively fast-growing economies at various stages of development and with relatively young populations. Further research can extend and potentially modify the results described here as well as further examine the process by which cultural factors affect consumer behavior.

**APPENDIX A**

**OVERVIEW OF STUDY 1**

Individuals were screened for car ownership and age 20 and up, were provided a brief introduction, and were asked which kind of car they drive, how many kilometers they drive in a year, whether they purchased car tires in the past 3 years, and how long a typical set of car tires last an average driver. Then the following situation was presented:

Imagine you are on a long trip in your car. Inadvertently you drive over a road hazard that slashes two of your tires. You realize that the tires need to be replaced and so you get the attention of a passerby.

The passerby helps you get to the nearest tire service store, which also happens to be the only such store in the area. You notice that the service store is a Society of Indian Automobile Manufacturers (SIAM) recommended store for several top brands of car tires. In the store you notice a prominently displayed brand of radial tires—ORION, made by The ORION Tire Company, manufacturer of all types of radial tires. The display also indicates that the ORION Tire Company has been in the tire business for over 50 years in India.

As you are considering which brand of tires to buy, the dealer inquires about the tire size you need. You find out that the only brand of tires available in the correct size is ORION’s all-season steel belted radial tires and so you decide to buy them and continue on your trip.

After the participants read the scenario, we:

- Measured subjects’ expectations,
- Had subjects complete a distractor task, and, finally,
- Measured perfectionism, disconfirmation sensitivity, belief in karma, expertise, involvement as well as demographics, realism of the scenario presented in the study, and how interesting they found the study.

**APPENDIX B**

**STUDY 1 MEASURES (USING A 7-POINT SCALE)**

**Perfectionism** (coefficient alpha = .74)
- I get mad at myself when I make mistakes.
- I should be upset if I make a mistake.
- Little errors bother me a lot.

**Disconfirmation Sensitivity** (coefficient alpha = .77)
- I notice when product performance does not match the quality I expect from the product.
- Customers should be delighted when products perform better than expected.
- I am not at all satisfied when products perform worse than I expect.
- I am very satisfied when products perform better than I expect.
- Customers are legitimately irritated when products perform worse than expected.
- I typically compare a product’s performance to my expectations for that product.

**Belief in Karma** (coefficient alpha = .73)
- The universe is a continuous cycle.
- I believe in reincarnation where one becomes better (worse) due to good (bad) actions.
- I believe in karma.
- The world was not formed by a once-for-all act of creation.

**Involvement** (correlation, r = .50)
- The performance of car tires is very important to me.
- The product category, car tires, is very relevant to me.

**Expertise** (correlation, r = .65)
- Compared to others, I consider myself more knowledgeable about car tires.
- I drive a car more than most people do.

**APPENDIX C**

**CONVERGENT AND DISCRIMINANT VALIDITY**

We also used confirmatory factor analyses to separately analyze the measurement models for disconfirmation sensitivity and belief in karma; the corresponding goodness of fit indices (GFI) were satisfactory with GFIs of .94 and .98, respectively. (Note that the GFI from a confirmatory factor analysis does not apply to single-factor, three-item scales, because the model is not identified.) Furthermore, Bentler’s comparative fit indices were high (.92 and .96, respectively), and the factor loadings were large and significant (p < .001). The composite reliability indices, which are analogous to coefficient alpha and reflect the internal consistency of the
measures of a given factor (Fornell and Larcker 1981), also were high (.79 and .74, respectively).

We verified that the two constructs were distinct by conducting a confirmatory factor analysis model for the pair; the resulting GFI was .91. Following Bagozzi, Yi, and Phillips (1991), we assessed the discriminant validity of belief in karma from disconfirmation sensitivity in two ways: First, we (i) estimated the standard measurement model in which the two factors were allowed to covary; (ii) estimated a measurement model identical to the previous one, with the correlation between the two factors fixed at one; and (iii) computed the difference in chi-square values between i and ii. The resulting changes in chi-square values were all significantly different from zero \( (p < .001) \). Second, we calculated the confidence interval of plus or minus two standard errors around the correlation between the two factors, and the confidence interval does not include 1.0 (Anderson and Gerbing 1988). Overall, the tests establish the discriminant validity of the constructs.

**APPENDIX D**

**STUDY 2 MANIPULATIONS**

**NEUTRAL CONDITION**

“As life is full of routine activities”

In our day to day life, we engage in many routine activities. This section is about regular events in your normal everyday life. In particular, think about how you typically spend your evenings on an ordinary day. Think of three regular activities that you normally do in a typical evening. Do you normally work, read, watch television, or just relax? Are there any other activities that you often do early in the evening or later on? Do you generally talk to other family members, call friends, or use a computer? Other routine things include eating dinner, doing household chores, watching television, etc.

Please think about three of your common evening activities and the time you spend on each of them. Please describe each one in a sentence.

Now pick one activity from above and describe it in more detail.

**BELIEF IN KARMA**

“As you have planted, so do you harvest; such is the belief in karma”

According to the concept of karma in the Indian culture, the universe is a continuous cycle. A key part of the philosophy of karma is that your current actions lead to corresponding results in the future. The effects of present deeds create future results, not just in our present life but in future lives, through reincarnation. This makes you responsible for your actions in life. Belief in karma means one believes that if we sow goodness, we will reap goodness; if we sow evil, we will reap evil. For example, if you behave appropriately (e.g., being truthful) in the present, something good typically happens to you in the future. On the other hand, doing something bad (e.g., being untruthful) in the present, will generally lead to bad results in the future.

Please think of three situations in your life where a belief in karma caused you to act in a particular way. Please describe each one in a sentence.

Now pick one instance from above and describe it in more detail.

**LONG-TERM ORIENTATION**

“A rupee saved today can grow to 10 rupees in the future”

Many people get in trouble by focusing on immediate pleasures without regard to long-term consequences. Such people often spend money on expensive cars and clothes, or engage in risky behaviors (e.g., drug use) without regard to their long-term financial situation or future health. On the other hand, many people who have sacrificed immediate pleasure by saving money or working multiple jobs have ended up wealthy and happy. Thinking about the future has frequently led to better results for them. For example, compared to others, a long-term oriented student who postpones some activities to study for the Indian Institutes of Technology (IIT) entrance exam is more likely to secure IIT admission, graduate with honors, and have a good job leading to a successful career and comfortable lifestyle.

Please think of three instances in your life where you took actions that involved sacrifice at the time but proved to be beneficial in the longer term. Please describe each one in a sentence.

Now pick one instance from above and describe it in more detail.

**APPENDIX E**

**STUDY 2 MEASURES (USING A 7-POINT SCALE)**

**Belief in Karma** (coefficient alpha = .74)

Good actions in the present lead to good outcomes in the future either in this life or in the hereafter.

Bad actions in the present lead to bad outcomes in the future either in this life or in the hereafter.

I believe in karma.

I believe in rebirth.

The universe is a continuous cycle.

There is no beginning or end to the universe.

The world was not formed by a one-time act of creation.

**Self-Deception** (adapted from Roth and Ingram 1985; coefficient alpha = .73)

Do you engage in wishful thinking?

Do you focus on the bright side of things in order to make yourself feel better?
Do you ever feel guilty?
Do you ever get angry?
Have you ever made a fool of yourself?
Are there things in your life that make you feel unhappy?

**Locus of Control** (adapted from Rotter 1966; coefficient alpha = .75)
Becoming a success is a matter of hard work.
Becoming a success has little or nothing to do with luck.
Getting what I want has little or nothing to do with luck.
I feel that I have little influence over the things that happen to me.
What happens to me is my own doing.
Most people don’t realize the extent to which their lives are controlled by chance happenings.

**Long-Term Orientation** (adapted from Bearden et al. 2006; coefficient alpha = .72)
I plan for the long term.
I work hard for success in the future.
I don’t mind giving up today’s fun for success in the future.

**Involvement** (coefficient alpha = .71)
The performance of car tires is very important to me.
The product category, car tires, is very relevant to me.
When I need tires, I spend time deciding what to buy.

**Expertise** (coefficient alpha = .83)
Compared to others, I consider myself more knowledgeable about car tires.
I drive a car more than most people do.
I have purchased several tires in my life.

**REFERENCES**


