

## Deference in Indians' Decision Making: Introjected Goals or Injunctive Norms?

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We examine the claim that Indians are more likely than Americans to act deferentially in the presence of authority figures and explore 2 possible psychological mechanisms for this cultural difference: introjected goals and injunctive norms. Studies 1 and 2 showed that after reflecting upon an authority's expectations, Indians were more likely than Americans to make clothing and course choices consistent with the authority's expectations, but there was no such cultural difference for peers' expectations. Study 3 showed that merely activating the concept of authority figures, without highlighting specific expectations, was sufficient to influence Indians' choices but not their evaluations. Examining a more basic distinction underlying introjected goals versus injunctive norms, Study 4 showed that authority primes influenced Indians' sense of what they should do but not what they want to do. Study 5 showed that, inconsistent with the internalized goal mechanism, the effect of explicit authority primes did not increase after brief delays. However, Indian participants who were less likely to accommodate to the salient authority experienced more guilt across delay conditions, which supported the injunctive norms mechanism. The findings suggest that manipulating injunctive norms can be an effective means for inducing or eliminating deferential behaviors in Indian settings.

*Keywords:* deference, accommodation, goals, norms, culture

An oft-noted difference between India and the West is the degree to which individuals accommodate to salient authority figures. Marriage partners in India are typically chosen within the lines of parents' expectations (Levine, Soto, Hashimoto, & Verma, 1995; Pasupathi, 2002). Likewise, in the workplace, Indian employees tend to defer to superordinates, such as by supporting a course of action that they think their boss prefers rather than an alternative that they personally think is better (Storti, 2007). This deference tendency is not simply a matter of currying favor or avoiding sanctions from the boss; it occurs even after their boss

leaves the meeting (Storti, 2007). Even high-tech firms that seek and reward independent decision making struggle to elicit junior employees' personal views uncolored by their perceptions of their superiors' opinions (Bryant, 2010).

To understand this so-called *Indian deference syndrome* (Storti, 2007), it is important to investigate the scope of the phenomenon and the psychological mechanism through which it occurs. In the current research, we examine two psychological mechanisms that might underlie the greater tendency of Indians as opposed to Westerners to make choices that are consistent with expectations of salient authorities. Is it because Indians are more likely to internalize the expectations of important others as their own preferences and goals? Or is it because Indians adjust their behavior to the expectations of the authority figures that are salient, even while maintaining private preferences that are not realized in their choices?

As an illustration of these two mechanisms, consider two examples of how a brush with an authority figure might affect people. Suppose two basketball players from a Catholic high school team are arguing about a recent game as they leave the athletic facility, accusing each other of poor play in highly indiscrete language. At the fourth floor, their coach enters the elevator and says, "Hi there," before promptly exiting at the third floor. In his wake, the two athletes realize that their argument runs against the spirit of teamwork and they begin talking earnestly about how to get better as a team. Alternatively, imagine that instead of the coach, it was a priest who briefly joined them in the elevator. In this case also, the two athletes adopt more polite language after their brush with the authority figure; however, their feelings about each other remain unchanged—they are merely translating their derogatory thoughts into less obscene language. In both cases, the effect on the athletes' behavior lingered after the authority figure left the scene, suggesting that it is not simply driven by feared

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sanctioning. However, the differential pervasiveness of the effects suggests different mechanisms. The coach's effect on their attitudes as well as behaviors may reflect the priming of a goal (teamwork) that they have internalized from the coach, whereas the priest's effect on behavior may only reflect that his presence instantiated a norm (respect for elders) that previously was not activated.

The internalization or introjection of goals from significant others is a central idea in the psychoanalytic object relations theory (Fairbairn, 1952). According to this perspective, "The cognitive representations of particular people (*object representations*), the wishes and emotions attached to these representations, and the fantasies and fears about the self and significant others have been seen as critical in mediating interpersonal functioning" (Westen, 1991, p. 429, original emphasis). Although the components of object relations theory have not all been empirically tested, one type of significant-other representation has been investigated in studies of *goal priming* (Fitzsimons & Bargh, 2003). The expectations of parents or work supervisors can be internalized as personal goals that become activated upon reminders of these individuals or of the type of relationship. This mechanism might explain the cultural difference if Indians are more likely to internalize the agenda of significant others as personal goals. The scope of the mechanism could be either important others in general or authority figures in particular.

Alternatively, it is possible that Indians' responses to authority figures are driven less by the priming of goals than the activation of norms. Although some psychoanalysts have described the cultural difference in terms of more intense object relations in India (Kakar, 1981), others have noted that while Indians are exquisitely sensitive to important others' expectations, they do not necessarily internalize these expectations as their own goals. Roland (1988, p. 64) observed that "beneath the observance of an overt etiquette of deference, loyalty, and subordination, Indians keep a very private self." According to this view, Indians accommodate their behaviors to others because they believe deference is an appropriate practice. We use the term *deference* to describe shifting one's overt actions toward the perceived expectations of an authority figure. A salient authority figure in a situation provides the focal point for the instantiation of this *injunctive norm*. Injunctive norms are rules for appropriate behavior that guide behavior to the extent that cues in the situation make it easy to see how the rules apply to the present situation (Cialdini, Reno, & Kallgren, 1990). This deference norm account entails that Indians differ in the pattern of their behavior (not the pattern of their preferences) and that the difference is specific to authority figures (not general to all significant others).

We aim to test goals and norms mechanisms for U.S.–India differences in responsiveness to authorities' expectations.<sup>1</sup> We first examine the scope of the cultural difference, checking whether the tendency to shift choices toward a salient other's expectations is specific to authority relationships as opposed to peer relationships. We then measure both people's choices and their evaluations of the choice objects. Whereas the deference norms view predicts cultural differences only in overt choices and not in private evaluations, the introjected goals account predicts both. Still another strategy is to measure people's *want* versus *should* judgments. Whereas the injunctive norms view predicts cultural differences in people's responsiveness to should judg-

ments, what people think they are supposed to do, the introjected goals view predicts variations in want judgments, what they personally desire. A final approach explores the motivational and emotional implications of these mechanisms. Effects of activated but unattained goals would magnify after a brief delay, whereas primed norms would decay. Further, attainment of goals would be reflected in increased pride, whereas violations of norms would be associated with feelings of guilt.

Before presenting four experiments examining the hypothesized cultural difference in choice processes, we review the two alternative mechanisms in greater detail.

### Introjected Goals

Research in the area of *significant other goal priming* has found that people internalize important others' expectations as goals, which are activated when people are reminded of these important others (Fitzsimons & Bargh, 2003; Fitzsimons & Shah, 2008; Shah, 2003a, 2003b; see also Baldwin, Carrell, & Lopez, 1990; Baldwin & Holmes, 1987). For example, Shah (2003b, Study 1) found that when participants are primed with a specific significant other (e.g., their mom or a friend) who has strong positive or negative expectations about the participant's performance abilities, participants subsequently performed better or worse, respectively, consistent with the primed expectations. Fitzsimons and Bargh (2003) found that priming a relationship category activated a goal that is typically associated with such relationships. For example, participants who were primed with "friends" were subsequently more likely than those primed with "coworkers" to help others, given that the goal of helping is associated more with friends than with coworkers (Fitzsimons & Bargh, 2003, Study 1). These goals can be primed both consciously (Baldwin et al., 1990; Baldwin & Holmes, 1987) and automatically, without conscious awareness (Fitzsimons & Bargh, 2003; Shah, 2003a, 2003b). Expectations associated with different categories of important others can be internalized in the same way.

Previous research has also found that when a goal is activated, people automatically evaluate goal-relevant objects more positively and goal-irrelevant objects more negatively (Brendl, Markman, & Messner, 2003; Ferguson & Bargh, 2004). For example, Brendl et al. (2003, Study 2) found that when their appetite was stimulated by a small sample of food, people valued food items more and nonfood items less than when their appetite was not stimulated. Ferguson and Bargh (2004) conceptually replicated these findings by both activating goals and measuring evaluations nonconsciously. These findings suggest that when an object is relevant to a goal, it is more positively valued, or in other words, more preferred, than when it is not relevant to a goal. Evaluations might thus serve as an indicator of whether or not people are pursuing a goal.

Although cross-cultural research on significant other goal priming is scarce, Indians might have richer representations of introjected goals associated with significant others because of their

<sup>1</sup> We do not intend to claim that these are the only two mechanisms possible; rather, these are two likely mechanisms suggested by previous research that we decided to investigate. Other mechanisms, such as values and institutionalized sanctioning systems, might be applicable but are not specifically investigated in the present research.

greater emphasis on contextually sensitive interpersonal responsiveness (Miller, 2003). Admittedly, the work of Miller and colleagues has examined contextually sensitive responsiveness to the actual presence of significant others in moral dilemma scenarios, not to the mere priming of significant others (Miller & Bersoff, 1992, 1998; Miller, Bersoff, & Harwood, 1990). If Indians are more likely than Americans to internalize important others' expectations as goals, we would expect cultural differences in decision making to emerge in situations in which important others have been invoked prior to a choice.

### Injunctive Norms

Injunctive norms—"what most others approve or disapprove" (Cialdini et al., 1990, p. 1015)—are another important source of cultural differences, although they have rarely been investigated as mechanisms for cultural differences in decision making. Injunctive norms do not guide behavior continuously but only when situationally primed; as Cialdini et al. (1990, p. 1015) stated, "Although they are said to characterize and guide behavior within a society, they should not be seen as uniformly in force at all times and in all situations. That is, norms should motivate behavior primarily when they are activated (i.e., made salient or otherwise focused on)" (see also Jacobson, Mortensen, & Cialdini, 2011; Reno, Cialdini, & Kallgren, 1993).

There has been relatively little empirical research on cultural differences in the pervasive injunctive norms that affect decision making, yet theory suggests that social norms should be more potent drivers of behavior in cultures oriented toward interdependence or collectivism (e.g., Markus & Kitayama, 1991; Triandis, 1989). Some empirical research supports this claim, although none of it is specific to India. For instance, people's perception of the social norms about life satisfaction (i.e., "How satisfied should the ideal person be with his or her life?"; Suh, Diener, Oishi, & Triandis, 1998, p. 487) was a stronger predictor of subjective life satisfaction in more collectivistic cultures than in more individualistic cultures (Suh et al., 1998). Social proof (i.e., information about what most similar others did) influenced decisions more in a more collectivistic culture than in a less collectivistic culture (Cialdini, Wosinska, Barrett, Butner, & Gornik-Durose, 1999), and participants' perceptions of the relevant social norms predicted their eating behaviors in interpersonal settings more strongly in Japan and China than in the United States (Bagozzi, Wong, Abe, & Bergami, 2000).

Despite the lack of social psychological research on injunctive norms in Indian settings, ethnographic evidence attests to the pervasiveness of acting on others' expectations. Derné (1992) reported that "upper-caste, middle-class North Indian Hindu men's talk about family life in intensive interviews reveals a true self that focuses on being guided by social pressures" (p. 260). Elaborating upon the insights generated by his ethnographic interviews, Derné (1992) claimed that "the primary concern is with bowing to social pressures, not with following standards of behavior that have been internalized" (p. 265). The claim is that Indians navigate their daily choices in large part by proactively acquiescing to the expectations of the authorities that the social environment makes salient. For example, unmarried professionals report that an advantage of living with their parents is that their parents' moral agenda will be chronically salient; if they lived alone without daily reminders of

these expectations, they would be tempted to act on their appetites. Compared to Americans, who tend to have very mixed feelings about deferring to authority figures, Indians seem to embrace this norm more eagerly yet still need the salience of a particular authority figure in the situation in order to have this norm guide their behavior.

### The Issue of Scope: Accommodation to Authority Figures vs. Significant Others in General

We have described the cultural pattern of interest as a tendency to respond to authority figures that is particularly prevalent in India. However, the scope of the phenomenon should be investigated rather than assumed (Torelli & Shavitt, 2010). Although many anthropologists and psychologists have studied distinctive Indian tendencies of accommodating to authorities and superordinates (Dumont, 1970; French & Zajonc, 1957; Verma & Triandis, 1999), others have identified cultural differences between Indians and Americans in accommodation to peers (Miller & Bersoff, 1992; Morris et al., 1998). Indeed, in Hofstede's (2001) rankings of 50 countries, India ranked 10th on power distance but 21st on collectivism. Hence, we begin by investigating participants' responsiveness to peers' as well as to authorities' expectations.

### Overview of Present Research

We conducted five studies to experimentally test whether Indians are indeed more likely than Americans to make decisions consistent with salient others' expectations, and if so, to investigate two mechanisms for this cultural difference. The first two studies focused on establishing the scope of the phenomenon, whereas the next three studies focused on identifying the mechanism for the cultural differences observed.

Studies 1 and 2 tested whether Indians are more responsive than Americans to the expectations of authority figures and peers in the context of choices between more revealing and less revealing party clothes (Study 1) and between technical and social professional development courses (Study 2). We hypothesized that the authority salience manipulation would shift Indians' but not Americans' choices toward the salient authority's expectations, but that there would be no cultural differences in the peer salience condition.

In Studies 3–5, we attempted to uncover the mechanism underlying the hypothesized cultural difference in responsiveness to salient authorities' expectations. In Study 3, we primed the salience of workplace authority figures using a standard sentence unscrambling task (e.g., Bargh, Chen, & Burrows, 1996). Following the manipulation, half the participants were asked to make a series of choices between courses on technical topics and social topics, whereas the other half was asked to evaluate each of these courses individually. We hypothesized that the authority priming manipulation would influence Indian participants' choices but not their evaluations, consistent with the mechanism of injunctive norms but not with that of introjected goals. However, we expected that the manipulation would not influence either Americans' choices or their evaluations.

In Study 4, following the same sentence unscrambling manipulation, we asked Indian participants to make two pre-choice judgments: which of the two options they want to choose versus should choose. We hypothesized that if the authority prime acti-

vates an injunctive norm, it would influence Indian participants' judgments of what they should choose but not their judgments of what they want to choose.

Finally, in Study 5, we tested a specific prediction of the introjected goals account—if authority primes activate a goal among Indians, and if participants are not provided with an opportunity to act upon that goal, then the effect of the priming manipulation on choice should increase after a brief delay (Bargh, Gollwitzer, Lee-Chai, Barndollar, & Trotschel, 2001; Chartrand, Huber, Shiv, & Tanner, 2008; Fitzsimons, Chartrand, & Fitzsimons, 2008; Sela & Shiv, 2009). We tested additional predictions using post-choice emotion measures. The goal account predicts that participants who made authority-consistent choices would experience a sense of pride, whereas the injunctive norms account predicts that participants who made authority-inconsistent choices would experience guilt. We expected to find support for the guilt effect, reflecting deviation from injunctive norms, rather than the pride effect, reflecting goal accomplishment.

### Study 1: Responsiveness to Others' Expectations

In our first study, we tested whether Indians are more responsive to the expectations of salient others in the context of young women choosing clothes to wear for a New Year's Eve party. Clothing is a relevant choice domain as people typically have clear internal preferences in this domain yet also feel sensitive to others' expectations. We focused on female students in this study and presented participants with choices between more revealing, sleeveless tops and more modest, sleeved tops. Our salience manipulation contrasted the expectations of the participant's father with those of the participant's most stylish friend. We focused on fathers as the authority figure because they would likely favor modest as opposed to revealing attire for their daughters. In the peer condition, we referred to participants' most stylish friend as a peer whose expectations are likely to diverge from those of the father.

We hypothesized that there would be no cultural difference in both the peer and control conditions but a significant difference in the authority salience condition, such that Indian participants would be more likely to choose modest sleeved tops after reflecting upon their father's expectations.

### Method

**Participants.** A total of 117 female students at Stanford University and 87 female students at St. Xavier's College in Mumbai, India, participated in the study. Participants were randomly assigned to the authority expectations, peer expectations, or control condition.

**Procedure.** All participants were asked to imagine that they were shopping for clothes to wear at a New Year's party and were asked to write five sentences about what kinds of clothes their father, their most stylish friend, or they themselves would prefer them to wear at the party. This task served as the experimental manipulation. Thereafter, participants were presented with 10 pairs of tops and asked to choose the top that they would buy if they were shopping for tops to wear at a New Year's party organized by their college friends. Five of these 10 choice trials were the target trials in which participants were presented with one sleeved and one sleeveless top. The remaining five choice trials were filler trials in which the tops were either both sleeved or both sleeveless.

After the choice round, participants in the father and friend conditions were presented with each top one at a time and asked to rate the extent to which the father/friend would like them to wear the top at the party, on a 4-point scale ranging from 1 (*Not at all*) to 4 = (*A lot*).

### Results

**Manipulation check.** We assumed that participants in the father and friend conditions would perceive their father to expect them to choose sleeved tops and their most stylish friend to expect them to choose sleeveless tops. To test whether this was the case, we averaged participants' ratings for the five sleeved tops and the five sleeveless tops and then took the difference between the two. The difference score indicated the extent to which participants perceived that their father/stylish friend would prefer them to choose the sleeved tops over the sleeveless tops (with positive numbers indicating a preference for sleeved tops and negative numbers one for sleeveless tops). One-sample *t* tests found that the difference score was significantly different from zero in the father condition, for Americans,  $t(36) = 1.94, p = .06, M = -0.50, SD = 1.56$ , for Indians,  $t(28) = 3.43, p = .001, M = -0.90, SD = 1.41$ , and in the peer condition, for Americans,  $t(40) = 19.75, p < .001, M = 1.98, SD = 0.64$ , for Indians,  $t(27) = 8.00, p < .001, M = 1.56, SD = 1.03$ . These analyses confirmed that participants perceived their father as expecting them to choose sleeved tops over the sleeveless tops but perceived their most stylish friend as expecting them to choose sleeveless tops over the sleeved tops.

**Choices.** To test whether the salience manipulation influenced Indian participants' choices more than Americans' choices, we took the proportion of sleeved tops that participants chose in the choice trials and submitted this measure to a 2 (culture)  $\times$  3 (condition) analysis of variance (ANOVA). We found a main effect of culture,  $F(1, 198) = 12.29, p < .001$ , a main effect of condition,  $F(2, 198) = 4.76, p < .01$ , and a Culture  $\times$  Condition interaction,  $F(2, 198) = 4.85, p < .01$ .

To decompose the interaction, we tested for cultural differences in each of the three conditions using independent post hoc Tukey honestly significant difference (HSD) contrasts. We found no cultural differences in the control condition,  $t(198) = .10, p > .92$ , indicating that our Indian and American participants were equally likely to prefer sleeveless tops over sleeved tops at baseline. We found a significant cultural difference in the authority condition,  $t(198) = 6.22, p < .0001, d = 1.11$ , indicating that Indians were substantially more likely than Americans to choose sleeved tops when reminded of their father's expectations. In the peer condition, Americans were more likely than Indians to choose sleeveless tops, but the difference was not significant,  $t(198) = 2.16, p > .087$  (see Figure 1).

### Discussion

Study 1 supported our prediction that Indians are more likely than Americans to make decisions consistent with the expectations of salient authority figures but not with the expectations of non-authorities, like peers. After reflecting upon their father's expectations, Indian participants were more likely to choose modest sleeved tops, whereas American participants tended to act in contrast to their father's expectations by choosing more revealing

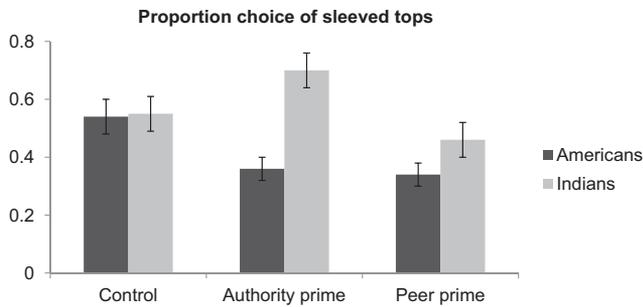


Figure 1. Proportion of trials in which participants chose a sleeved top instead of a sleeveless top, by culture and experimental condition. Error bars indicate standard errors of the means.

sleeveless tops. There was no cultural difference in the peer condition.

Reflecting on our procedure, we surmised that perhaps Indian participants might have been more likely than Americans to assume that their father would find out about their clothing choices. Perhaps a fear of being sanctioned by their father led Indian participants to choose more sleeved tops in the authority condition. Therefore, in our subsequent studies, we attempted to eliminate this ambiguity by sampling a different choice domain that might be less vulnerable to social sanctioning interpretations, namely, choice of continuing education courses while working at a hypothetical company.

### Study 2: A Replication

In our second study, we examined people's choices in the context of continuing education courses. We used courses as our choice domain because college students in both cultures have experience with course selection decisions, and choice of courses is an important decision because it is likely to influence an individual's skills, knowledge, and job prospects. Our salience manipulation induced participants to reflect upon the expectations of either their imagined project manager, who would likely prefer employees to choose more serious courses on technical topics, or their imagined coworkers, who would likely prefer colleagues to choose more fun courses on social topics. We then measured participants' choices between a series of technical and social courses.

Once again, we hypothesized that there would be no cultural difference in the peer and control conditions but a significant difference in the authority salience condition, such that Indian participants would be more likely to choose technical courses after reflecting upon their hypothetical manager's expectations.

### Method

**Participants.** Participants were 82 students at a university in northern California (36 women, mean age 19.4 years; 38 agnostics, 27 Christians, 8 Jews, 2 Hindus, 1 Muslim, 1 Buddhist, and 4 others) and 92 participants at a university in Bangalore, India (18 women, mean age 20.4 years; 84 Hindus, 5 Muslims, 2 Christians, 2 Jains, and 2 agnostics). The populations were similar in terms of socioeconomic status: 79% of American participants and 82% of

Indian participants had at least one parent with a bachelor's degree and would thus be classified as middle class (Backlund, Sorlie, & Johnson, 1999). Participants were randomly assigned to the authority expectations, peer expectations, or control condition.

**Stimuli.** The study was framed as a "continuing education courses study." Participants were first asked to imagine being an employee at a large software company in which they had the opportunity to take continuing education courses at a local college. We created 20 course titles, half of which were about social topics (e.g., "How to make new friends at work," "Learning relaxation techniques") and half about technical topics (e.g., "Research methods for innovation," "Statistical techniques for software modeling;" see Appendix). In a pilot study, 27 American students were asked to rate how *fun* and how *useful* the 20 courses were on a 7-point scale. Paired-sample *t* tests revealed that the social courses were rated as being more fun than the academic courses,  $t(26) = 2.88, p < .008$ , and the technical courses were rated as being more professionally useful than the social ones,  $t(25) = 3.59, p = .001$ .

**Salience manipulation.** After they saw a list of all 20 courses, participants were randomly assigned to one of three conditions. One group was asked to describe in a few sentences the types of courses that their project manager at the company would prefer them to enroll in (*authority* condition); another group was asked to describe courses that their coworker friends at the company would prefer them to enroll in (*peer* condition); a third group was asked to describe the courses that they themselves would prefer to enroll in (*control* condition). This open-ended task was timed for 2 min.

**Dependent measure.** After the salience manipulation, participants were shown 10 pairs of courses, containing one social and one technical course, and were asked to choose the course in which they would enroll. Choices were made on a 6-point scale, ranging from *Definitely choose Course 1* to *Definitely choose Course 2*, without a neutral midpoint.

**Manipulation check.** As a manipulation, we asked all participants to rate the extent to which their hypothetical project manager and their hypothetical coworkers would expect them to enroll in each course, on a 6-point scale ranging from 1 (*not at all*) to 6 (*very much*).

### Results

**Manipulation check.** We averaged participants' ratings of the extent to which their manager and their coworkers would prefer them to enroll in the 10 technical courses and the 10 social courses. Using one-sample *t* tests, we found that participants indicated that their manager would expect them to enroll in the technical courses over the social courses, for Americans,  $t(81) = 21.24, p < .001, M = 2.40, SD = 1.02$ , for Indians,  $t(91) = 4.62, p < .001, M = 0.61, SD = 1.26$ , and that their coworkers would prefer them to enroll in the social courses over the technical courses, for Americans,  $t(81) = 6.21, p < .001, M = -1.00, SD = 1.46$ , for Indians,  $t(91) = 3.64, p < .001, M = -0.42, SD = 1.96$ .

**Choice.** We first scored all trials, such that higher numbers indicated a more definite choice of the technical course, and then averaged across all trials. Upon submitting this measure to a 2 (culture)  $\times$  3 (condition)  $\times$  2 (gender) ANOVA, we found a significant Culture  $\times$  Condition interaction,  $F(2, 161) = 3.54, p < .04$ ; none of the other effects were significant.

To decompose the interaction, we tested for cultural differences in each of three conditions using post hoc Tukey HSD contrasts. In the control condition, American participants chose technical courses more often than Indian participants did, but the difference was not significant,  $t(161) = 1.95, p > .09$ . We found a significant cultural difference in the authority condition,  $t(161) = 2.33, p = .05, d = 0.43$  (one-tailed), indicating that Indians were more likely than Americans to choose technical courses when reminded of their manager's expectations. In the peer condition, the two groups did not differ in their choice of courses,  $t(161) = 1.20, p > .17$  (see Figure 2).

## Discussion

Study 2 replicated Study 1 by finding that Indians are more likely than Americans to make decisions consistent with the expectations of salient authority figures but not with the expectations of peers. After reflecting upon a hypothetical project manager's expectations, Indians but not Americans were more likely to choose more professionally useful continuing education courses. Once again, there was no cultural difference in the peer condition.

One important limitation of the present study is that the manipulation and the dependent measure were closely related. Perhaps American participants were also responding to the highlighted authority's expectations but, instead of assimilating, were consciously trying to act independent of those expectations. Therefore, in the subsequent studies, we used a more implicit manipulation that would not be subject to such criticisms.

Together, Studies 1 and 2 establish that the previously identified cultural difference in responsiveness to salient others' expectations (e.g., Storti, 2007) is stronger for authority figures than for other categories of significant others, such as peers. Therefore, we focused on authority figures in the subsequent studies, attempting to identify the mechanism underlying this cultural difference.

### Study 3: Choices and Evaluations

Whereas Studies 1 and 2 focused on clarifying the scope of cultural differences in responsiveness to salient others' expectations, Study 3 was aimed at identifying which mechanism—introjected goals or injunctive norms—better explains the greater responsiveness to authorities' expectations identified among Indians. We primed the concept of workplace authority figures in this

study and tested whether the manipulation influenced participants' choices and evaluations of various professional education courses. The introjected goals hypothesis predicts that if authority primes work by activating a latent goal, they would influence Indian participants' choices *and* evaluations more than those of American participants, given that people evaluate goal-relevant objects more positively than goal-irrelevant objects (Brendl et al., 2003; Ferguson & Bargh, 2004; Markman & Brendl, 2000). In contrast, the injunctive norms hypothesis predicts that if authority primes work by making the deference norm relevant to the present decision, the manipulation would influence Indians' choices but not their evaluations. Norms influence how people act, but people's personal preferences need not be aligned with the norm (Cialdini, Kallgren, & Reno, 1991).

The salience manipulations in Studies 1 and 2 used an explicit reflection on others' expectations about the relevant choice domain. This procedure might have created experimenter demand, to which Indian and American participants might have reacted differently. Therefore, Study 3 used a less transparent procedure, a standard sentence-unscrambling task (e.g., Bargh et al., 1996), to activate the general concept of legitimate workplace authority without making reference to the choice domain.

## Method

**Participants.** Seventy-five participants at M. S. Ramaiah Institute of Technology (47 women, 26 men, 2 unreported; mean age 20.5 years) and 63 participants at Columbia University (47 women, 16 men; mean age 20.2 years) participated in the study. Participants were randomly assigned to one of four cells of a 2 (prime: authority vs. control)  $\times$  2 (dependent variable: choices vs. evaluations) design.

**Procedure.** For a study on "sentence formation," participants were asked to unscramble 10 six-word sentences. In the legitimate authority prime condition, each sentence contained an authority-related word with a positive association (e.g., "She likes her *boss* very much"). In the control condition, the sentences were identical except that the authority-related words were replaced with neutral words (e.g., "She likes her *dog* very much").

After the prime, participants were presented with the following instructions:

You are now participating in a research study about people's preferences for different types of professional development courses. Suppose that you are working as a software programmer at a big company in San Jose, California/Bangalore. You really like your current job, but the company is going to close its San Jose, California/Bangalore office in a week, and you are searching for a job at some other software company. While you are searching for a job, you decide to enroll in some professional development courses at a local institute for professionals. We want to learn about what types of courses you would be interested in taking.

Thereafter, participants assigned to the choice dependent variable (DV) condition were instructed, "On the following screens, you will see various professional development courses presented in groups of two. From each pair, please select one of the two courses that you would prefer to take yourself." Participants were then presented with 10 pairs of technical courses (e.g., "Writing detailed project reports") and social courses (e.g., "Practicing

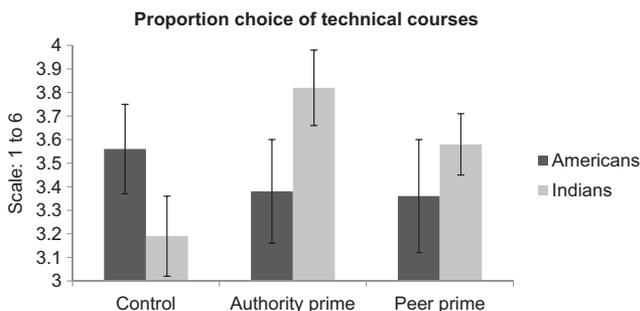


Figure 2. Proportion of trials in which participants chose a technical course instead of a social course, by culture and experimental condition. Error bars indicate standard errors of the means.

group discussion with movies”) and had to choose one course from each pair (see Appendix).

Those assigned to the evaluation DV condition were instructed, “On the following screens, you will see various professional development courses presented one at a time. Please tell us *how much you like* each course using the scale provided.” They were then presented with the 20 courses one at a time (in a random order) and were asked to evaluate each course on a 6-point scale ranging from 1 (*Don’t like this course at all*) to 6 (*Like this course very much*).

Finally, U.S. participants were administered a funnel debrief (Bargh & Chartrand, 2000), which asked a series of questions increasing in specificity, probing whether they identified a connection between the sentence unscrambling task and the subsequent choice or preference task.

## Results

For participants who received the choice DV, we computed the proportion of trials in which they chose the technical course. For those who received the evaluation DV, we computed the difference between participants’ ratings for the 10 technical courses and the 10 social courses (with positive numbers indicating a preference for technical courses and negative numbers indicating a preference for social courses). Given that the two dependent measures were on different scales, we scaled the evaluation measure to range from 0 to 1.

We then submitted the scaled DV to a 2 (culture)  $\times$  2 (prime: authority vs. control)  $\times$  2 (type of DV: evaluation vs. choice) ANOVA. We found a main effect of culture,  $F(1, 130) = 22.66$ ,  $p < .001$ ; a main effect of type of DV,  $F(1, 130) = 6.65$ ,  $p = .01$ ; a Culture  $\times$  Prime interaction,  $F(1, 130) = 4.93$ ,  $p < .01$ ; a Culture  $\times$  Type of DV interaction,  $F(1, 130) = 9.11$ ,  $p < .005$ ; and a Prime  $\times$  Type of DV interaction,  $F(1, 130) = 6.09$ ,  $p < .05$ .

We conducted simple effects  $t$  tests to investigate the three two-way interactions. The Culture  $\times$  Prime interaction indicated that the prime had opposite effects on Indians and Americans; averaging across the choice and evaluation conditions, the authority prime shifted Americans toward social courses,  $t(130) = 1.52$ ,  $p = .13$ ,  $M$  (control) = 0.67,  $SD = 0.23$  vs.  $M$  (authority) = 0.41,  $SD = 0.24$ , but Indians toward technical courses,  $t(130) = 1.50$ ,  $p = .14$ ,  $M$  (control) = 0.48,  $SD = 0.14$  vs.  $M$  (authority) = 0.54,  $SD = 0.17$ . The Culture  $\times$  Type of DV interaction indicated that averaging across the priming conditions, Americans favored technical courses more in choices than in evaluations,  $t(130) = 3.79$ ,  $p < .001$ ,  $M$  (choice) = 0.56,  $SD = 0.27$  vs.  $M$  (evaluations) = 0.72,  $SD = 0.17$ , but Indians showed no difference between choices and evaluations,  $t < 1$ ,  $p > .98$ ,  $M$  (choice) = 0.51,  $SD = 0.19$  vs.  $M$  (evaluations) = 0.51,  $SD = 0.11$ . The Prime  $\times$  Type of DV interaction indicated that the prime had opposite effects on choices and preferences; averaging across culture, the authority prime shifted evaluations toward social courses,  $t(130) = 1.51$ ,  $p = .13$ ,  $M$  (control) = 0.56,  $SD = 0.13$  vs.  $M$  (authority) = 0.50,  $SD = 0.14$ , but choices toward technical courses,  $t(130) = 1.55$ ,  $p = .12$ ,  $M$  (control) = 0.58,  $SD = 0.25$  vs.  $M$  (authority) = 0.64,  $SD = 0.25$ . As the size of the priming effect (although not the direction) on Americans’ preferences and on Indians’ choices was nearly identical, the three-way Culture  $\times$  Prime  $\times$  Type of DV interaction was not significant,  $F(1, 130) = 0.00$ ,  $p > .94$ .

The three two-way interactions indicate that the priming effect works in opposite directions on different response modes across the two cultures. Therefore, we followed up with specific planned comparisons to elucidate how the Culture  $\times$  Prime interaction varied across the response modes. Simple effects  $t$  tests confirmed that American participants were about equally likely to choose technical courses in the authority prime condition as in the control condition,  $t < 1$ ,  $p > .86$ ,  $M$  (control) = 0.72,  $SD = 0.24$  vs.  $M$  (authority) = 0.73,  $SD = 0.22$  (see Figure 3), whereas Indian participants were significantly more likely to choose technical courses in the authority prime condition than in the control condition,  $t(130) = 2.42$ ,  $p < .05$ ,  $M$  (control) = 0.43,  $SD = 0.15$  vs.  $M$  (authority) = 0.57,  $SD = 0.21$ , Cohen’s  $d = 0.74$ . However, American participants were significantly less likely to prefer technical courses (compared to social courses) in the authority prime condition than in the control condition,  $t(130) = 2.33$ ,  $p < .05$ ,  $M$  (control) = 0.63,  $SD = 0.15$  vs.  $M$  (authority) = 0.49,  $SD = 0.14$ , Cohen’s  $d = 0.93$  (see Figure 3), whereas Indian participants were about equally likely to prefer technical courses (compared to social courses) in the authority prime condition than in the control condition,  $t < 1$ ,  $p > .88$ ,  $M$  (control) = 0.51,  $SD = 0.07$  vs.  $M$  (authority) = 0.51,  $SD = 0.08$  (see Figure 4).

Finally, we checked American participants’ responses to the funnel debriefing measure to test whether they identified the link between the sentence unscrambling task and the subsequent choice or preference task. Only one of 63 participants came close to guessing the hypothesis, indicating that the priming manipulation was sufficiently disconnected from subsequent choice or preference tasks.

## Discussion

Study 3 replicated the findings of Studies 1 and 2 with a number of improvements. First, rather than use the explicit salience manipulation, we used a more implicit priming procedure employing the commonly used sentence unscrambling method. Second, we reduced the possibility of social sanctioning concerns by not priming a specific authority figure. Third, we manipulated whether participants made choices or evaluations immediately after the manipulation.

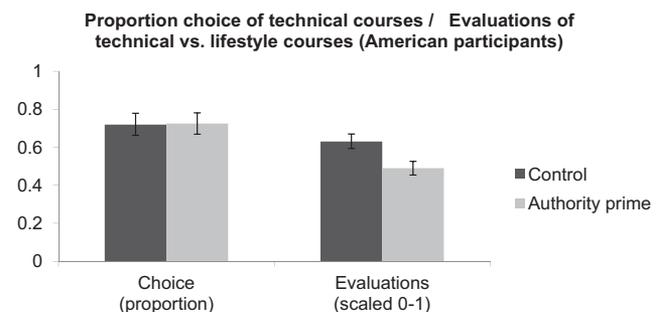


Figure 3. Proportion of trials in which American participants chose technical courses (left columns) and difference between participants’ evaluations of technical versus social courses (right columns), by experimental condition. Error bars indicate standard errors of the means.

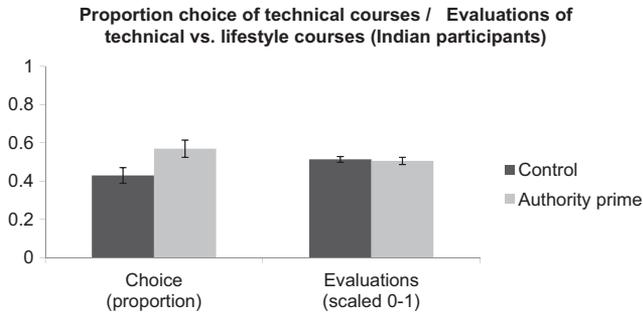


Figure 4. Proportion of trials in which Indian participants chose technical courses (left columns) and difference between participants' evaluations of technical versus social courses (right columns), by experimental condition. Error bars indicate standard errors of the means.

This improved procedure found an effect of the authority prime on Indians and Americans but on different response modes and in the opposite direction. Compared with those in the control condition, Indians primed with authorities were more likely to choose job-relevant technical courses over job-irrelevant social courses, but were not more likely to evaluate technical courses more favorably than social courses. In contrast, Americans primed with authorities evaluated technical courses relatively less favorably than did those in the control condition, but their choices did not differ across the two priming conditions. In sum, we found support for the predicted effect of the authority prime on Indians' choices, the predicted null effects of the authority prime on Indians' preferences and Americans' choices, and an unexpected contrast effect of the authority prime on Americans' preferences.

The study does not support the introjected goals hypothesis that authority primes activate a goal that participants then pursue, as Indian participants' evaluation ratings of the various courses did not vary by priming condition. In contrast, the Indian data supports the injunctive norms hypothesis, that authority primes cue the norm of responding to expectations of salient authorities.

#### Study 4: Want vs. Should Judgments

Whereas Study 3 used the distinction between choices and evaluations to test the two sets of competing hypotheses, the evaluation and choice tasks structurally differed from each other in significant ways (e.g., whether items were presented individually or simultaneously), in the number of trials, and in the scale on which participants responded. Therefore, in the third study, we used a more refined methodology to test the introjected goals versus injunctive norms hypotheses while keeping the structure of the task uniform. Further, we wanted to test a more basic distinction underlying goals and norms for which the two hypotheses make distinct predictions. In particular, we asked all participants to make two different pre-choice judgments: what they would *want* to choose and what they think they *should* choose.

Recent research shows that people's evaluations of individual items are more likely to capture what they want to do, whereas choices among multiple items are more likely to capture what they think they should do (Bazerman, Loewenstein, & White, 1992; Bazerman, Moore, Tenbrunsel, Wade-Benzoni, & Blount, 1999; Bazerman, Tenbrunsel, & Wade-Benzoni, 1998). For example,

Irwin, Slovic, Lichtenstein, and McClelland (1993) found that when evaluating options individually, participants were willing to pay more money for commodities for personal use (e.g., a new VCR), something that they would want for themselves, but when choosing among multiple options were willing to pay more money for public goods (e.g., air quality improvement), something that they should value. Therefore, in the context of our studies, participants' evaluations of different alternatives are likely to measure what they want to do (their personal goals) whereas their choices among multiple alternatives are likely to measure what they should do (their responsiveness to injunctive norms). Therefore, the wants versus shoulds distinction allows us to test the introjected goals versus injunctive norms mechanisms.

If authority primes trigger injunctive norms, then they would make accessible participants' sense of what they should do without necessarily shifting what they actually want to do, given that injunctive norms highlight what most others approve or disapprove of (Cialdini et al., 1990). In contrast, if authority primes activate introjected goals, then they should shift participants' judgments of what they want to do, given that goal striving is defined by increased wanting for the goal target (Austin & Vancouver, 1996; Bargh et al., 2001; Markman & Brendl, 2000). Given that we found no evidence of accommodation to authorities' expectations among American participants in Study 3, we conducted this study with Indian participants only.

#### Method

**Participants.** One hundred and one participants at M. S. Ramaiah Institute of Technology (36 women, 65 men; mean age 20.8 years) participated in the study. Participants were randomly assigned to one of four cells of a 2 (prime: authority vs. control)  $\times$  2 (DV order: want judgment first vs. should judgment first) design.

**Procedure.** Participants first completed the same sentence unscrambling priming measure as in Study 3. About half the participants were asked to unscramble 10 sentences containing authority-related words, and the remaining participants were asked to unscramble 10 sentences without any authority-related words. Participants were then asked to imagine that they have the opportunity to take some professional development courses in between two different jobs, as in Study 3.

The stimuli for the dependent measure were the 10 technical course descriptions and the 10 social course descriptions used in Study 3. These 20 courses were combined to form 10 pairs, each containing one technical course and one social course (e.g., "Learning advanced computer debugging" and "Making more friends at work"). The 10 pairs were presented once in Block 1 and then again in Block 2. For half the participants, Block 1 was the want block and Block 2 was the should block, and vice versa for the remaining participants.

In the should block, participants were instructed, "On the following screens, you will see various professional development courses presented in groups of two. From each pair, please select one of the two courses that you think you *should* choose." In the want block, participants were instructed, "On the following screens, you will see various professional development courses presented in groups of two. From each pair, please select one of the two courses that you *want* to choose." Participants were then presented with 10 pairs of technical and social courses and asked

to respond on a 6-point scale ranging from 1 (*Definitely Course 1*) to 6 (*Definitely Course 2*). The 10 trials were separately randomized for the should and want blocks for each participant.

## Results

We recoded participants' want and should ratings such that higher values indicated a greater preference for technical courses. As there is likely to be common variance between participants' want and should ratings across trials, we ran a three-level hierarchical linear model,<sup>2</sup> with ratings nested within course pairs nested within participants (Raudenbush, Bryk, Cheong, Congdon, & du Toit, 2004, pp.140–165). Level 1 represented participants' two ratings for each pair of courses; the dependent variable was every rating that participants made (two ratings for each of 10 course pairs), and the predictor variable was a dummy indicating whether each rating was a want rating (TypeOfRating = 0) or a should rating (TypeOfRating = 1). Level 2 represented the 10 pairs of technical–social courses to which participants responded (there were no predictor variables at Level 2). Finally, Level 3 represented participants; predictor variables were priming condition (control = 0, authority = 1), order of rating tasks (0 = want task first, 1 = should task first), and Prime  $\times$  Order interaction. The full model is specified below:

Level 1 model:

$$\text{Rating} = \pi_0 + \pi_1 \text{TypeOfRating} + \varepsilon$$

Level 2 model:

$$\pi_0 = B_{00} + r_0$$

$$\pi_1 = B_{10}$$

Level 3 model:

$$B_{00} = G_{000} + G_{001} \text{Prime} + G_{002} \text{TaskOrder} + G_{003} \text{Prime} * \text{TaskOrder} + U_{00}$$

$$B_{10} = G_{100} + G_{101} \text{Prime} + G_{102} \text{TaskOrder} + G_{103} \text{Prime} * \text{TaskOrder}$$

Given the dummy coding of the variable TypeOfRating (0 = want ratings, 1 = should ratings), the coefficients  $G_{001}$  to  $G_{003}$  represent the effects of the priming condition and task order on participants want ratings, whereas the coefficients  $G_{101}$  to  $G_{103}$  represent the effects of condition and task order on should ratings after controlling for want ratings.  $G_{001}$ – $G_{003}$  were nonsignificant ( $t_s < 1$ ,  $p_s > .43$ ), indicating that participants' want ratings did not differ by priming condition or task order. However, controlling for want ratings, participants indicated that they should choose the technical courses more strongly in the authority prime condition than in the control condition,  $G_{101} = .38$ ,  $t(2012) = 2.20$ ,  $p < .03$ . Task order was nonsignificant,  $G_{102} = .26$ ,  $t(2012) = 1.51$ ,  $p > .13$ , as was the Prime  $\times$  Task Order interaction,  $G_{103} = -.28$ ,  $t(2012) = 1.16$ ,  $p > .24$  (see Figure 5).

## Discussion

Study 4 provided further support for our argument that authority primes cue an injunctive norm about responding to salient author-

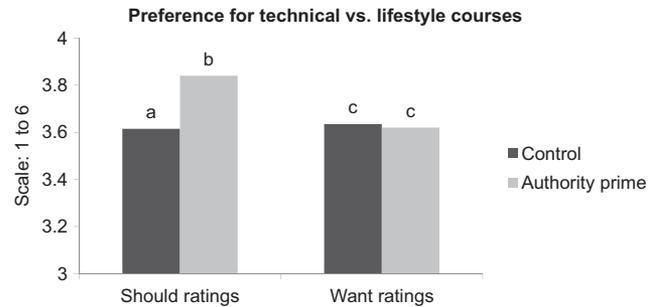


Figure 5. Difference between participants' want and should ratings of technical versus social courses, by experimental condition. Different letters indicate that the cells are significantly different.

ities' expectations in Indian settings: The authority prime shifted participants' ratings about the types of course they should choose but not about the types of courses that they wanted to choose. These findings call into question the introjected goals argument as an explanation of the present findings, given that a key feature of this argument is that the expectations of significant others are internalized as goals that are actively pursued once triggered. Instead, the results support the injunctive norms argument, given that the prime influenced participants' sense of what they are supposed to do.

## Study 5: Goal Striving, Pride, and Guilt

Our purpose in our final study was to provide a stronger test of the introjected goals hypotheses. Whereas Studies 3 and 4 tested the goals mechanism by assessing participants' evaluations, choices, and prechoice judgments, Study 5 tested the goal mechanism using a delay paradigm. According to Bargh et al. (2001, p. 1020), "Goal-directed action tendencies consume their strength to the degree they are acted on, reaching their lowest level of activation immediately after the goal is attained. Until the goal is acted on, however, the action tendency is posited to increase in strength over time, thus pressing for realization." In other words, if a goal has been activated but not attained, the ensuing frustration increases the desire for goal attainment (see also Förster, Liberman, & Friedman, 2007).

In support of this argument, Bargh et al. (2001, Study 3) found that the effect of activating an achievement goal on participants' performance was stronger when there was a 5-min delay between the manipulation and the achievement measure. Similarly, Chartrand et al. (2008) found that the effect of prestige versus thrift goals on consumer choice was stronger after an 8-min delay than a 3-min delay (for additional examples, see Fitzsimons et al., 2008; Sela & Shiv, 2009). This research leads to the prediction that if the authority condition activated a goal, the effect of the manipulation on choice should increase after a brief delay. In contrast, the norms account does not specifically predict either amplification or attenuation of the manipulation over brief delays.

<sup>2</sup> The three-level HLM model was equivalent to a two-level multivariate HLM model.

The emotions that participants experience after making choices allow a final test of distinctive predictions of the goals and norms accounts. Chartrand (1999, as cited in Parks-Stamm, Oettingen, & Gollwitzer, 2010, p. 532) found that participants who were given the opportunity to fulfill a nonconsciously activated goal felt pride and other positive moods. This finding suggests that if reminders of authorities activate a goal that participants subsequently fulfill by making choices in line with the other's expectations, then we would expect greater frequency of accommodative choices to be correlated with increased feelings of pride in the authority condition but not in the control condition.

In contrast, violating injunctive norms evokes feelings of guilt. For example, Bierbrauer (1992) found that participants from three different cultural groups indicated that violation of social norms, including legal, religious, and traditional norms, would lead to increased feelings of guilt. Therefore, if reminders of authority cue that an injunctive norm about responding to legitimate authorities' expectations are relevant, we would predict that participants who act contrary to the activated norms would experience more guilt. Again, because Study 3 found that authority primes did not influence Americans' choices, we conducted this study with Indian participants only.

## Method

**Participants.** One hundred and sixty-five students at M. S. Ramaiah Institute of Technology in Bangalore, India (53 women, 112 men; mean age 20.5 years), participated in the study. Participants were randomly assigned to one of six cells of a 2 (salience manipulation: authority vs. control)  $\times$  3 (delay: none vs. 4.5 min vs. 9 min) design.

**Procedure.** Participants first went through an explicit salience manipulation to activate specific authority expectations. Participants were asked to imagine that they were working at a software company and had the opportunity to take continuing education courses. They were exposed to a list of 10 technical and 10 social courses to give them an idea of the choice domain. Participants were then asked to describe either the types of courses their project manager at the hypothetical company would expect them to take (authority salience condition), or the types of courses that they themselves would prefer to take (control condition). This task was timed for 2 min.

After the salience manipulation, participants in the two delay conditions were asked to do the neutral filler task used by Sela and Shiv (2009), in which they had to remember the largest odd number of many two-digit numbers successively displayed on the screen. In the 4.5-min delay condition, we displayed 60 numbers for 4 s each, whereas in the 9-min delay condition, we displayed 84 numbers for 6 s each, both with a .5-s intertrial interval. Thereafter, participants were asked to choose between 10 pairs of technical versus social courses, as in Studies 2 and 3, on a continuous 6-point scale ranging from 1 (*Definitely Course 1*) to 6 (*Definitely Course 2*).

Following completion of the choice measure, participants completed a measure of pride and guilt from the State Self-Conscious Emotions Scale (Marschall, Sanftner, & Tangney, 1994). For the pride measure, participants responded to the items, "I feel good about myself right now"; "I feel worthwhile, valuable"; "I feel capable, useful"; "I feel proud"; and "I feel pleased about some-

thing I have done." For the guilt measure, participants responded to the items, "I feel remorse, regret"; "I feel tension about something I have done"; "I cannot stop thinking about something bad I have done"; "I feel like apologizing, confessing"; and "I feel bad about something I have done." They responded on a 6-point scale ranging from 1 (*Not feeling this way at all*) to 6 (*Feeling this way strongly*).

## Results

We averaged the extent to which participants chose the technical courses across the 10 trials and submitted this measure to a 2 (salience: authority vs. control)  $\times$  3 (delay: none vs. 4.5 min vs. 9 min) ANOVA. We found a significant main effect of the salience manipulation,  $F(1, 159) = 8.40, p < .005, d = 0.45$ , but neither the main effect of delay,  $F(2, 159) = 1.52, p > .22$ , nor the Salience  $\times$  Delay interaction,  $F(2, 159) = .13, p > .87$ , was significant. As indicated in Figure 6, participants in the authority condition were more likely to choose technical courses across the three delay conditions. Notably, the size of the effect did not increase with these brief delays.

We next averaged participants' ratings on the pride scale ( $\alpha = .71$ ) and submitted this measure to a regression with condition (control = 0, authority = 1), choice of technical courses (centered), and a Condition  $\times$  Choice interaction as predictors. The main effect of the salience condition was not significant,  $\beta = .16, t(158) = 0.82, p > .41$ , nor was the main effect of choice courses,  $\beta = .03, t(158) = .22, p > .82$ , nor the Salience  $\times$  Choice interaction,  $\beta = -.005, t(158) = .00, p > .99$  (see Figure 7).

We next averaged participants' ratings on the guilt scale ( $\alpha = .74$ ) and submitted this measure to a similar regression. The main effect of the salience manipulation was marginally significant,  $\beta = .34, t(158) = 1.90, p = .06$ , indicating that participants in the authority condition experienced more guilt than those in the control condition. The main effect of choice was not significant,  $\beta = .08, t(158) = .08, p > .55$ , but we found a significant Salience  $\times$  Choice interaction,  $\beta = -.47, t(158) = 2.24, p < .03$ . Additional analyses indicated that whereas there was no correlation between choice and guilt in the control condition ( $r = .07, p = .55$ ), there was a significant negative correlation in the authority condition ( $r = -.26, p = .02$ ), indicating that participants who were less likely to choose according to the activated authority expectations experienced more guilt (see Figure 8).

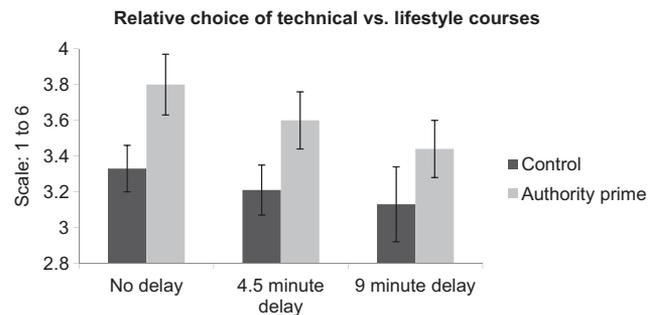


Figure 6. Relative choice of technical versus social courses, by delay and priming condition. Error bars indicate standard errors of the means.

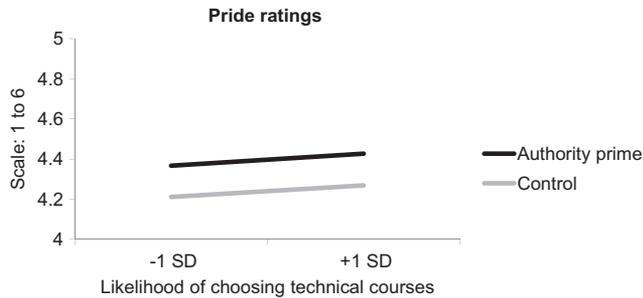


Figure 7. Pride as a function of likelihood of choosing technical courses and priming condition. SD = standard deviation.

## Discussion

Study 5 found converging evidence in support of the injunctive norms mechanism and further disconfirmed the introjected goals mechanism. Contrary to predictions of the goal account (Bargh et al., 2001; Chartrand et al., 2008; Fitzsimons et al., 2008; Sela & Shiv, 2009), the effect of the authority salience manipulation did not increase after brief delays of 4.5 and 9 min. This study further disconfirmed an additional prediction of the goal account—participants who chose according to the activated expectations did not experience more pride, as would be predicted by the goal account (Chartrand, 1999, as cited in Parks-Stamm et al., 2010, p. 532). In contrast, participants who chose contrary to the activated expectations experienced more guilt, as predicted by the injunctive norms account (Bierbrauer, 1992). Notably, Study 5 found that even participants who were not contributing to the overall choice effect (i.e., participants who did not defer to authorities in their choices) nevertheless experienced strain because of acting contrary to the activated expectations. In this manner, Study 5 provides converging support for the injunctive norms mechanism derived from two sets of individuals—those who defer and those who do not.

## General Discussion

Whereas traditional accounts for cross-cultural differences in decision making often assumed that cultural differences were fixed and stable across contexts, increasingly, cross-cultural psychologists have realized that many cultural differences are evoked in particular situations but not in others (e.g., Hong, Morris, Chiu, & Benet-Martínez, 2000; Y. Kashima, 2008). As such, culture is less likely to work as a trait and more often works as a prime. Cultural primes can work through a number of different mechanisms, but few researchers have specifically examined this question (for notable exceptions, see E. Kashima & Kashima, 1998; Y. Kashima, 2000, 2008). We tested whether reminders of authority figures lead Indians but not Americans to act according to the authority's expectations, and examined two possible mechanisms for such an effect.

## Summary of Findings

Study 1 induced participants to reflect upon the types of clothes that an authority figure (participant's father), a peer (their most stylish friend), or they themselves would prefer them to wear at a

New Year's Eve party. We found that Indian participants were more likely to make choices that were consistent with the primed authority's expectations but not with the primed peer's expectations, whereas Americans accommodated to neither. Study 2 replicated the choice findings in a different domain (i.e., continuing education courses while working at a hypothetical software company) by invoking different significant others (i.e., project manager as the authority figure, coworker friends as peers).

Study 3 manipulated whether participants were implicitly primed with the concept of workplace authority using a sentence unscrambling task and also whether participants made choices or evaluations after the prime. We found that when primed with workplace authority, Indian participants were more likely to choose professionally useful technical courses; this priming manipulation did not influence their evaluations of the two types of courses. In contrast, the priming manipulation did not influence Americans' choices but influenced their evaluations in the opposite direction—Americans evaluated technical courses less favorably after the authority prime.

Study 4 examined whether authority primes influence two different pre-choice judgments that are associated with norms versus goals. We found that after an implicit authority prime, Indian participants were more likely to state that they should choose professionally useful technical courses, but they were no more likely to want to choose those courses, indicating that the prime shifted participants' normative perceptions but not their personal desires.

Finally, Study 5 tested additional predictions of the introjected goals and injunctive norms accounts. We found that the effect of authority primes on choice does not increase after brief delays of 4.5 and 9 min, as predicted by the goal account, but stays relatively stable. Further, participants who choose according to the primed expectations do not experience more pride, as would be predicted by the goals account. Instead, participants who do not choose according to the primed expectations experience more guilt, consistent with the injunctive norms account.

## Implications

### Mechanisms for cultural differences in decision making.

The present research attempts to bridge the literatures of automaticity and cultural psychology by considering automatic processes as mechanisms for cultural differences in decision making. Researchers in cultural psychology have typically considered stable

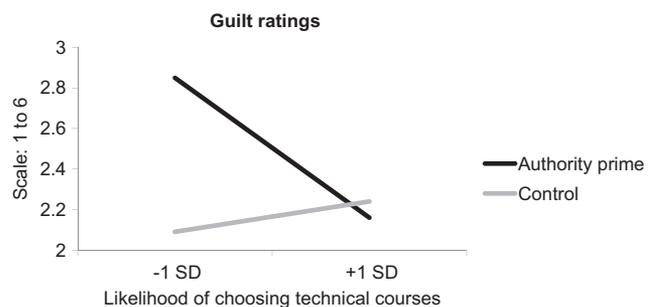


Figure 8. Guilt as a function of likelihood of choosing technical courses and priming condition. SD = standard deviation.

values, attitudes, personality traits, and preferences as mechanisms for cultural variation in psychological and behavioral tendencies (e.g., Hofstede, 1980; Oyserman, Coon, & Kimmelmeier, 2002; Triandis, 1989, 1996). However, recent developments in cultural psychology consider more dynamic mechanisms, such as construct activation (Briley, Morris, & Simonson, 2000; Hong et al., 2000; Kashima, 2008; Weber & Morris, 2010), perceptions of social norms (Zou et al., 2009), situationally appropriate cultural tasks (Kitayama, Park, Sevincer, Karasawa, & Uskul, 2009), and the structure of everyday situations (Kashima & Kashima, 1998; Kitayama, Markus, Matsumoto, & Norasakkunkit; Savani, Markus, Naidu, Kumar, & Berlia, 2010; Savani, Morris, Naidu, Kumar, & Berlia, 2011; Yamagishi, Hashimoto, & Schug, 2008; see Markus & Hamedani, 2007, for a review of these different mechanisms). We explored the concept of automatically activated goals as another possible mechanism for cultural differences in decision making. Although we did not find support for the hypothesized goal mechanism in the present studies, there are likely to be many cultural differences that are derived from basic automatic processes (for a discussion, see Adams & Markus, 2004).

Although social norms have a long history in social psychology (Kahneman & Miller, 1986), they have attracted little attention as mechanisms for cultural variation in decision making (for exceptions, see Cialdini et al., 1999; Zou et al., 2009). Although researchers might often infer that people in different cultural contexts make different choices because they hold different internalized values, attitudes, preferences, and goals, our research shows that in some circumstances, cultural variation in decision making could be better explained by the perceived external norms that are activated in different interpersonal situations. For example, Zou et al. (2009) found that cultural differences in compliance, internal versus external causal attribution, and additive versus subtractive counterfactuals were as well explained by participants' perceptions of the cultural consensus as by their personal views. A more comprehensive attention to both internal and external mechanisms for cultural differences is likely to enrich the field.

Our research is related to Yamagishi and colleagues' (e.g., Yamagishi et al., 2008) theorizing that many cultural differences are caused by anticipated or imagined social sanctions. However, we find that Indians are more likely than Americans to accommodate even when there is little or no possibility of social sanctioning. Instead, we believe that many Indians tend to conform to the norm of deferring to salient authorities' expectations not just because they want to avoid social sanctions but also because they believe that bowing to legitimate social pressures is the "right" way of being a person (Derné, 1992).

Our research highlights the context-sensitive nature of cultural differences (Miller, 2002, 2003; Miller et al., 1990). For instance, instead of finding that Indians are overall more accommodative to others than Americans are, we found that Indians were accommodative to authority figures but not to peers and that they accommodate in their choices but not in their preferences. We were able to document this contextual variability by sampling different interpersonal relationships and dependent measures. If we had sampled a single relationship or a single dependent measure, we would not have been able to cover this variability.

**Evaluation-choice consistency.** The present research helps explain recent findings that the consistency between people's evaluations and their choices is weaker among Indian participants

than among Americans. For example, Savani, Markus, and Conner (2008, Study 4) found that whereas 86% of American participants chose to keep a pen that they evaluated most positively of five different pens, only 63% of Indian participants did so. The current findings suggest that cultural variation in susceptibility to interpersonal primes might be one potential explanation for Indians' lower preference-choice consistency: If Indians are more likely to be reminded of important others while making choices, and if they respond to the injunctive norms thus activated to some extent, they would be expected to exhibit lower evaluation-choice consistency.

## Limitations

**Limitations of the mechanisms examined.** In the present research, we considered goals and norms as two possible mechanisms for cultural differences in deferential tendencies and examined predictions derived from both of these accounts. Although we did not specifically examine cultural values as a possible mechanism, it is possible that in a number of circumstances, both Indians and Americans might be acting upon a conscious, internalized value to defer to respected authorities and not responding to injunctive norms (e.g., when deciding whether to attend religious services). It is also likely that authorities elicit deferential behaviors by invoking the value of deference in many Indian settings. Future research might examine specific predictions of the values account.

**Limitations of stimulus generalizability.** Although we found effects consistent with the injunctive norms account across two different stimulus tasks—choice among party clothes and choice of professional development courses—it is possible that these domains might be ones in which young Indian adults are particularly unlikely to internalize authorities' expectations as personal goals and instead to view these as externally triggered roles. Future research should examine the generalizability of the findings across a more diverse stimulus set. However, given the importance of the growing consumer market and the growing corporate sector as the engine of economic development in India, our stimulus development is nonetheless relevant for present-day issues in Indian society.

**Limitations of the priming procedure.** The priming procedure in Studies 3–4 primed legitimate authorities (i.e., authorities associated with positivity), as we assumed that Indians would primarily accommodate to authorities that are perceived as legitimate, not to any authorities. However, it is possible that reminders of any authority, not just legitimate authority, activate the deference norm for Indians. Future research might test whether neutral reminders of authority figures would have similar effects.

**Limitations of the participant pool.** In a similar vein, our use of largely middle-class college students in metropolitan Indian cities necessarily limits the generalizability of the findings. Perhaps Indians from more rural settings or from other less advantaged socioeconomic backgrounds might be more likely to value deference and to internalize authorities' expectations as personal goals. Although we have some generalizability by sampling Indian participants from two different cities with very different regional cultures and languages, and also from two very different colleges (an arts and sciences college and an engineering college), future research should specifically examine the generalizability of the findings beyond our limited participant pools.

## Future Directions

Past research has argued that the concept of the person in Indian culture is specified in terms of concrete, context-specific behaviors, rather than in terms of stable internal attributes (Shweder & Bourne, 1982). If so, the deference phenomenon that we have documented might involve little strain or dissonance for Indians if they do not feel a pressure to act according to their internal attitudes. As Derné (1992, p. 274) suggests, "But because, for Hindu men, being guided by social pressures is what is essential, continuity between inner desires and convictions and outer actions is not an essential element for an authentic self." Further research can test whether accommodation to interpersonal expectations results in less cognitive dissonance for Indians than for Americans.

Although deference to authorities' expectations in Indian settings might be beneficial in many situations, it might be detrimental in some cases. Our research suggests some strategies to manipulate deference in Indian settings. Consider an employer who decides that he or she wants greater active participation from junior employees in the decision-making process. If deference arises from introjected goals, the employer would have to change employees' behaviors by selecting different kinds of employees or socializing new employees to adopt the goal of being independent and outspoken. In contrast, if deference arises from injunctive norms, the employer might change employees' behaviors through transforming the prevailing injunctive norms in the workplace, such as by instructing managers and supervisors to model independent behavior and to reward such behaviors by subordinates, and by encoding this principle in organizational mission statements, institutionalizing it in performance review processes, and so on. It is likely that changing injunctive norms would be easier than changing employees' introjected goals. Further research might test these ideas using interventions in the workplace.

## Conclusion

Being a competent member of a cultural context requires one to act according to certain expectations that are common in the cultural context. Whereas researchers have typically assumed that cultural expectations must be either internalized or enforced for them to be reproduced in the long run, the present research suggests that people might accommodate to cultural mandates without internalization and without coercion if the cultural environment provides plentiful reminders of these expectations. In this manner, cultural patterns are collectively held in place by the sociocultural and interpersonal environments.

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## Appendix

### Choice/Evaluations Stimuli Used in Studies 2–5

Social courses	Technical courses
How to make new friends at work	Research methods for innovation
How to build a social network	Statistical techniques for software modeling
Learning teamwork through games	Mathematical modeling of software life cycle
Practicing group discussions with movies	Probabilistic analysis of debugging
How to communicate with the opposite sex	Decision analysis of software projects
Learning relaxation techniques	Risk management for software industry
How to take short breaks at work	Economic and investment analysis of new products
How to enjoy yourself at work	Designing experiments for optimal software design
How to make boring tasks interesting	Analyzing strategies used by competitors
Planning social events for the office	Writing detailed project reports

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