

# Let Your Preference Be Your Guide? Preferences and Choices Are More Tightly Linked for North Americans Than for Indians

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Using experimental paradigms from economics and social psychology, the authors examined the cross-cultural applicability of 3 widely held assumptions about preference and choice: People (a) recruit or construct preferences to make choices; (b) choose according to their preferences; and (c) are motivated to express their preferences in their choices. In 6 studies, they compared how middle-class North American and Indian participants choose among consumer products. Participants in both contexts construct nonrandom preferences at similar speeds. Those in Indian contexts, however, are slower to make choices, less likely to choose according to their personal preferences, and less motivated to express their preferences in their choices. The authors infer that the strong link between preferences and choices observed among North Americans is not a universal feature of human nature. Instead, this link reflects the *disjoint* model of agency, which prescribes that people should choose freely on the basis of their preferences. In contrast, Indian contexts reflect and promote a *conjoint* model of agency, according to which agency is responsive to the desires and expectations of important others and may require restraining one's preferences.

*Keywords:* preference, choice, agency, culture, India

Psychologists and economists assume the desire and ability to make choices to be a defining feature of human agency. In middle-class North American contexts, people greatly value choice and want to have choices in virtually every domain of life, from what to eat for breakfast to what heroic measures to use at the end of life. Choice is a psychologically powerful act; in the course of choosing, people simultaneously express their personal preferences and convey a sense of control or agency in the situation.

But does everyone, everywhere agree about the meaning and function of choice? Does everyone base choices on preferences? Is every person always motivated to express his or her preferences? And more broadly, can social scientists assume that the relationships between preference, choice, and agency are similar in all contexts?

In six studies, we use a variety of experimental paradigms to examine these questions in middle-class Indian and North American cultural contexts,<sup>1</sup> building upon previous research comparing choice in North American and East Asian contexts (e.g., Heine & Lehman, 1997; Hoshino-Browne et al., 2005; Iyengar & Lepper, 1999; Kim & Drolet, 2003; Kim & Markus, 1999; Kitayama, Snibbe, Markus, & Suzuki, 2004). We extend this body of research in two ways: We include Indian contexts, and we focus explicitly on the relationship between preferences and choices. Although choice is extensively practiced and valued in South Asian contexts (Kamdar, 2007), choice is neither as elaborated in public discourse nor as salient an aspect of everyday life. As a result, choosing according to one's personal preferences may not be as important to the experience of agency for Indians as it is for North Americans (e.g., Markus & Kitayama, 1991, 2003; Miller, 2003).

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<sup>1</sup> When we refer to Indians or North Americans, we refer to people who are engaging in contexts characterized by particular ideas, practices, situations, and social structures (Adams & Markus, 2004; Markus & Hamedani, 2007). In the interconnected worlds of the cosmopolitan middle-class, Indians can engage in North American contexts and North Americans engage in Indian contexts, although to varying degrees and in different ways. People participate in multiple contexts that prescribe multiple ways of being. Along with country or region, people are shaped by many contexts, including ethnicity, race, social class, gender, religion, language, cohort, and so on.

## Preferences and Choices

Although researchers often use the terms preference and choice interchangeably, the terms refer to distinct constructs. A preference is a latent construct, and it refers to a person's subjective evaluation of a stimulus on the dimension of valence (Zajonc, 1980). In contrast, a choice is not a latent construct but an action in the world; it is usually defined as an intentional selection among multiple alternatives. Researchers often assume that preferences are the basis for choice, but in the current research, we empirically test this unexamined assumption.

### *Choice From a Psychological Perspective*

North American cultural contexts are saturated with ideas and practices promoting choice, and with many requirements and opportunities to choose (Schwartz, 2000, 2004). For example, recent counts find over 300 retirement plans in certain workplaces, 285 types of cookies in supermarkets, and 80 different painkillers in pharmacies (Iyengar & Lepper, 2000; Schwartz, 2004). An extensive psychological literature on choice demonstrates that people have preferences and want to express their preferences through their choices. Those who choose, even among trivial and illusory options, are more intrinsically motivated, happier, and healthier than those who do not get to choose (e.g., Cordova & Lepper, 1996; Langer & Rodin, 1976; Zuckerman, Porac, Lathin, Smith, & Deci, 1978). Choice allows for, reflects, and fosters self-expression and control, values that are foundational both in North American society and in the field of psychology (Bellah, Madsen, Sullivan, Swidler, & Tipton, 1985; Weber, 1958).

Recent research shows, however, that choice might function differently in some contexts and under some circumstances. In contrast to middle-class European Americans, working-class European Americans do not rank CDs more favorably after choosing them and do not like pens that they chose themselves more than pens chosen by an experimenter (Snibbe & Markus, 2005). Still other studies reveal that too many irrelevant choices or choices among too many options can have detrimental effects (Iyengar & Lepper, 2000; Vohs et al., 2007). Giving people more investment options, for example, makes them less likely to choose one at all (Sethi-Iyengar, Huberman, & Jiang, 2004).

### *Choice From an Economic Perspective*

Economists and decision theorists have also formulated many theories about choice (e.g., Savage, 1954; Tversky & Kahneman, 1981; Von Neumann & Morgenstern, 1944; see Lichtenstein & Slovic, 2006). Although economists assume that people choose according to preexisting, stable preferences (Samuelson, 1937), decision theorists assume that people construct preferences for the available alternatives and then choose according to their constructed preferences (e.g., Bettman, Luce, & Payne, 1998). Despite their disagreement, both groups agree that people must have some preferences to make systematic choices; if people did not have preferences, their choices would be random. When people have difficulty making choices, such as when choosing among many alternatives (Iyengar & Lepper, 2000) or among highly attractive options (Tversky & Shafir, 1992), researchers often assume that they had difficulty constructing coherent preferences.

## Models of Agency

Integrating ideas from psychology, decision theory, and economics, we identify three core assumptions about preference and choice: People (a) recruit or construct preferences to make choices, (b) choose according to their personal preferences, and (c) are motivated to express their preferences in their choices. Although many researchers claim that these assumptions follow from basic properties of the human mind, sociocultural psychologists suggest that these assumptions apply only in particular cultural contexts with particular models of agency.

Models of agency are implicit frameworks of ideas and practices about "how to be a good person" that guide action; they reflect descriptive, prescriptive, and normative understandings of how and why people act (Kitayama & Uchida, 2005; Markus & Kitayama, 2003; Markus, Uchida, Omeregic, Townsend, & Kitayama, 2006; Miller, 2003; Morris, Menon, & Ames, 2001; Snibbe & Markus, 2005; Stephens, Markus, & Townsend, 2007). Cultural models of agency do not exist exclusively in people's minds but are also realized in the form of their social and material worlds, in institutions, in practices, in products, and in the situations that people typically encounter in their everyday lives (Atran, Medin, & Ross, 2005; Heine, Lehman, Markus, & Kitayama, 1999; Kitayama, Markus, Matsumoto, & Norasakkunkit, 1997; Morling, Kitayama, & Miyamoto, 2002; Shweder, 1990). In a cycle of mutual constitution, as people engage with these models in different ways, they reproduce the models and perpetuate the very cultural contexts—the ideas, practices, situations, and institutions—that gave rise to those models (Adams & Markus, 2004; Cohen, 2001; Cohen, Hoshino-Browne, & Leung, 2007; Fiske, Kitayama, Markus, & Nisbett, 1998). Because different cultural contexts afford and maintain qualitatively different models of agency, they afford diverse modes of being and acting (Adams, 2005; Kitayama & Cohen, 2007; Nisbett, Peng, Choi, & Norenzayan, 2001).<sup>2</sup>

### *The Disjoint Model*

One particular model of agency, the *disjoint* model, is widely distributed in North American contexts (Markus & Kitayama, 2003) and derives from ideological and philosophical traditions that have been pervasive in North American contexts for centuries (Bellah et al., 1985; Weber, 1958). The disjoint model of agency prescribes that "actions are freely chosen, contingent on one's own preferences, goals, intentions, motives" and defines good actions as those that are "independent from others; follow from the expression of individual preferences, intentions, and goals" (Markus & Kitayama, 2003, p. 7). The exercise of free choice and the expression of preference are defining features of the disjoint model

<sup>2</sup> We do not conceptualize cultural models of agency as *latent individual difference constructs* (Kitayama, 2002; cf. Brewer & Chen, 2007; Oyserman, Coon, & Kimmelmeier, 2002), although they are certainly manifested as individual differences in behavior and in responses to psychological measures (see Borsboom, Mellenbergh, & van Heerden, 2003, 2004; Cervone, 2004, 2005). Instead, cultural models of agency are *networks of social representations* (Moscovici, 2001) that shape the interpretive processes by which people construct, produce, and organize their manifest behavior and responses (Bruner, 1990; Shweder, 1990).

of agency, and agency can be inferred from the exercise of choice and the expression of preferences.

The disjoint model underpins the three economic and psychological assumptions outlined above. Because the fields of psychology and economics both originated in European and North American cultural contexts, it is not surprising that they incorporate the cultural models and frameworks that are widely pervasive in those contexts (Heine & Norenzayan, 2006; Shweder, 2003). In the present studies, we ask whether the assumptions identified above hold in contexts where the disjoint model is not as widely distributed—where agency is constructed differently.

### *The Conjoint Model*

The model of agency prevalent in Indian cultural contexts is likely to be a conjoint model, according to which “actions are responsive to obligations and expectations of others, roles, and situations; preferences, goals, and intentions are interpersonally anchored” (Markus & Kitayama, 2003, p. 7). The conjoint model does not prescribe that people should choose according to their preferences or that they should infer agency from the exercise of free choice or from the expression of preferences.

There are multiple reasons to predict that Indian and North American choosers do not experience choice in the same way. Studies in both anthropology and psychology find that Indian contexts are less likely to encourage people to act according to their internal attributes and private states, and sometimes even actively discourage them from cultivating preferences (Dumont, 1970; Menon & Shweder, 1998; Miller, 2003; Miller, Bersoff, & Harwood, 1990; O’Flaherty & Derrett, 1978). For example, ancient Indian religions and philosophies often teach detachment from the material world and underscore the link between desire and suffering. According to the ancient text *Chhandogya Upanishad*, “when the mind does not create reactions of prejudice, preference, like, dislike, then the waking consciousness becomes a domain of freedom” (Thakar, 2004, p. 396). While Western philosophical traditions define freedom as the *exercise* of preference, Indian traditions conceptualize freedom as the *absence* of preference.

The work of Miller and colleagues (e.g., Miller & Bersoff, 1992, 1994, 1998) on moral judgment and motivation also suggests that the role of preference in choice might be different in Indian and North American contexts. In different types of social situations, Miller and colleagues found that Indian participants valued interpersonal responsibility over personal choice, whereas North American participants valued personal choice over interpersonal responsibility. For example, Miller and Bersoff (1998) asked participants whether they are just as responsible to help someone they do not like as they are to help someone they do like. American participants felt more responsibility for the people they like, revealing the importance of preference in Americans’ moral judgments. In contrast, Indians felt a moral obligation to help everyone, regardless of their preferences, revealing a more conjoint understanding of agency.

At the same time, many people in India clearly make a lot of choices. Among metropolitan, middle-class Indians, choosing, shopping, and consumerism are now staple activities of everyday life (Kamdar, 2007; Poddar & Yi, 2007). Yet, as documented by an ethnographic study in a middle-class neighborhood of Baroda,

India, many Indians are ambivalent about choice (Van Wessel, 2004). Although participants said that choice and consumption are central to their social lives, they denied consumption’s “legitimacy and real significance for the constitution of their individual selves” (Van Wessel, 2004, p. 93; see also Das, 2003).

### Overview

In the present studies, we examined the cross-cultural applicability of the three assumptions about preference and choice that are pervasive in psychological and economic theory. We tested these assumptions with metropolitan, middle-class students who have many opportunities to choose in their daily lives. We also focused on everyday choices between consumer items. Our conclusions, therefore, can be generalized only to people in similar contexts (not to all Indians or to all North Americans) and to everyday consumer choices (not to all types of choices that are possible).

In Studies 1 and 2, we tested the first assumption that people in middle-class Indian and North American contexts construct nonrandom preferences and make nonrandom choices by asking participants to rate how much they liked different consumer items and to choose among multiple items. We also compared latency, differentiation, and stability of preferences and choices across the two groups. In Studies 3 and 4, we tested the second assumption that people choose according to their preferences by comparing the extent to which preference ratings for various consumer items predicted choices for Indian and North American participants. In Studies 5 and 6, we tested the third assumption that people are motivated to express their personal preferences through their choices by comparing how Indian and North American participants reacted to not getting to choose which items they received.

Because consumer choices are pervasive in metropolitan middle-class Indian and North American contexts, we anticipated that people from both contexts would be able to construct nonrandom preferences and to make nonrandom choices. In contrast, because the disjoint model of agency pervasive in North American contexts elaborates the connection between preference, choice, and agency, whereas the conjoint model pervasive in Indian contexts does not, we anticipated that North American participants would construct their preferences and make their choices faster than would Indian participants, would be more likely to choose according to their preferences, and would be more motivated to express their preferences through their choices more.

### Description of Indian Participants

Our Indian participants were college students in India’s largest city and the country’s financial capital. These students were enrolled in prestigious colleges in Mumbai, came from middle- and upper-class families, and had college-educated parents. The students extensively engage with global consumerist cultures: They watch MTV, see Hollywood movies, listen to American popular music, and use the Internet. A survey of 200 students in Mumbai revealed that they spend approximately 2,500 rupees (about U.S.\$250 in purchasing power parity terms) per month on discretionary expenses, indicating that they have substantial buying power. Because India transitioned from a quasi-socialist economy to a consumer capitalist economy in the mid 1990s, current college students have had a wide array of consumer choices for over a

decade. Like the North American students whom we surveyed, these Indian students commonly select among many alternatives in their everyday lives, in varied domains such as food, clothing, music, movies, nightclubs, leisure activities, accessories, and electronic items. A pilot study confirmed that Indian and North American students practice and value choice in such domains to a similar extent.

### Study 1

Study 1 tested the basic economic and psychological assumption that people ubiquitously and universally construct preferences, which subsequently form the basis for their choice. Research by Miller and Bersoff (1992, 1994, 1998) indicates that although people in Indian contexts have personal preferences, they might not act according to their preferences to the same extent as do people in North American contexts. In their studies, Miller and Bersoff found that people in Indian contexts relinquish personal choice to meet interpersonal expectations and obligations, suggesting that normatively prescribed scripts are a better guide to behavior than personal preferences. Further, as noted earlier, several branches of Indian philosophy and spirituality stress that people should psychologically detach themselves from the material world. If these philosophical principles are widely distributed, even if neither universally nor explicitly endorsed, then people in Indian contexts may be less likely to construct and reflect on the preferences that are necessary for the exercise of free choice.

In the present study, to test the first assumption, we assessed whether Indian and North American participants construct nonrandom preferences. We also compared three measures of preference strength across these contexts: latency, differentiation, and stability of preference ratings (Fazio, 1995). Response time was our primary dependent measure because it assesses either the accessibility of preexisting preferences or the ease of construction of novel preferences. We measured the variance of preference ratings to compare the extent to which people construct differentiated preferences. Finally, we measured the stability of constructed preferences, another indicator of preference strength.

### Hypothesis

Because consumer choice is a pervasive part of everyday life in both contexts, we expected to confirm that metropolitan, middle-class Indian and North American students would construct nonrandom preferences for everyday consumer items. But because the disjoint model of agency emphasizes the elaboration and expression of preferences whereas the conjoint model does not, we further hypothesized that North American participants would express their preferences faster than would Indian participants as well as have more stable and more differentiated preferences for everyday consumer items.

### Method

**Participants.** A total of 92 Indian students and 90 North American students participated in Study 1. Two Indian participants were excluded from the analyses because of computer malfunction, and 2 North American participants were excluded because they were not U.S. citizens. The final sample consisted of 90

Indian participants (46 women and 44 men; mean age, 18.5 years) and 88 North American participants (45 women and 43 men; mean age, 20.6 years). Participants in all studies were recruited at colleges in Mumbai, India and in northern California. North American students received \$7 and Indian students received 100 rupees for participating in the study.<sup>3</sup> There were no gender effects in this and subsequent studies (except where noted).

**Procedure.** Participants were shown images of 72 different items presented one at a time on a computer screen.<sup>4</sup> For each item, participants were asked to rate "how much you like the item" on a scale of 1 (*not at all*) to 4 (*a lot*). After rating all items once, participants were presented with the same items again and asked to rate them for a second time.<sup>5</sup> The order of presentation of the 72 items was randomized separately for the two rounds and for each participant. We recorded participants' preference rating on each trial and their response time to make the rating.

We used items from a wide range of common consumer categories so that we could extend our findings to consumer choice in general. We selected eight items from each of nine categories: chairs, colors, cups, jewelry, tile patterns, plants, shirts, umbrellas, and watches. We took care to select moderately attractive items that were appropriate in both contexts. Color images of items, ranging in size from 150 to 240 pixels, were presented at the center of the screen.

In a pilot study, we asked 30 Indian and 29 North American students to rate how familiar they were with a sample of four items from each category, on a scale of 1 (*not at all*) to 5 (*a lot*). We did not find any cultural differences in familiarity ratings,  $t(58) = 1.54$ , *ns* ( $M = 3.53$  for Indian;  $M = 3.24$  for North American), indicating that we succeeded in selecting objects that were common in the everyday lives of both groups of participants.

All materials were prepared in English, translated from English into Hindi by a Hindi-English bilingual student, and then back-translated from Hindi into English by another bilingual student. Discrepancies in translation were resolved through discussion.

### Results

If participants were making preference ratings randomly, then we would expect nearly zero between-participant agreement. Consequently, if we find nonzero between-participant agreement in preference ratings, the results would imply that participants were not making random ratings. To measure between-participant agreement, we computed Cronbach's alpha by treating stimuli as

<sup>3</sup> At the time of the study, 100 rupees was approximately equal to U.S.\$2.30 in currency exchange terms and \$10 in purchasing power parity terms. Although paying students for participation has been a relatively uncommon practice in India, it has been increasing in the last several years. We have been conducting paid studies at the research sites in Mumbai for a few years, so students are familiar with the procedure of receiving payment for participation.

<sup>4</sup> Indian participants completed the study on PC laptops, and North American participants completed the study on PC desktops. We used comparable hardware and the same software in both contexts.

<sup>5</sup> About two thirds of the participants in both contexts completed a brief questionnaire between the first and second round of ratings. However, the results do not differ if we control for this discrepancy in all the analyses reported herein.

cases and participants as variables. We found high between-participant agreement for both Indian ( $\alpha = .91$ ) and North American ( $\alpha = .93$ ) participants.

To assess latency of preference ratings, we first eliminated response times that were either less than 300 ms or more than three standard deviations above the mean. To reduce skewness, we log-transformed individual response time data before conducting the analyses. Because a factor analysis performed on the mean latency for the nine categories extracted a single factor, we averaged reactions times across all items for each participant. We then compared response time across cultural contexts using an independent-samples *t* test, which did not reveal any significant cultural differences,  $t(176) = 1.73$ , *ns*, contrary to our hypothesis. North American participants took 1,646 ms on average to make a preference rating, whereas Indian participants took 1,752 ms (see Figure 1).

To compare the differentiation of preferences across cultural contexts, we computed the standard deviation of preference ratings for the eight items within each category for each participant. We then averaged the standard deviation across the nine categories for each participant and compared this measure across cultural contexts using an independent-samples *t* test. We found a marginally significant effect,  $t(176) = 1.94$ ,  $p = .055$ ,  $d = 0.31$ , with Indian participants making more differentiated preference ratings than North American participants ( $M = 0.69$  vs.  $M = 0.62$ ), again contrary to our hypothesis.

Finally, we developed a trial-by-trial measure of stability from participants' first and second round ratings by creating a dummy variable that equaled 1 if participants made the same preference rating in both the first and the second rounds and 0 otherwise. We averaged this dummy variable across all trials for each participant and submitted the average measure to a normalizing logit-transform. A *t* test failed to reveal a significant cultural difference,  $t(176) = 1.76$ , *ns*; North American participants made identical preference ratings in the two rounds for 63% of the items, and Indian participants did so for 60% of the items.

## Discussion

As hypothesized, Study 1 confirmed the first assumption in the context of everyday consumer choices by finding that middle-class

Indian and North American students construct nonrandom preferences. However, contrary to our hypothesis, the latency and stability of preference ratings was similar in Indian and North American contexts, and Indian participants had more differentiated preferences than North American participants. Although unexpected, these results seem plausible because constructing preferences is a necessary and ubiquitous task for people in modern middle-class societies, so the process of constructing preferences can become automatic and take similar forms in these particular Indian and North American contexts. The populations that we sampled are reasonably similar in social class, urban residence, relative affluence, education, exposure to international media, and, most important, engagement with the global consumer economy; all of these factors might contribute to the observed pattern of results, and the pattern of results is unlikely to be observed in populations that do not share these important contexts.

## Study 2A

If people in Indian contexts construct nonrandom preferences for consumer items, then the first assumption would predict that they should be able to make nonrandom choices. Similarly, if preferences are the basis for choice, as theories in economics and psychology claim, then Indian and North American participants should be equally fluent in expressing their preferences in choices. In the present study, we question the economic and psychological assumption that free choice automatically follows from preference. Although people in Indian contexts might be able to make nonrandom choices, they might be slower in making choices than North American participants if the conjoint model of agency does not define choice as the mere expression of preference or, in fact, suggests the wisdom of restraining desires and preferences. In contrast, if preferences are the normative basis for choice in North American contexts, then fluency of preference ratings should generalize to fluency of choice.

## Hypothesis

Expecting to confirm the first assumption, we hypothesized that both Indian and North American participants would make nonrandom choices because they construct nonrandom preferences. But anticipating to disconfirm the first assumption's implication that fluency of preference ratings would generalize to fluency of choice, we hypothesized that North American participants would be faster in making choices among consumer products than Indian participants because preferences are the normative basis for choice according to the disjoint model of agency but not according to the conjoint model.

## Method

**Participants.** A total of 90 Indian students and 89 North American students participated in Study 2A. Two North American participants were excluded from the analyses because they were not U.S. citizens, and another North American participant was excluded because of computer malfunction. The final sample consisted of 90 Indian participants (46 women and 44 men; mean age, 18.5 years) and 86 North American participants (45 women and 41 men; mean age, 20.0 years). North American students received \$7

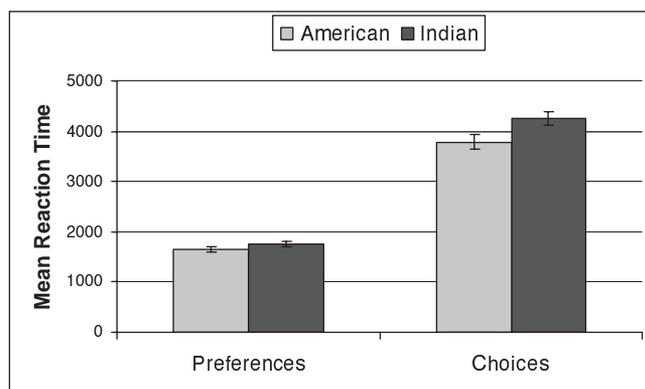


Figure 1. Mean response times (in milliseconds) in Studies 1 and 2. Error bars represent 95% confidence interval of the mean.

and Indian students received 100 rupees for participating in the study.

*Procedure.* Participants were presented with 36 groups of four images each displayed simultaneously on a computer screen. The images were a superset of those used in Study 1. For each trial, participants were instructed to “choose the item that you like the most.” The order of presentation of the 36 sets of stimuli was randomized for each participant. We recorded participants’ choice on each trial and their response time to make the choice. There were three trials from each of 12 categories: chairs, colors, cups, jewelry, letters, tile patterns, pens, plants, shirts, umbrellas, vegetables, and watches. We grouped items to construct homogenous choice sets such that items in each group were similar on price, quality, and availability (e.g., four cotton buttoned shirts with different designs).

## Results

We first tested whether Indian and North American participants were randomly choosing one of the four items in each trial. If so, then the proportion of participants choosing each item should be approximately 25%. To test this possibility, we conducted a univariate chi-square test, separately for each of the 36 trials, testing whether participants were randomly choosing among the four items. We conducted these analyses separately for Indian and North American participants. Because the chi-square distribution is additive, we summed the chi-square values across all 36 trials. The results indicated that the distribution of choices across the four options was far from random both for Indian participants,  $\chi^2(108) = 951, p < .0001$ , and for North American participants,  $\chi^2(108) = 748, p < .0001$ . The high degree of interparticipant agreement indicates that participants in both contexts were drawing on culturally shared affective and cognitive evaluations to make their choices, as they did for making preference ratings in Study 1.

To assess latency of choices, we first eliminated response times that were either less than 300 ms or more than three standard deviations above the mean. To reduce skewness, we log-transformed individual response times before conducting the analyses. A factor analysis performed on the mean response times for each category extracted a single factor, so we averaged response times across categories for each participant. Upon submitting the average response time to an independent-samples *t* test, we found a significant cultural difference,  $t(174) = 2.44, p < .02, d = .37$ . As shown in Figure 1, North American participants took 3,787 ms on average to make a choice, whereas Indian participants took 4,253 ms.

## Discussion

Study 2A supported our hypothesis that people in metropolitan middle-class Indian and North American contexts would make nonrandom choices among consumer products because they construct nonrandom preferences. Study 2A also found that, as hypothesized, North American participants were faster in making choices than Indian participants, thus challenging the first assumption’s implication that fluency of preference ratings would generalize to fluency of choice. Although Study 1 found that Indian participants were just as fluent as North American participants in

constructing preferences, choosing among multiple items was a relatively more complex process for Indian participants. We might not have observed cultural differences in response time for preference ratings because there are no right or wrong preferences among different shirts, cups, and umbrellas, which largely differ on aesthetic dimensions rather than on utilitarian dimensions. Different people may possess different preferences, but as long as they do not act on their preferences in their choices, the preference does not have any consequences. In contrast, because choices have material outcomes, the conjoint model of agency might restrain people from immediately acting on their preferences, whereas the disjoint model of agency would in fact encourage them to do so.<sup>6</sup> These results suggest that a choice need not always be the immediate expression of a preference but can take on different meanings in different contexts.

## Study 2B

The results of Study 2A are subject to alternate interpretations, most importantly that Indian participants might be generally slow in responding on a computer when the task involves a judgment among multiple items. To address this possibility, Study 2B improved on Study 2A by providing within-participant and within-culture controls, including an individual difference measure of response time for all participants and a condition in which Indian participants would be expected to exhibit faster latency compared with a choice condition similar that that of Study 2A. These controls allow us to test the hypothesis that the cultural difference in response time observed in Study 2A is not characteristic of simply any judgment among multiple items.

## Hypothesis

We hypothesized that when the task involved a judgment that was unrelated to personal preferences and choices, Indian participants would take less time to make a response than they would when they are making a personal choice, even after controlling for individual differences in response time.

## Method

*Participants.* A total of 59 Indian students (33 women and 26 men; mean age, 19.0 years) participated in this study. Participants received 50 rupees for their time.

*Procedure.* Participants were randomly assigned to one of two conditions. In the choice condition (the same condition as in Study 2A), participants were shown four shoes displayed simultaneously on the screen for 20 trials and were given the following instructions: “Suppose you can get one of the four pairs of shoes for yourself. Which pair will you choose in that case?” In the non-choice judgment condition, participants were shown identical stimuli but this time asked to make a judgment unrelated to preference and choice: “Select the pair of shoes that does not have any shoelaces” (there was only one such pair in each trial). We chose

<sup>6</sup> Although we used hypothetical choices on a computer in our study, which are by definition inconsequential, the present method works against our hypothesis. We would expect any cultural differences to magnify with more consequential choices (cf. Studies 3 and 4).

attractive unisex sport shoes as our stimuli,  $225 \times 225$  pixels in size, and instructed all participants to respond as fast as possible.

After the shoes task, all participants were given a new task to measure individual differences in reaction time. For 20 trials, participants were shown four single-digit numbers on the screen, of which one number was always the number 9. Participants had to indicate the position of number 9 on the screen by pressing one of four number keys, as in the previous shoes task. Participants were again instructed to respond as fast as possible.

### Results

To assess latency, we first eliminated responses times that were more than one and a half standard deviations beyond the mean, separately for the shoes and numbers tasks, which eliminated 5% of the responses for the shoes task and 3.5% of the responses for the individual difference measure. We then log-transformed individual response times before averaging them across participants. We submitted mean latency in the shoes task to an analysis of covariance with condition as a fixed variable and the individual difference in response time measure as a covariate. The main effect of condition was significant,  $F(1, 56) = 6.43, p < .02, d = .69$ , as was the individual difference measure,  $F(1, 56) = 9.94, p < .005$ ,  $\text{std } \beta = .37$ ; participants were substantially faster in the nonchoice judgment condition ( $M = 2,726$  ms) than in the choice condition ( $M = 3,763$  ms).

### Discussion

Study 2B provided within-participant and within-culture controls to ensure that Indian participants' relative slowness at making choices among consumer items was not due to a general slowness at tasks involving multiple items. When asked to make a judgment that is unrelated to choices and preferences, Indian participants were more than 1,000 ms faster than when choosing an item for themselves. By establishing that we can manipulate choice latency, Study 2B allows us to more confidently conclude that the relatively longer response time of Indian participants in Study 2A is not an artifact of a difficulty or hesitation in making any type of judgment among multiple items.

Whereas Study 1 found that Indian and North American participants were equally fast at making preference ratings for various consumer items, Study 2 found that Indian participants were slower at making choices. These results suggest that the tight coupling between preferences and choices, as formulated by Assumption 2, may be stronger in middle-class North American contexts than in middle-class Indian contexts, at least in the domain of everyday consumer choices.

### Study 3

In the present study, we assessed the second assumption that people choose according to their preferences by operationalizing preferences and choices independently and comparing the extent to which preference ratings for various consumer products predicted choices in these two urban middle-class contexts. In everyday life, various factors constrain the choices that people can make. If constraints or costs exist that restrict the choice set (e.g., price, availability, social disapproval), then the economics assumption is

that people would choose according to their preference structure for the readily available alternatives. We argue that even among alternatives that are equally available and accessible, people might not always choose according to their preferences.

Although the topic of preference–choice coherence has been extensively studied in decision making under the topic of preference reversals (e.g., Hsee, Loewenstein, Blount, & Bazerman, 1999; Kahneman & Tversky, 1979; Nowlis & Simonson, 1997; Tversky, Sattath, & Slovic, 1988; see Lichtenstein & Slovic, 2006), our assumptions and methods differ significantly from theirs. Decision making researchers assume that different tasks such as preference rating and choice are different methods to reveal constructed preferences (Tversky et al., 1988), and they demonstrate reversals across participants by asking one group to engage in a preference rating task and another group to engage in a choice task (e.g., Item X was rated the best by Group A but Item Y was chosen most often by Group B). Similar reversals have also been obtained using pricing and matching tasks (Lichtenstein & Slovic, 2006). Decision making researchers claim that people construct different latent preferences given different elicitation methods, whereas the elicitation method itself reveals those constructed yet latent preferences.

In our research, we reject the assumption that all elicitation methods measure latent preferences but instead argue that choices and preferences can be measured independently. Following Zajonc (1980), we assume that questions such as “How much do I like this item?” are valid measures of a person's preference, independent of the person's subsequent choices. Further, we do not assume that a person's choices are indicators of their latent preferences. Consequently, we ask participants to engage in both rating and choice tasks and assess preference–choice coherence within participants, not across different groups of participants.

### Hypothesis

Operationalizing preferences and choices independently within the same individual, we hypothesized that preference ratings would predict choices to a greater extent for North American participants than for Indian participants, because the disjoint model of agency prescribes a tight link between preferences and choices whereas the conjoint model does not. In the domain of everyday consumer choices, our hypothesis questions the second assumption that people in different contexts are equally likely to choose according to their preferences.

### Method

**Participants.** A total of 30 North American students (15 women and 15 men; mean age, 19.3 years) and 30 Indian students (15 women and 15 men; mean age, 18.3 years) participated in the study. North American participants received \$10 and Indian participants received 100 rupees.

**Preference round.** In the first round, as in Study 1, participants were presented with images of one item at a time on the computer screen, and for each item, they were instructed to “rate the extent to which you like the item” on a scale ranging from 1 (*not at all*) to 4 (*a lot*). Sixty-four different items were presented in a random order. The stimuli included eight items from each of eight categories, which were a subset of the items used in Studies 1 and 2A.

As in Study 2A, we took care to construct homogeneous choice sets with similar items from the same category. The items in each choice set were therefore similarly priced in the marketplace and equally common, familiar, and available.

**Choice round.** In the subsequent choice round, we combined the stimuli from the preference round into groups of four. We divided the eight items from each category into two groups of four items each, yielding a total of 16 choice sets. For each choice set, participants were instructed as follows: "Suppose you can get one of the four items for yourself. Which item will you choose in that case?" The order of presentation of the 16 choice sets was randomized for each participant.

## Results

We computed the extent to which participants chose according to their preferences using two different measures. Of the four items in each choice set, we determined the item that was most highly rated in the preference round. For each choice trial of the choice round, we coded a dummy variable that equaled 1 if participants chose the most highly rated item and 0 otherwise. We averaged the dummy variable across all 16 choice trials for each participant to obtain a measure of preference–choice coherence. We then submitted this measure to a normalizing logit-transform and conducted an independent-samples *t* test, which revealed a significant cultural difference,  $t(58) = 3.37, p = .001, d = .90$ . North American participants chose their most highly rated item in 73% of the trials, whereas Indian participants did so in 63% of the trials (see Figure 2).

We also computed an alternate, more precise measure of preference–choice coherence. To control for heterogeneity in mean preference ratings across choice sets, we converted the raw preference ratings within each choice set into ranks, with ranks averaged among ties. For each trial of the choice round, we calculated the rank of the chosen item, with smaller ranks indicating more preferred items. We averaged the rank of the chosen item across all 16 choice trials for each participant and conducted a *t* test, which again revealed a significant cultural difference,  $t(58) = 2.69, p < .01, d = .70$ . On average, North American participants chose an item with a higher rank than Indian participants ( $M = 2.19$  vs.  $M = 2.36$ ).

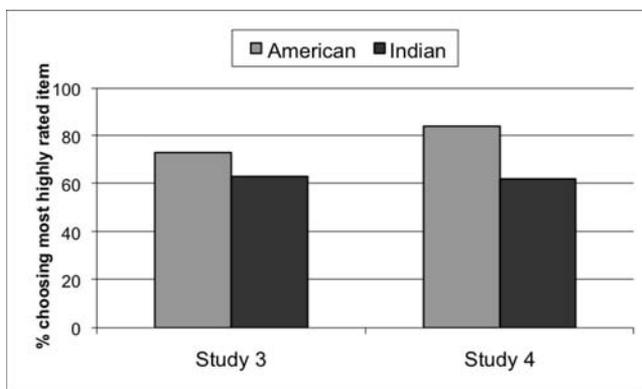


Figure 2. Percentage of trials in which participants chose their most highly rated item in Studies 3 and 4.

## Discussion

Study 3 confirmed our central hypothesis that people in middle-class North American contexts choose what they like more often than people in middle-class Indian contexts, thus challenging the second assumption that people from different cultural contexts are equally likely to choose according to their preferences in the domain of everyday consumer choices. We computed the extent to which preference ratings predict choices using two complementary measures; both measures indicated that the link between preferences and choices is stronger in North American contexts than in Indian contexts. The experiment was a conservative test of our hypothesis because participants stated concrete preferences in the first round, so those preferences would be highly available when they were making a choice in the second round. However, the cultural difference can be explained by the argument that preferences were measured with greater error for Indian participants than for North American participants. It is also difficult to generalize from choice among hypothetical consumer items. To address these issues, we conducted another study using choices among actual items.

## Study 4

Study 4 improved on Study 3 in two important respects: (a) Instead of asking participants to make hypothetical choices among many assorted items, we asked them to make an ecologically valid choice among five actual pens, and (b) instead of measuring participants' preferences by a single composite preference rating, we asked participants to rate items on six dimensions, to ensure that our preference measure is internally reliable. We used pens instead of a more important item because items such as pens have a similar meaning and value across different cultural contexts (Kim & Markus, 1999; Snibbe & Markus, 2005; Stephens et al., 2007). Further, for items like pens, we minimize extraneous influences on choice because other people are less likely to evaluate a person's choice of pens, and pens do not differ much in practicality. Because the choice has material consequences (the participant gets an actual pen), any perceived demand effects are likely to be minimal. For all of these reasons, the experiment is a relatively conservative test of our hypothesis.

## Hypothesis

Expecting to replicate the findings of Study 3, we hypothesized that people in middle-class North American contexts would choose their most highly rated pen more often than people in Indian contexts, because the disjoint model of agency prescribes a tight link between preferences and choices whereas the conjoint model does not.

## Method

**Participants.** A total of 60 North American students and 60 Indian students participated in the study. Eleven North American participants were excluded from the analyses because they were not U.S. citizens. The final sample consisted of 49 North American participants (18 women and 31 men; mean age, 18.5 years) and 60 Indian participants (30 women and 30 men; mean age, 17.7 years). All participants received a free pen for participating in the study.

**Procedure.** Participants were recruited on their respective college campuses and were invited to participate in a research study in exchange for a new pen. Participants evaluated each of five attractive black gel pens on the following items, using a scale ranging from 1 (*not at all*) to 5 (*a lot*): (a) “Overall, how much do you like the pen?” (b) “How much do you like the look of the pen?” (c) “How much do you like the design of the pen?” (d) “How much do you like the way the pen writes?” (e) “How much do you like the pen’s ink?” and (f) “How much do you like the color of the pen?”

Of the 120 possible orders for rating the five pens, we randomly selected 60 orders. Each of the 60 Indian and North American participants received a different random order, and the same 60 orders were used in both cultural contexts. Immediately after participants rated the five pens, they were asked to choose one pen for themselves as a gift for participating in the study. The experimenter did not allow participants to refer back to their preference ratings before making the choice. Once participants chose a pen, the experimenter noted the chosen pen on the questionnaire and asked participants to complete a demographic questionnaire.

## Results

Because the six pen evaluation items had good internal reliability for each of the five pens (mean  $\alpha = .83$  for North American; mean  $\alpha = .84$  for Indian), we averaged the ratings for each pen. To assess preference–choice coherence, we created a dummy variable for each participant that equaled 1 if the participant chose their most highly rated pen and 0 otherwise. A chi-square test revealed that the proportion of participants who chose their most liked pen differed by cultural context,  $\chi^2(1, N = 109) = 6.42, p < .02, \phi = .24$ ; 84% of North American participants but only 62% of Indian participants chose their most highly rated pen (see Figure 2).<sup>7</sup>

We also compared the relative rating of the chosen pen among the five pens. For each participant, we computed the rank of the rating for the chosen pen, with smaller ranks indicating more preferred pens. Upon submitting this measure to an independent-samples *t* test, we found the predicted cultural difference,  $t(107) = 2.43, p < .02, d = .48$ ; the average rank of the chosen pen was higher for North American participants than for Indian participants ( $M = 1.27$  vs.  $M = 1.72$ ).

Finally, we tested the possibility that the first item assessing participants’ overall liking for the pen might be a better predictor of choice than a composite of the six items. We found that 86% of North American participants but 63% of Indian participants chose a pen that they rated the highest on the overall measure,  $\chi^2(1, N = 109) = 6.92, p < .01, \phi = .25$ , paralleling the above results.

We conducted additional analyses to test whether Indian participants were less likely to choose according to their preferences because their preferences were not differentiated across the five pens. To measure preference differentiation, we computed the standard deviation of mean preference ratings for the five pens for each participant. Contrary to the above explanation, Indian participants had significantly more differentiated preferences than North American participants,  $t(107) = 2.23, p < .03, d = .43$ , as found in Study 1.

## Discussion

Replicating the findings of Study 3 using an ecologically valid task with choice among actual items, Study 4 found a larger cultural difference than did Study 3. Factors other than the measured preferences seem to account for twice the proportion of choices for Indian participants than for North American participants, suggesting that there is a substantial cross-cultural variation in the preference–choice link that needs to be explained. Because the six-item pen evaluation measure had high internal consistency in both cultural contexts, it is unlikely that Indian participants’ preferences were measured with greater error than those of North American participants. The results further challenge the second assumption that people in different cultural contexts are equally likely to choose consumer products according to their preferences.<sup>8</sup>

## Study 5

Studies 5 and 6 investigated the third assumption that people are motivated to express their preferences in their choices. The third assumption about people’s motivation to make free choices is especially important in social psychology and has been extensively studied in the field, particularly in the research paradigms of reactance and self-determination.

In Study 5, we used a classic behavioral method from reactance theory (Brehm, 1966) in which some participants are not allowed to choose for themselves and, consequently, not allowed to express their preferences. Reactance theory claims that because people are

<sup>7</sup> We tested for a main effect of gender and a Culture  $\times$  Gender interaction by conducting a logistic regression and did not find any significant differences.

<sup>8</sup> The results of Study 4 are open to an alternate interpretation. Perhaps Indian participants thought that they did not deserve to receive the most valuable pen from the set for participating in a 10-min study, and if the pen they liked the most was also the pen that they thought was the most valuable, then an effort to avoid the most valued pen would decrease their preference–choice coherence. We conducted an additional study to test for this possibility by asking 102 Indian participants (74 women and 28 men; mean age, 18.1 years) for their perceived value of each pen (“According to your estimate, how much does the pen cost?”) in addition to measuring their liking for the pen using the same six items as in Study 4. Because the six pen evaluation items had good internal reliability (mean  $\alpha = .80$ ), we averaged the ratings for each pen. To control for heterogeneity in preference ratings and perceived pen values across participants, we converted each participants’ average preference ratings and perceived values for the five pens into ordered ranks, with smaller ranks indicating more preferred and more valued pens. To simultaneously test the effect of pen liking and perceived pen value on choice, we conducted a mixed model logistic regression with each pen that each participant rated as the unit of observation and participants as random variables. For each pen, a dummy variable indicating whether the participant chose the pen was the dependent variable, and the participants’ pen liking rank and perceived pen value rank were independent variables. We found that pen liking rank significantly predicted choice ( $\beta = -1.08, z = 7.82, p < .0001$ ), whereas pen value rank did not ( $\beta = .01, ns$ ). The results do not support the hypothesis that Indian participants were less likely than North American participants to choose their most highly rated pen because they were trying to avoid choosing the most valued pen. Finally, we also found that 67% of these Indian participants chose their most highly rated pen, comparable to the proportion of 62% found in Study 4.

motivated to choose according to their preferences, they react strongly when their choice is restrained or revoked. To reassert their freedom, people increase their liking for the chosen item and decrease their liking for unchosen items (Brehm, 1966; Hammock & Brehm, 1966). Reactance theory is rooted in the disjoint model of agency, which assumes that to be a good agent, people want to choose freely, based upon their preferences, goals, or intentions. However, according to the conjoint model of agency, preferences, goals, and intentions should be interpersonally anchored, and being a good agent might sometimes require restraining one's own preferences. From the perspective of the conjoint model, people may not be particularly motivated to choose according to their own preferences and may not experience the lack of choice in certain domains as a threat to their freedom, at least for mundane choices.

In a recent experiment, Snibbe and Markus (2005) found that people engaging in middle-class European American contexts liked pens that they chose more than identical pens that were assigned to them by the experimenter. Assuming that participants' initial choice of a pen after examining the offered array of pens for a few seconds is essentially random, Snibbe and Markus (2005) argued that middle-class European Americans devalue pens assigned by the experimenter because they were not able to exercise free choice. We follow their method in the present study.

### Hypothesis

Because actively expressing preferences in choices is a signature of agency in middle-class North American contexts, we hypothesized that North American participants would like chosen pens more than identical pens that were assigned to them by the experimenter. But because people in middle-class Indian contexts might not be motivated to express their preferences to the same extent, we hypothesized that Indian participants would like both types of pens, chosen and unchosen, to a similar extent. This hypothesis questions the third assumption that people in different contexts are similarly motivated to choose everyday consumer items according to their preferences.

### Method

**Participants.** A total of 70 North American students and 97 Indian students participated in Study 5. Two North American participants were excluded from the analysis because they were not U.S. citizens. The final sample consisted of 68 North American participants (34 women and 34 men; mean age, 22.5 years) and 97 Indian participants (53 women and 44 men; mean age, 17.7 years).<sup>9</sup> North American participants received \$5 and a new pen, whereas Indian participants received a comparable payment of 50 rupees and a new pen.

**Procedure.** Participants were approached individually on or around college campuses and invited to participate in a research study. We tried to ensure that participants in both contexts viewed the experimenters as peers. The experimenter for Indian participants was an Indian man 22–23 years of age, and the experimenters for North American participants were European American men 19–21 years of age. All experimenters seemed to be students at the participants' college and dressed and acted accordingly. The Indian experimenter had grown up in India and had lived in Mumbai, so his language and accent sounded local. At the research sites in

Mumbai, many students asked the experimenter for his major, assuming that he was a student at their own college.<sup>10</sup>

Before approaching participants, the experimenter randomly assigned them to either condition. Participants in the free choice condition were presented with five attractive black gel pens and were asked to choose a pen for themselves; thereafter, they tested the chosen pen on the first page of the questionnaire and completed the pen evaluation measure.

Participants in the usurped choice condition initially chose and tested a pen for themselves, but before they turned the page, the experimenter interrupted them and took away their chosen pen, explaining, "Oh I am sorry, you can't have that pen, it's the last one of its kind that I have. Here, please take this one." The experimenter then gave participants a replacement pen of a different make and model. Participants tested the assigned pen on the first page of the questionnaire and then proceeded to evaluate the pen.

In most cases, usurped choice participants received the same pen that the previous free choice participant had chosen, so that pens were yoked across conditions. Whenever a usurped choice participant chose the same pen as the previous free choice participant, the experimenter randomly chose the replacement pen.

**Pen evaluation.** All participants evaluated their pen on four measures: (a) "Overall, how much do you like the pen?" (b) "How much do you like the design of the pen?" (c) "How much do you like the pen's ink?" and (d) "How well does the pen write?" Indian participants evaluated their pens on a 4-point scale ranging from 1 (*not at all*) to 4 (*a lot*), but as a result of a clerical error, North American participants made their evaluations on a 7-point scale ranging from 1 (*dislike a lot*) to 7 (*like a lot*).

### Results

Because Indian participants evaluated their pens on a 4-point scale while North American participants evaluated their pens on a 7-point scale, the North American responses were scaled to a 1–4 range with increments of half a point. Because the 4-item pen evaluation measure had good internal reliability ( $\alpha = .69$  for Indian;  $\alpha = .77$  for North American), we averaged all items to form the pen evaluation index.

We submitted the pen evaluation index to a 2 (cultural context)  $\times$  2 (condition: free choice vs. usurped choice)  $\times$  2 (gender) analysis of variance, which revealed a significant main effect of condition,  $F(1, 157) = 9.77, p < .005$ ; a main effect of gender,  $F(1, 157) = 5.37, p < .05$ ; and a Cultural Context  $\times$  Condition interaction,  $F(1, 157) = 8.80, p < .005$ . As shown in Figure 3, simple effects *t* tests confirmed that North American participants

<sup>9</sup> Although Indian participants were significantly younger than North American participants,  $F(1, 97) = 52.10, p < .001$ , age did not correlate with the dependent measure of pen liking ( $r = -.02, ns$ ).

<sup>10</sup> In an earlier study using a similar procedure with pens, we asked 53 participants for their status relative to the experimenter. In this sample, 79% of the participants said that they and the experimenter had the same status, 15% said that they had higher status than the experimenter, and 6% said that they had lower status than the experimenter, thus confirming our belief that the experimenter succeeded in appearing as a peer. For this reason, we did not include manipulation checks in Studies 5 and 6 to measure the experimenter's status relative to the participants.

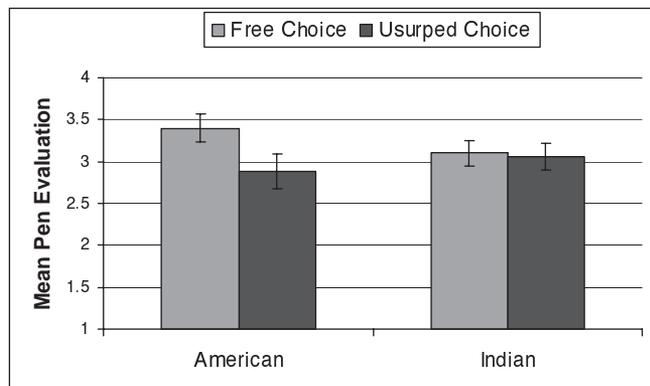


Figure 3. Mean pen evaluations by cultural context and condition in Study 5. Error bars represent 95% confidence interval of the mean.

rated the pens higher in the free choice condition than in the usurped choice condition,  $t(67) = 3.78, p < .001, d = 1.01$ , but Indian participants' pen evaluations did not differ by condition ( $t < 1$ ). The main effect of gender revealed that women liked the pens slightly more than men ( $M = 3.20$  vs.  $M = 3.00$ ); however, gender did not interact with either cultural context or condition.

### Discussion

We replicated the reactance findings of Snibbe and Markus (2005) with middle-class North American participants but not with middle-class Indian participants. Whereas North American participants evaluated chosen pens more positively than pens assigned to them by the experimenter, Indian participants liked pens to the same extent in both conditions. The study suggests that as hypothesized, people in North American contexts are more motivated to choose according to their preferences, to exert control over the environment, and to feel more threatened by the lack of choice, thus challenging the third assumption that people in different contexts are similarly motivated to express their preferences in their choices in the domain of everyday consumer items.

### Study 6

The manipulation involved in Study 5 was a strong manipulation in which the experimenter usurped the participants' choice of pen without providing a satisfying reason. The purpose of Study 6 was to explore the effects of a more simple and subtle manipulation: whereas the no-choice participants in Study 5 had their choices explicitly usurped, the no-choice participants in Study 6 were not offered the opportunity to choose in the first place; their choice was simply preempted, as in Snibbe (2002, Study 3). Whereas the usurped choice study used the reactance paradigm, the current preempted choice study draws upon a self-determination paradigm (e.g., Zuckerman et al., 1978), although both paradigms use similar manipulations. Self-determination studies find that people in middle-class North American contexts perform better at a task when they get to choose the task themselves than when the task is assigned to them by the experimenter. Extending this research from the choice of tasks to the choice of objects, Snibbe (2002) found that people in middle-class North

American contexts like self-chosen items more than other-chosen items.

### Hypothesis

Because people in middle-class Indian and North American contexts might be differentially motivated to express their preferences in their consumer choices, we hypothesized that North American participants would like chosen pens more than pens that were assigned to them by the experimenter, whereas Indian participants would like both types of pens to a similar extent.

### Method

**Participants.** A total of 59 North American students (21 women and 38 men; mean age, 18.2 years) and 47 Indian students (25 women and 22 men; mean age, 18.5 years) participated in Study 6. Participants were randomly assigned to either the free choice condition or the preempted choice condition. All participants received a free pen for participating in the study and Indian participants received an additional 50 rupees for also completing a packet of unrelated questionnaires. Male experimenters conducted the study in the United States and India, as in Study 5.

**Procedure.** Students were approached individually on and around their college campuses and invited to participate in a research study in exchange for a new pen. Once a student agreed to participate, the experimenter displayed five attractive black gel pens and said, "These are the five different pens we are interested in today. All of them write in black ink." Thereafter, participants in the free choice condition were instructed to "please choose a pen for yourself." In the preempted choice condition, the experimenter selected one of the five pens and extended it to the participant, saying, "Here, I choose this pen for you." With a few exceptions, pens were yoked across conditions and across gender, such that each preempted choice participant received the pen that the previous free choice participant of the same gender chose. All participants then responded to the six pen evaluation items used in Study 4 on a scale ranging from 1 (*not at all*) to 5 (*a lot*).

### Results

Because the six-item pen evaluation scale had high internal reliability ( $\alpha = .79$  for Indian;  $\alpha = .82$  for North American), we averaged participants' responses to the six items to form the pen evaluation index. Upon submitting this index to a 2 (cultural context)  $\times$  2 (condition) analysis of variance, we found the predicted Cultural Context  $\times$  Condition interaction,  $F(1, 102) = 5.04, p < .05$ ; no main effects were significant. As shown in Figure 4, simple effects  $t$  tests confirmed that North American participants liked their pens more in the free choice condition than in the preempted choice condition,  $t(58) = 3.11, p < .005, d = .77$ , whereas Indian participants liked their pens equally well in the two conditions ( $t < 1$ ).

### Discussion

Study 6 replicated Study 5 with a more subtle manipulation. As hypothesized, North American participants liked their pens more when they chose their own pen than when they did not get to exercise choice. Indian participants, on the other hand, liked their

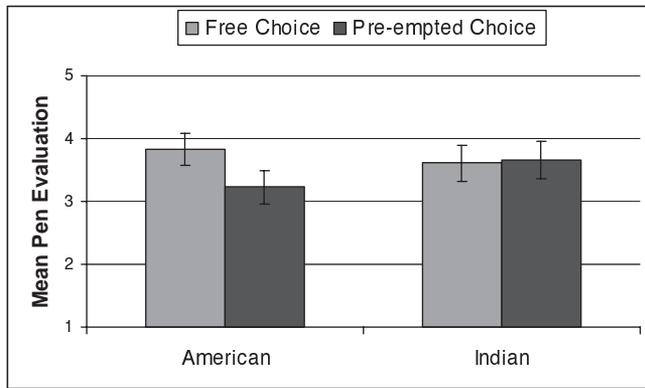


Figure 4. Mean pen evaluations by cultural context and condition in Study 6. Error bars represent 95% confidence interval of the mean.

pens equally well regardless of whether they chose according to their preferences. The results further challenge the third assumption that people in different cultural contexts are equally motivated choose consumer items according to their individual preferences.

## General Discussion

### Summary of Findings

This series of studies began with the observation that choice is a psychologically powerful act. We posed a series of broad questions about whether the meaning and function of choice is a psychological universal: Does choice always reveal a personal preference, and are the relationships among preference, choice, and agency similar in different contexts? In the course of six studies, we systematically tested the generality of three assumptions about preference and choice derived from psychological and economic theory with urban middle-class student populations in India and the United States, in the domain of everyday consumer items. We found some cross-culturally general features of choice but discovered important cultural differences in the preference-choice system. Our findings suggest that the expression of preferences in choice is not as central to agency in urban middle-class Indian contexts as it is in North American contexts and that the link between personal preference and choice is shaped by what it means to be a good agent in a given context.

Studies 1 and 2 confirmed the first assumption that people in middle-class Indian and North American contexts construct non-random preferences and make nonrandom choices in the domain of everyday consumer items. Indicating that people from these urban middle-class contexts can effortlessly construct preferences, we did not find any cultural differences in preference latency for everyday consumer items. Indian participants, however, were slower in making choices, thus challenging the first assumption's implication that fluency of preference ratings for consumer products would generalize to fluency of choice.

Studies 3 and 4 tested the second assumption that people choose according to their preferences. Whereas the disjoint model prescribes that the source of action lies within the person, the conjoint model prescribes that agency derives simultaneously from multiple sources, including the expectations of others, and might require

restraining one's own preferences. Supporting our theorizing, Studies 3 and 4 found that North American participants choose consumer items according to their preferences more often than Indian participants, both for hypothetical items and for actual pens.

Studies 5 and 6 tested the third assumption that people are motivated to express their preferences in their choices using experimental paradigms derived from reactance and self-determination theories (Brehm, 1966; Ryan & Deci, 2000). To assess people's reactions to the availability and nonavailability of choice, we manipulated whether participants received and subsequently evaluated a pen of their own choice or a pen of the experimenter's choice. Replicating previous research, we found that North American participants liked chosen pens more than assigned pens but that Indian participants liked both chosen and assigned pens to the same extent, indicating that people in North American contexts are more motivated to choose according to their preferences than people in Indian contexts.

These studies are a conservative test of our hypotheses of cultural variation in models of agency because we deliberately selected populations that are similar and comparable to each other in many aspects of daily life (e.g., in terms of social class, urban residence, relative affluence, education, exposure to international media, and participation in the global consumer economy) and selected stimuli (everyday consumer items) that are widely available and commonly chosen in both contexts.

### Implications for Theory

The most important finding reported in this article is that although people in middle-class Indian contexts practice choice and can fluently construct preferences, personal preferences for various consumer items predict subsequent choice to a lesser extent for Indian participants than for North American participants, even for choices involving actual material outcomes. Our findings call into question a fundamental assumption in psychology, economics, and decision theory that choices are emergent manifestations of latent preferences (Bettman, Luce, & Payne, 1998; Samuelson, 1937). The assumption needs to be qualified: Choices do not always reveal constructed preferences, and choices reveal personal preferences to different extents in different cultural contexts. Methodologically, our findings suggest that researchers should consider operationalizing preferences and choices independently because the one-to-one mapping between constructed preferences and expressed choice does not hold perfectly even in North American contexts, as Studies 3 and 4 show.

### Future Directions

Given this pattern of results, the next set of studies should establish why there is a consistently weaker association between personal preferences and choices in Indian contexts than in North American contexts. Drawing on findings about cultural variation in choice and also on hypotheses derived from ethnographic and observational studies of Indian contexts, we outline three initial possibilities to be examined. Indian participants might have been less likely to choose according to their preferences in our studies because (a) the choice situation was not social enough, (b) they were more often choosing according to factors other than personal

preferences, and (c) they were restraining their preferences while making choices.

Suggesting that the first possibility outlined above might explain our findings, recent studies comparing choice in North American contexts with choice in East Asian contexts found that choice does not become meaningful for people in East Asian contexts unless other people are invoked (e.g., Hoshino-Browne et al., 2005; Kitayama et al., 2004). These studies find that although Japanese respondents do not exhibit cognitive dissonance in the standard condition, they justify their choices when induced to think about others before making the choice. Reflecting the conjoint understanding of agency, these results suggest that agency in Japanese contexts requires people to reference others and their expectations. Given these findings, perhaps the Indian participants in our studies might have chosen according to their preferences if the choice situations explicitly invoked or involved other people.

To test the possibility that preference ratings might predict choices to a greater extent for Indian participants in a more social context, we made repeated attempts to design situations that varied in how directly and explicitly they invoked other people, using the same basic design as Studies 3 and 4 (Savani & Markus, 2006b). For example, Indian participants rated and chose items (a) after being primed either about themselves or about a generalized other, by circling “I” or “we” in a story (see Brewer & Gardner, 1996); (b) after describing either their own preferences or their friends’ preferences; (c) either alone or while a friend was monitoring their ratings and choices; (d) either alone or in pairs with a friend; and (e) either for themselves while they were alone or for a friend while the friend was watching them. The first three of these studies involved hypothetical choices on a computer, and the last two involved choices among actual pens. The studies used manipulations that ranged from minimal (e.g., circling “I” and “we,” choosing pens in pairs with a friend) to substantial (e.g., choosing while a friend was actively monitoring their choices, choosing a pen for a friend sitting besides them). In all of these studies, preference–choice coherence was statistically indistinguishable between the two conditions, indicating that the relatively asocial nature of Studies 3 and 4 is unlikely to account for the cultural differences observed.

A second and related possibility is that if people in Indian contexts are more sensitive to interpersonal expectations (Miller & Bersoff, 1992; Miller, Bersoff, & Harwood, 1990), they might be more likely to base their choices on factors other than personal preferences, such as the preferences and expectations of other people. Consistent with this hypothesis, Savani and Morris (2007) found that Indian women made significantly different clothing choices when the expectations of their friends and family were invoked than when such expectations were not invoked. Furthermore, if people in Indian contexts do not think that personal preferences in general, whether their own or of other people, are the most appropriate basis for choice, then they might base their choices on other objective criteria; for example, they might choose items that are practical or utilitarian. In support of this hypothesis, Qi, Savani, and Markus (2006) found that the perceived practicality of consumer items predicted subsequent choice to a greater extent for Indian participants than for North American participants, thus showing that the choices of Indian participants might be more reflective of factors other than personal preferences.

A third possibility for the relative lack of coherence between preferences and choices in Indian contexts is that Indian participants might be restraining or inhibiting their preferences at times. If ideas and practices prevalent in Indian contexts do not encourage people to construct and elaborate on their personal preferences, then people in Indian contexts might develop a tendency to restrain and ignore their immediate evaluations of various stimuli. Whereas expressing one’s preference is encouraged and often normatively appropriate in many situations in North American contexts, being a normatively good person in many Indian contexts may more often involve resisting the temptation to act on one’s own desires and being concerned about the propriety and the consequences of actions driven primarily by one’s individual preferences. We have not yet explored this provocative hypothesis that ties agency to the restraint of preferences rather than the expression of preferences, but if this is the case, then we might be able to enhance preference–choice coherence in Indian contexts if we make it difficult for participants to restrain or ignore their preferences. Future studies could test such a hypothesis by putting participants under cognitive load during the choice task, or alternatively by priming them to focus on their preferences and their immediate evaluations.

### *Limitations*

In all of our studies, we used both hypothetical and actual consumer items as our choice stimuli because choices among such items are a ubiquitous part of everyday life in modern middle-class societies and have recently exploded in middle-class India. To ensure the validity of our conclusions, we took care to select consumer items that were common, familiar, and available in both cultural contexts and that were equivalent in meaning. Therefore, our findings from the present studies can be generalized only to everyday consumer choices, not to important, less-frequent consumer choices (such as cars and apartments) or to nonconsumer choices (such as career and marriage).

Although choice based on personal preference may not carry the same psychological significance in Indian contexts as it does in middle-class North American contexts, it is likely that Indian people will choose according to their preferences for certain classes of important and consequential choices. Notably, however, when Levine, Soto, Hashimoto, and Verma (1995) asked participants whether they would marry a person if the person meets all their requirements but they are not in love with the person, they found striking differences between Indian and North American participants. Whereas only 5% of North American participants agreed to marry someone they do not love, about 50% of Indian respondents agreed to do so, thus indicating that for certain important life choices, Indian participants might be even more likely to disregard their preferences and to take into account other concerns, such as the preferences of their family members and societal norms.

Studies 1 to 3 used moderately attractive consumer items as stimuli, so further research needs to address whether our findings would generalize to unattractive or highly attractive consumer items. Further, to equate consumer items on price, quality, and availability in the choice tasks used in Studies 2 and 3, we grouped items to construct relatively homogeneous choice sets in which items differed from each other on only a few dimensions; future

research should test whether our results generalize to choice among more heterogeneous choice sets.

Throughout the article, we limit our analysis to people engaging in middle-class contexts because previous research has documented systematic social class variability in the meanings and consequences of choice (e.g., Snibbe & Markus, 2005; Stephens et al., 2007). Furthermore, we restrict our analysis to metropolitan contexts in India and to urban and suburban contexts in the United States because there are likely to be important differences in patterns of psychological functioning by region of country (Kitayama, Ishii, Imada, Takemura, & Ramaswamy, 2006; Plaut, Markus, & Lachman, 2002). Given the diversity of cultural contexts distributed in India and in the United States, we recommend caution in generalizing our findings beyond educated, urban, middle-class youth populations in the respective countries.

When Indian participants do not choose according to their preferences, their actions might be interpreted as weak and non-agentic, but Miller (2003) suggested that even when people in Indian contexts act according to normative guidelines, they do so with a keen sense of agency:

Choice is entailed in both of these approaches to agency, although it entails somewhat contrasting forms. In particular, whereas the stance privileged in individualistic cultures is characterized by a sense of free choice, in which individuals experience themselves as acting in a purely autonomous manner, the stance given greater emphasis in collectivist cultures is characterized by a sense of freely acting to meet the perceived requirements of duty. (p. 77)

Therefore, the prevalence of a conjoint model of agency in which one's own preferences are actively restrained so as to be agentically responsive to the situation seems the best interpretation of our Indian findings.

### *What Counts as a Choice?*

In the present studies, we presented participants with consumer items and explicitly asked them to either state their preferences or to make choices. But in everyday life, people often have to identify the relevant stimuli themselves and to construct choices from the situations that they encounter. Are people in Indian and North American contexts equally likely to construe everyday situations as involving opportunities for the construction of preferences and for the exercise of choice? In recent research, we found that after all participants are subtly induced to select among a series of multiple alternatives, Indian participants are less likely than North American participants to see the same actions as choices (Savani & Markus, 2006a). Indian participants are also less likely to see their everyday actions as choices, and thereby recall making many fewer choices during the day than North American participants. These findings suggest that choice may not be an equally salient category of experience in all cultural contexts. Even if Indian and North American contexts provide similar opportunities for choice, people in Indian contexts might be less likely to construe everyday situations as involving choices and, consequently, might be less likely to invoke preferences in the course of their everyday lives.

### *Conclusion*

A recent report by Goldman Sachs (Poddar & Yi, 2007) predicts that India's gross domestic product will continue to grow around

8%, resulting in more than a 100% increase in per capita income over the next decade. As people in middle-class metropolitan Indian contexts and in many other contexts around the world engage with more and more consumerism, will they rely more on their personal preferences to make their choices, as the tag line of a leading Indian cellular phone company ("Express yourself") indicates? Or will they continue taking multiple factors into account while they construct preferences and make choices? Is consumerism alone sufficient to foster and sustain the expression of personal preferences or does it need to be accompanied by a model of agency that gives special meaning to the expression of preference through choice? Will an appeal to the expression of personal preferences become the most effective way to motivate or change behavior with respect to significant social issues, such as the control of smoking, family planning, and environmental protection?

If people practice choice frequently enough and value choice to a reasonable extent, preference may become their guide. They may become sufficiently fluent at integrating their affective and cognitive evaluations of objects to come up with a preference, as we found for Indian participants. One possibility is that capitalism and globalization will minimize cultural differences in the preference-choice system, so that the cultural differences that we found would disappear as India progresses along the capitalist path. An alternate possibility is that without a meaningful interpretive framework, the practice and value of choice might not be sufficient to create coherence between preferences and choices or to motivate people to express their preferences in choices. Although capitalism has powerful effects when economic and ideological principles are in concert, its consequences might be more limited when the two stand in tension. The case of Japan is illuminating in this regard. Although Japan has been a capitalist economy for over five decades, choice in Japanese contexts and choice in North American contexts still have very different meanings and consequences (Kitayama et al., 2004). For example, people in Japanese contexts, unlike North American participants, do not usually seek to differentiate themselves from others through their choices and do not need to justify their choices unless they are aware that their behavior is being scrutinized by others. India provides a natural laboratory for testing how rapidly changing sociocultural contexts shape agency and for further theorizing about the ways in which agency is contingent on meanings and practices (e.g., Hong, Morris, Chiu, & Benet-Martinez, 2000).

Finally, these findings support the claim that actions, even relatively simple actions like the choice of a pen, do not have inherent meanings (Bruner, 1990; Shweder, 1990). Whether one's preference becomes one's guide depends on the specifics of how to be a good agent in that context. Although these results challenge the assumption that choice has a universal meaning or function, they underscore the universal principle that the psychological is cultural and constituted significantly by the ideas and practices of sociocultural contexts.

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