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# Cultural Differences in Consumer Impatience

Haipeng (Allan) Chen, Sharon Ng, and Akshay R. Rao

*How much do people value immediate outcomes across cultures? This study in the U.S. and Singapore finds that Americans are more willing to pay for expedited product delivery than their Asian counterparts. For firms marketing to diverse cultures, the finding suggests careful consideration of product offer presentation.*

## Report Summary

In this report, Chen, Ng, and Rao examine cross-cultural differences in how Westerners and Easterners value time. Which time period has more value in the East and in the West, the present or the future? The authors empirically probe this philosophical question in order to answer a more practical one: can managers predict and manipulate a consumer's willingness to pay for immediate consumption?

The authors ground their hypotheses in Hofstede's work on cultural differences and propose that Asians value the future more than Westerners, specifically Americans. As a result, they speculate, Easterners will be more patient and less willing to pay for expedited delivery of a product. To test their predictions, the authors conducted two studies in which university students from Singapore and the U.S. were primed with culture-specific collages and then asked a series of questions regarding their willingness to pay an increased price for one-day delivery of an online product. A third study examined whether a consumer's willingness to pay for this option could be altered by manipulating the offer presentation.

The authors find that, in general, Westerners do display more impatience than Easterners; they discount the future to a greater degree and are much more willing to pay for immediate consumption. They also find that a consumer's cultural orientation can be situationally induced and manipulated by subtle changes in emphasis. Specifically, Westerners are more likely to spend money to achieve a desirable outcome (such as being able to read a novel the next day), while Easterners are more likely to spend money to avoid an undesirable outcome (such as avoiding an extended waiting period).

Chen, Ng, and Rao's work offers new contributions to the fields of cross-cultural psychology and behavioral pricing, and presents a new priming technique that recognizes that multiple cultural orientations may exist in an individual subject. For managers, their study emphasizes a firm's ability to affect prices that consumers are willing to pay by manipulating the offer presentation based on culturally encoded differences. ■

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## Introduction

Whether and how people incorporate the future into the decisions they make about consumption is a topic of considerable interest to scholars of marketing and consumer behavior, both from a normative as well as from a descriptive standpoint. For instance, the time value of money is an integral component of standard economic prescriptions regarding consumption, investment, and expenditure decisions. According to the normative view, people ought to prefer receiving money immediately rather than later, because all future outcomes should be discounted *positively*. Researchers on intertemporal choice have examined precisely how the future is discounted, and whether discount rates vary across situations and individuals. In general, their findings, which are descriptive, support the normative view. They find that the discounting pattern follows a hyperbolic functional form (Read, Loewenstein, and Kalyanaraman 1999; but see Read and Frederick 2002). Immediate events are discounted to a greater degree than events that occur substantially in the future.

Discounting the future is a sign of impatience. A high discount rate implies that the future is considerably less important than the present, and people who employ high discount rates prefer instant gratification. This impatience most likely applies not just to the acquisition of money, but to the acquisition of other material objects as well. Impatient consumers are likely to (a) desire quicker service and faster delivery of products, (b) exhibit preferences for options that offer early rather than late payoffs, and (c) manifest a willingness to pay for immediate gratification. Consequently, the general issue of impatience is of substantial interest to anyone involved in marketing and consumer behavior.

The extant literature on intertemporal choice and time discounting utilizes samples of U.S. subjects for empirical validation. While this approach has proven eminently fruitful, we develop the argument that the notion of time is culture bound. Specifically, issues such as the

time value of money and the need to be expedient in achieving economic goals reflect dominant cultural values in the West. In cultures in which the pace of life is slower and the associated valuation of time lower, we expect that the degree to which the future is discounted will be different (i.e., the parameters of the functional forms may be different). Further, the manner in which discounting occurs also may differ (i.e., how certain factors influence the parameters may also differ). In our research, we are interested in the general issue of consumer impatience and whether both the degree to which and the manner in which people discount the future differs across cultures. In order to answer these questions, we study consumer willingness to pay for early relative to delayed consumption.

Our findings draw from a variety of perspectives. The questions we ask and answer are pertinent to the emerging discipline of cross-cultural psychology (Triandis 1989; Markus and Kitayama 1991) and its application to consumer behavior. In addition, we apply principles and perspectives from regulatory focus theory and behavioral decision theory to the issue of consumer impatience. These perspectives suggest that the goal fulfilled and the manner in which the option is posed help determine how much people value immediate consumption.

Methodologically, we employ a procedure that controls for the confounding of culture with other variables such as language, by randomly assigning bicultural respondents to conditions in which one or the other of their cultural orientations is primed. From a practical standpoint, our findings have implications for firms interested in addressing culturally diverse segments. Multinational firms addressing culturally diverse markets need to recognize that the level of impatience and desire for expedited delivery vary across cultural contexts and may in fact be labile. Consequently, a firm may be able to influence consumers' desire for early delivery to its advantage. By the same token, firms that speak to culturally diverse segments within a country (for instance, firms that cater to first generation

immigrants as well as long-time residents) should recognize that these different segments have different levels of impatience that can be primed by both the presentation and the cultural context of the message. By taking these factors into consideration, firms can leverage consumer price sensitivity and charge appropriate fees for expedited delivery of products and services.

In the following sections, we briefly review relevant literature and generate a set of predictions regarding variations in impatience. We report on three studies designed to test our hypotheses, and finally, we conclude with a discussion of the implications of our research.

## Literature Review and Hypotheses

Our review of the relevant literature covers three broad areas. First, we draw from the literature on intertemporal choice to explain the manner in which people discount the future. Second, we examine the related issue of individual differences in time orientation. These two streams of literature allow us to specify cross-cultural differences in impatience. Third, we turn to the literature on regulatory focus to examine how relative levels of impatience may vary depending on the manner in which the consumption opportunity is framed. These perspectives allow us to develop a series of predictions regarding the degree of impatience that people will exhibit.

### Time discounting

Normative theories posit that individual consumers should (and do) incorporate the future into their decision-making process. Specifically, in our context, unless an object appreciates in value as a result of deferring its consumption, individuals ought to choose immediate rather than deferred consumption (i.e., they should discount the future). Such a manifestation of impatience, or desire for immediate gratification, is a predictable consequence of a positive discount rate (Koopmans 1960).

The extant empirical evidence raises questions about several assumptions that undergird

models of how individuals behave with respect to consumption over time. Of particular interest to our thesis is the evidence that the discount rate is not constant, i.e., the rate between any two adjacent periods is not the same (Loewenstein and Prelec 1993). In addition, Benzion, Rapoport, and Yagil (1989) demonstrate that individuals' discount rates vary across different scenarios (e.g., lending vs. borrowing), and depend on the length of the delay and the magnitude of the outcome. Further, consistent with the immediacy effect, people value immediate outcomes much more than outcomes that are delayed, a phenomenon that should not be observed under a uniform discount rate. In fact, a hyperbolic discount function is more consistent with such discounting patterns (Prelec and Loewenstein 1991; Benzion, Rapoport, and Yagil 1989).<sup>1</sup> While a hyperbolic discount function is nonlinear over time, our basic premise argues that the discount function could vary systematically with culture.

There is evidentiary support for the proposition that people differ in their time orientation. For instance, Amyx and Mowen (1995) observe that people differ in whether they are "present focused" versus "future focused," and these foci have observable consequences. Individuals with a future time orientation were more likely to purchase a car when the payment was due immediately, whereas individuals with a present time orientation were more likely to purchase a car that had a delayed payment option. Apparently, people who emphasize the present in their decision discount the future to a relatively high degree; consequently, cash in hand is relatively valuable and a delayed payment option is relatively attractive.<sup>2</sup> This possibility is particularly germane to our inquiry, for, if discount rates vary across time intervals within an individual, they also are likely to vary systematically across identifiable groups of individuals. We turn to an examination of that issue next.

### Cross-cultural differences in time discounting

While research that examines differences in time orientation across cultures is scant, the pioneering work on cross-cultural differences

by Hofstede (1980) allows us to develop the foundational prediction from which the rest of our research flows. Hofstede (1980) originally identified four dimensions on which Asian and American cultures differ; a fifth dimension was added and elaborated upon in Hofstede and Bond (1988) (see also Hofstede 2001). Termed “Confucian Dynamism,” this fifth dimension reflects Confucius’ teachings on the importance of perseverance, social hierarchy, thrift, and a sense of shame. A high score on this dimension is believed to be consistent with “a dynamic, future-oriented mentality” (Hofstede and Bond 1988, p. 16). Among the top ten ranked countries on this scale, seven were Asian. In other words, Asian cultures probably value the future more, the present less, and are likely to be more patient than their American counterparts.<sup>3</sup>

The conclusion that emerges from this literature is consistent with Eastern religious and spiritual thought as well. For instance, the notion of being “reborn” in Buddhism and Hinduism, the dominant religions in much of South East Asia, captures the belief that one’s current life represents a small portion of one’s existence. A belief in the next life may have the effect of diminishing the value one places on immediate outcomes and increasing the value of future outcomes. Similarly, Confucianism, whose influence is still palpable in a host of Asian countries (e.g., Tan and Farley 1987), emphasizes the importance of education (e.g., “It takes ten years to grow a tree, and a hundred years to educate a person”), *patience*, a notion of central importance to our research (e.g., “Impatience over trivial things may ruin important pursuits”), perseverance (e.g., “Dripping water can penetrate stone”), and a future perspective (e.g., “If a man takes no thought at what is distant, he will find sorrow near at hand”) (Confucius 551-479 B.C.). In contrast, in the West, where the pace of life is much faster, immediate consumption may be more important for two reasons. First, in a dynamic environment one’s preferences and tastes may change very rapidly, rendering future consumption less valuable. Second, and probably related to the first reason, time may be

worth more money in a culture where things change quickly and the society as a whole is more productive (cf. Leclerc, Schmitt, and Dube 1995).

Based on these arguments, we propose that American culture is more present-oriented and Asian cultures are more future-oriented. Consequently, future outcomes will be discounted more, and immediate consumption will be valued more highly, in American culture than in Asian cultures. We employ willingness to pay for speedy delivery as an operational measure of impatience. Formally:

H1: People in the American culture will place a higher value on immediate consumption than those in Asian cultures, and thus will display a higher willingness to pay for immediate relative to delayed consumption.

### The role of message framing

There is abundant evidence in the behavioral decision theory literature that people’s preferences are labile and that the manner in which the available options are framed systematically influences consumer judgments (e.g., Kahneman and Tversky 1979; Thaler 1985). Therefore, in addition to the main effect of culture, we make the case that differing levels of impatience are contingent upon the manner in which the consumption opportunity is framed. We invoke the familiar notion of loss aversion to suggest that the prospect of a loss has a greater impact than the prospect of an equivalent gain (Kahneman and Tversky 1979). Consequently, the desire to avoid a loss should be relatively strong, and people should deploy additional resources when a message emphasizes negative information. Therefore, because of loss aversion,

H2: A message that emphasizes the inability to engage in consumption as a loss will yield higher willingness to pay than a message that emphasizes the ability to engage in consumption as a gain.

While we do not predict any differences in the degree of loss aversion *between* cultures, we do

Table 1  
**Examples of Promotion and Prevention Gain and Loss**

	<b>Gain</b>	<b>Loss</b>
Promotion focus	Won \$100 <i>Desirable outcome achieved</i>	Did not win \$100 <i>Desirable outcome not achieved</i>
Prevention focus	Did not lose \$100 <i>Undesirable outcome avoided</i>	Lost \$100 <i>Undesirable outcome suffered</i>

predict that the *manner* in which loss aversion is experienced is culture-specific. As we discuss next, we draw from regulatory focus theory to predict a three-way interaction between (a) *culture*, (b) whether the *outcome* represents a gain or a loss, and (c) the *goal* (prevention or promotion) emphasized in the message.

### The interaction between culture, outcome, and goal

We propose that culture may interact with the goal that consumption fulfills to influence the manifestation and degree of impatience. Specifically, the strength of response to a specific message may be a function of the *congruence* between the values and norms embedded in the salient culture and the goal that is emphasized in the message. In particular, and consistent with the literature on regulatory focus theory from which we draw, we propose that the differential responses to the outcome frames (e.g., the loss aversion effect in H2) will likely be stronger when there is a match between the values embedded in the culture and the goal emphasized in a message, and that they will be weaker when there is a mismatch between the two. This interactive effect has interesting implications with regard to how people from different cultures value immediate consumption.

Regulatory focus theory distinguishes between two types of desired end-states (i.e., goals) that people are motivated to achieve, an “ideal” state driven by the desire to achieve one’s hopes and aspirations, and an “ought” state driven by the desire to fulfill one’s obligations and responsibilities (Higgins 1997). Employing this regula-

tory focus approach, outcomes can be classified as follows: a promotion gain (Mr. A won \$100), a promotion loss (Mr. A did not win \$100), a prevention gain (Mr. A did not lose \$100), and a prevention loss (Mr. A lost \$100) (see Table 1).<sup>4</sup>

This subtlety, that gains and losses can be framed relative to the two types of desired end-states, has potential implications for how much people value immediate outcomes across cultures that differ in their regulatory foci. Specifically, one robust difference between Eastern and Western cultures is the dominant self-view (e.g., Hofstede 1980), which has been linked to the two different types of regulatory foci. Lee, Aaker, and Gardner (2000), for example, point out that an *independent* self-view, with its emphasis on achievement and autonomy, is characteristic of the U.S. culture and is consistent with a regulatory focus of promotion, whereas an *interdependent* self-view, with its emphasis on fulfilling obligations within one’s social network, is characteristic of Asian cultures and is consistent with a regulatory focus of prevention (Aaker and Lee 2001). Aaker and Lee (2001) further demonstrate that when peoples’ independent self-view was made more salient, they were more persuaded by a promotion-framed message, but when their interdependent self-view was made more salient, they were more persuaded by a prevention-framed message. Apparently, people process information more carefully and thoroughly when the frame associated with the message is congruent with their self-view.

Consistent with this finding, we posit that the strength of loss aversion as proposed in H2 will

depend on whether the message frame is congruent with people's culture-evoked regulatory focus.<sup>5</sup> The extant research suggests that an individual for whom U.S. culture dominates likely subscribes to an independent self-view, endorses a promotion focus, and pays more attention to a message that emphasizes promotion goals. Conversely, a person for whom Asian culture dominates probably subscribes to an interdependent self-view, endorses a prevention focus, and pays more attention to a message that emphasizes prevention goals. The enhanced attention to message congruency, therefore, should strengthen the effect of loss aversion for Easterners who are prevention oriented and for Westerners who are promotion oriented. In contrast, when a message frame is incongruent with an individual's culture-evoked regulatory focus, the lack of attention to the message should diminish the effect of loss aversion.

In an intertemporal consumption context, this reasoning suggests the presence of a three-way interaction between culture, outcome, and goal embedded in the message. Formally:

H3a: The impact on willingness to pay when a message emphasizes a promotion loss relative to a promotion gain will be higher than the impact of a message that emphasizes a prevention loss relative to a prevention gain, for promotion-focused Americans.

H3b: The impact on willingness to pay when a message emphasizes a prevention loss relative to a prevention gain will be higher than the impact of a message that emphasizes a promotion loss relative to a promotion gain, for prevention-focused Asians.

We now turn to the description of our empirical efforts to test the predictions developed thus far.

## Empirical Evidence

We describe our methodology, a pretest, and three main studies in this section. The first two

studies were designed to examine the first hypothesis, while the third study was designed to examine the latter two sets of hypotheses.

Following the dynamic constructivist perspective on cross-cultural research (e.g., Hong and Chiu 2001), we test our first prediction on "bicultural" subjects. While traditional cross-cultural studies have focused on uncovering differences across nationalities, which are deemed to be proxies for culture (e.g., Hofstede 1980), the emerging dynamic constructivist approach takes the position that multiple cultures may operate within an individual. While this holds true (to different degrees) for people everywhere, the notion of multiculturalism is especially pertinent in places that have been influenced by multiple cultures during their histories (e.g., the Indian subcontinent, Hong Kong, Singapore), or among people who are exposed to different cultures (e.g., immigrants). Researchers in this area view cultures as implicit theories that underlie people's knowledge structures. For people who acquire multiple cultures, which culture directs behavior can be situation-specific, depending on the relative accessibility of each of the competing cultures (also see Hong, Morris, Chiu, and Benet-Martinez 2000). As Hong et al. have demonstrated, it is feasible to generate behaviors consistent with different cultures in such bicultural subjects by providing appropriate visual primes.<sup>6</sup> This procedure, of priming bicultural subjects with cultural icons that invoke a particular culture, rather than comparing subjects from two cultures, eliminates the potential for confounding that occurs when subjects are not randomly assigned to experimental conditions.

While recent research has employed college students in Hong Kong to represent the Asian culture (e.g., Hong and Chiu 2001; Hong et al. 2000; Briley, Morris, and Simonson 2000), we tested our cross-cultural predictions employing students from a major university in Singapore. Similar to Hong Kong, Singaporean society is multicultural. Most Singaporeans retain a good knowledge of their own native culture, be it



Chinese, Malay, or Indian. But the substantial influx of Western products, including films, music, and books, has exposed the younger generation, especially college students, to Western influences (Tan and Farley 1987). In addition, the fact that college students in Singapore are fluent in English as well as their particular native language (Chinese, Malay, or Tamil) further compounds their biculturalism (Wharton 2000; Bishop 1998). Finally, like in Hong Kong, this type of research can be conveniently conducted in English.

### Pretest

As an initial effort to establish the proposed cross-cultural difference in impatience, and to check the appropriateness of the cultural priming to be employed in studies one and three, we collected data from student subjects in Singapore and the U.S. While all subjects were administered a four-item financial time orientation scale (Perry 2003), Singaporean subjects were randomly divided into two groups and were presented with either the U.S. or the Singapore cultural visual prime before they responded to the scale.

The scale showed desirable psychometric properties: all four items loaded on one factor with acceptable reliabilities in both the U.S. and in Singapore (eigen values = 2.236, 2.368, variance explained = 55.91%, 59.20%, Cronbach's alpha = .73, .77 in the U.S. and Singapore, respectively). Consistent with our expectation, it was found that for the Singapore subjects the U.S. priming condition yielded a shorter financial time horizon than the Singapore priming condition ( $3.57 < 4.41$  on a 7-point scale,  $p < .001$ ). Furthermore, Singapore subjects in the U.S. priming condition showed a time orientation that was similar to that of the U.S. subjects ( $3.57$  vs.  $3.78$ , two-tailed  $p > .20$ ), whereas Singapore subjects in the Singapore priming condition showed a longer time orientation than that of the U.S. subjects ( $4.41 > 3.78$ , one-tailed  $p < .01$ ). These results confirmed our general premise that there is more impatience associated with the Western cultures than with

the Eastern cultures. Furthermore, the pretest lends credibility to the priming method employed in studies one and three below. In Study 1 that follows, we formally test our first hypothesis.

### Study 1

**Design and Stimuli.** We tested the first hypothesis (H1) using a relatively simple approach. Bicultural Singaporean subjects were randomly assigned to one of two conditions in which they were exposed to visual stimuli that either primed their U.S. culture or their Singaporean culture. The visual prime comprised a collage consisting of 12 icons representing either the Singaporean culture (e.g., the Singapore Airlines model, the Tiger beer icon, etc., see Appendix 1) or the U.S. culture (a classic representation of Marilyn Monroe, the Coca-Cola icon, etc., see Appendix 2). The 12 pictures in each collage were chosen so that they represented a variety of cultural aspects (e.g., architecture, landscape, celebrity, statesman, brand names, cartoon figures, national flag, etc.) and matched each other in terms of their location in the collage as well as their content. As the cultural icons cannot be easily related to the focal task in the experiment, there should be no concerns regarding demand effects associated with the cultural prime (Hong et al. 2000, p. 711).

**Subjects.** Fifty-five students from a large Singapore university participated in this study in return for course credit. The students were randomly assigned to one of the two cultural prime conditions and completed the questionnaire at their own pace.

**Procedure.** Each student received the questionnaire and was told to follow the instructions closely. On the first page, subjects were shown either the Singaporean or the U.S. collage, depending on the experimental condition to which they were assigned, and were instructed to examine the pictures carefully. After viewing the collage, subjects turned to the next page, where they were asked to list all the things they remembered about the collage. After the recall

task, subjects were presented with an online shopping scenario for the purchase of a novel, and were informed of the standard delivery fees for this purchase (Sing \$2.99). They were told that the book would arrive in three to seven business days with the standard delivery method, but they had the option of choosing a faster delivery method that could result in the delivery of the book in one business day. As a measure of the focal dependent variable, subjects were asked to indicate how much they would be willing to pay for delivery in one day.<sup>7</sup> Based on H1, subjects primed with the U.S. cultural icons are predicted to be willing to pay more for the faster delivery than subjects primed with the Singaporean culture. Demographic information was collected towards the end of the questionnaire.

**Results.** The recall task showed that the subjects understood the collages well, as all subjects recalled most of the pictures correctly and nobody made mistakes in their recall. To test H1, a simple  $t$ -test was conducted on the dependent variable. The result showed a significant main effect of cultural priming. Consistent with H1, subjects in the U.S. condition were willing to pay substantially more than those in the Singapore condition for one-day delivery (Sing \$6.60 > Sing \$5.10,  $t_{(53)} = 1.93$ , one-tailed  $p < .05$ ).

**Discussion.** Results from Study 1 demonstrate that bicultural subjects primed with different cultures may be differentially impatient, as a result of which individuals whose Western cultural values are made salient via cultural priming place a higher value on immediate consumption than do individuals whose Eastern cultural values are made salient. While differential levels of impatience (i.e., differential discount rates) are not impermissible under a normative discount utility model provided there is idiosyncrasy in borrowing or lending power or variations in prevailing marketing interest rates (Benzion, Rapoport, and Yagil 1989, p. 271), our use of bicultural subjects who were randomly assigned to different experimental conditions rules out these possible explanations for our results.

While the results of Study 1 are supportive of our prediction that priming the U.S. culture should yield a higher value for immediate consumption than priming one of the Asian cultures, it is possible (though not likely) that a factor other than the cultural prime influenced consumer impatience. For instance, a plausible rival explanation to our cultural priming argument is that Singaporean subjects' *perceptions of the U.S. culture* drove their responses when they were exposed to the U.S. prime, and these perceptions may not be identical to those of U.S. subjects. In other words, it is possible that our subjects who were primed with the U.S. collage preferred immediate consumption more than other subjects because they assumed that Americans are impatient, while Americans may in fact be quite patient. While this conjecture seems to be invalidated by our pretest results, to address this possibility more directly, we conducted a second study in which we measured the impatience of U.S. student subjects to assure that the impatience manifested by U.S.-primed subjects in Singapore was consistent with that of their U.S. counterparts.

Another important purpose of Study 2 is to rule out an alternative trivial explanation of the Study 1 results. Specifically, since the online book retailer was referred to as "*xyz.com*" in the stimuli, it is possible that the subjects in the U.S. priming condition thought that the novel was shipped from the U.S., while subjects in the Singapore priming condition (mistakenly) thought that the novel was shipped from a local retailer. Since an online company in Singapore usually has .sg as the suffix of its domain name, the miscomprehension on the part of the Singapore-primed subjects is not a very likely occurrence. Nevertheless, one could argue that the enhanced accessibility of one specific culture via visual priming could have misled the subjects to mentally "locate" the retailer in a place that was consistent with the temporally more accessible culture.

If the perceived location of the online retailer is affected by the dominant culture, then U.S.

subjects will (correctly) identify “xyz.com” as a local retailer, no matter whether they are primed with U.S. cultural icons or not. According to the location-based explanation, therefore, one should expect to observe that U.S. subjects behave similarly to the Singapore-primed Singaporean subjects in Study 1, who mistakenly identified “xyz.com” as a local retailer. Further, U.S. subjects should exhibit a lower willingness to pay relative to the U.S.-primed Singaporean subjects, who correctly identified “xyz.com” as a remote retailer. As we report in the following section, the results from Study 2 do not support the alternative explanation; rather the impatience-based explanation appears to be the correct explanation.

### Study 2

In the second study, U.S. subjects provided their responses to the dependent variable in two settings. In the first setting, they were not provided any visual prime. Presumably U.S. subjects are naturally inclined to act in a manner consistent with their culture and do not need a prime to do so. However, in the unlikely event that the visual primes played some unintended role in generating responses to the dependent measure, in the second setting, subjects were exposed to the U.S. collage of visual primes used in Study 1. As our goal was to measure the value placed on immediate consumption by Americans, their reactions to the Asian cultural primes were not relevant; thus the Singaporean collage was not employed. The numerical value of the base price and the standard delivery fees were the same as those employed in Study 1 (i.e., U.S. \$19.95 and U.S. \$2.99).

Twenty-eight undergraduate business students from a major university in the U.S. participated in this study for extra course credit. Subjects completed the questionnaire at their own pace, following the same procedures as in Study 1. Since the prices that subjects were willing to pay for quicker delivery were not statistically different when the visual prime was present and when it was absent ( $p > .10$ ), we collapsed the responses across the two conditions. When we compared the collapsed results with those from

Study 1,  $t$ -tests showed that the prices provided by the U.S. subjects were indistinguishable from those provided by the Singapore subjects who had been primed with the U.S. cultural icons (7.64 vs. 6.60, two-tailed  $p > .30$ ), which were higher than the prices provided by the Singaporean subjects who had been primed with their own cultural icons (7.64 vs. 5.10, one-tailed  $p < .001$ ).<sup>8,9</sup>

In sum, the results of the first two studies together can be taken to imply that cultural priming increases cultural accessibility, as a result of which the Singaporean subjects who were primed with the U.S. culture behaved like their U.S. counterparts, as reflected in their enhanced valuation of immediate consumption. The results of Study 2 also helped us rule out a rival explanation based on the perceived location of the online retailer. While the first two studies demonstrate the impact of culture on an individual’s valuation of immediate consumption, they do not speak to the subtleties predicted in H2 and H3. We next turn to the description of a study designed to test those hypotheses.

### Study 3

Recall the logic for H2. Consistent with loss aversion, a message that emphasizes that a delay in engaging in consumption is a loss should yield enhanced willingness to pay. For H3, the effect of loss aversion on willingness to pay for immediate consumption was expected to be stronger for Americans when immediate consumption fulfills a promotion goal, while for Singaporeans the effect was expected to be stronger when immediate consumption fulfills a prevention goal.

**Design.** To examine these hypotheses, a three-factor between-subjects design was implemented. Culture (the first factor) was manipulated as in Study 1. The second and third factors (outcome: gain versus loss, and goal emphasized in a message: prevention versus prevention) were manipulated as follows. Subjects in each of the culturally primed conditions were exposed to stimuli that described the opportunity to

Table 2  
**Message Frames Describing Faster Delivery Options**

	<b>Gain</b>	<b>Loss</b>
Promotion focus	Faster processing methods “will allow you to start enjoying the novel earlier.”	Without the faster processing methods “you cannot start enjoying the novel as early as you like.”
Prevention focus	Faster processing methods “will shorten the time you’ll have to wait for the novel to arrive.”	Without the faster processing methods, “you will have to wait longer for the novel to arrive.”

expedite delivery of a product. In each of four conditions, either (a) selecting the expedited delivery option provided the opportunity to enjoy the product earlier, or (b) not selecting the expedited delivery option resulted in not enjoying the product earlier, or (c) selecting the expedited delivery option resulted in not having to wait for the product to arrive, or (d) not selecting the expedited delivery option resulted in having to wait. These four conditions reflect promotion gains, promotion losses, prevention gains, and prevention losses respectively (see Table 2 for the exact wording used in the stimuli). As in the earlier studies, because of its familiarity to student subjects and its ubiquitous availability at World Wide Web retailers, we used a novel as the focal product in the stimuli.

**Subjects.** For Study 3, 149 subjects were recruited from the same subject pool as Study 1. The study was conducted on the World Wide Web, and subjects were randomly assigned passwords, which corresponded to the eight different experimental conditions. Cell sizes ranged from 16 to 22.

**Procedure.** The procedure for this experiment was similar to that of Study 1, with the following changes. First, subjects were told that the novel would arrive in five business days with the standard delivery method, instead of three to seven business days as in Study 1, to eliminate any potential confounding due to culturally induced differences in risk perception. Another difference in the stimuli was that the online

retailer was specified to be local in this study (“a local retailer book.com.sg”). This change was made to test the robustness of the finding across different domain names.

After reading through the information provided, subjects were asked to indicate the amount they would be willing to pay for the one-day delivery option. As a manipulation check for whether or not the goal-framing of the outcome was perceived to be salient, subjects were asked to rate the importance of being able to “enjoy the novel earlier” and the importance of “not having to wait for the novel to arrive,” in their willingness-to-pay decisions. On the next page, subjects were asked to list the names of three politicians that came to their mind, which served as a check for the culture manipulation. On the final page, subjects provided some demographic information.

**Manipulation Check.** The recall task demonstrated that the subjects understood the cultural collages well, as all subjects recalled most of the pictures correctly and nobody made mistakes in their recall. In addition, subjects’ answers to the politician question were coded as to whether the politician named was a Western politician or Eastern politician. A *t*-test showed a significant effect of cultural priming, with subjects primed with the U.S. collage listing more Western politicians, and subjects primed with the Singapore collage listing more Eastern politicians ( $p < .0001$ ).<sup>10</sup> Thus, the cultural priming manipulation was deemed successful.

Table 3  
**Mean (S.D.) of Price for One-Day Processing—Study 3**

	Gain		Loss	
	Promotion	Prevention	Promotion	Prevention
U.S. priming	7.26 (2.56)	8.23 (4.63)	10.15 (7.15)	7.55 (3.72)
Singapore priming	6.26 (2.87)	5.63 (1.43)	6.47 (2.87)	7.90 (2.83)

To check the success of the regulatory goal manipulation, we analyzed subjects' rating of the importance of being able to enjoy the novel now rather than having to wait for the novel to arrive, in their willingness-to-pay decisions. Subjects in the promotion-focused condition rated being able to enjoy the novel now as a more important consideration than subjects in the prevention-focused condition ( $4.33 > 3.76$ , one-tailed  $p < .01$ ). Similarly, subjects in the prevention-focused condition rated not having to wait for the novel to arrive as a more important consideration than subjects in the promotion-focused condition, albeit marginally so ( $3.73 < 4.15$ , one-tailed  $p = .07$ ). The manipulation appeared to be successful.<sup>11</sup>

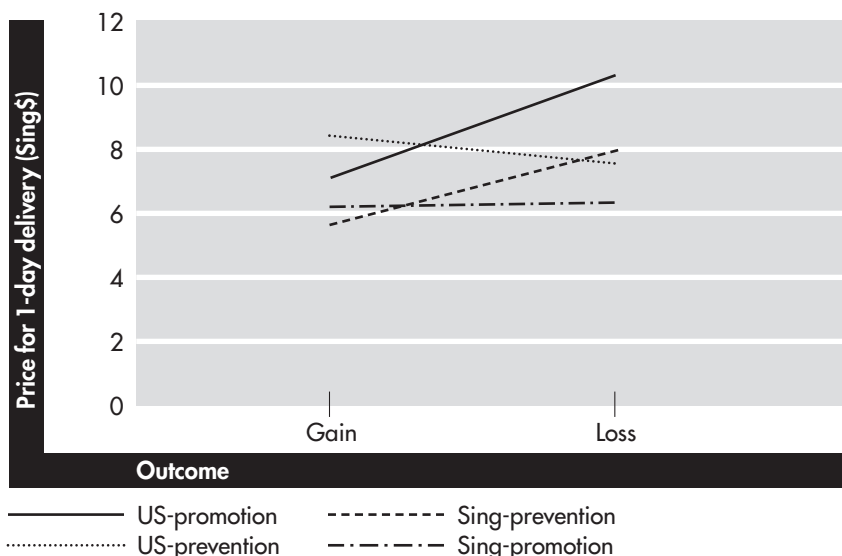
**Data Transformation.** Due to the large variance in one of the cells, the assumption of equal

error variance was violated ( $p < .01$ ). Fortunately, a logarithm transformation of the raw data helped stabilize the error variance ( $p > .10$ ). Following Kuehl (1994), in the analyses that follow, we report the  $p$ -values based on the log-transformed data, but interpret the results based on the raw data.

**Results.** Analysis of variance employing a fully saturated model of the three main effects (culture, outcome, and emphasis of the message frame), the three associated two-way interactions and the one three-way interaction indicates that the three-way interaction was significant ( $p < .05$ ). In light of the observed higher order interaction, we address that finding first.

The cell means and standard deviations of the price responses are summarized in Table 3. The structure of the observed three-way interaction is depicted in Figure 1. Consistent with H3, the effect of loss aversion on willingness to pay was stronger for Singapore-primed subjects when immediate consumption was prevention focused than when it was promotion focused ( $p < .05$ ). Planned contrasts showed that Singapore-primed subjects were willing to pay significantly higher prices to shorten waiting time ( $\$7.90 > \$5.63$ , one-tailed  $p < .001$ ). But, this difference was not observed when Singapore-primed subjects could assure delivery to start enjoying the book earlier ( $\$6.47$  vs.  $\$6.26$ , two-tailed  $p = .83$ ). In contrast, for U.S.-primed subjects, the effect of loss aversion on willingness to pay was marginally stronger when immediate consumption was promotion focused than when it was prevention focused ( $p = .08$ ). Planned contrasts showed that U.S.-primed subjects were

Figure 1  
**Results on Three-Way Interaction in Study 3**



willing to pay marginally higher prices to assure that they could start enjoying the book earlier (\$10.15 > \$7.26, one-tailed  $p = .06$ ). This difference was not observed, however, when U.S.-primed subjects were faced with the option of paying to avoid having to wait longer for the novel to arrive (\$7.55 vs. \$8.23, two-tailed  $p > .60$ ). Both predictions associated with H3 are therefore supported.

In addition, the main effect of outcome was also significant. Subjects in the loss conditions were willing to pay much more, relative to those in the gain conditions, to get the novel one day earlier (\$7.99 > \$6.88,  $p < .05$ ). This result supports H2 and is consistent with the loss aversion effect that has been well documented in the behavioral decision theory literature (Kahneman and Tversky 1979; Thaler 1985). The main effect of regulatory focus (i.e., promotion versus prevention) was not significant, nor were any of the remaining two-way interactions ( $p > .10$ ).

Finally, consistent with our first hypothesis and replicating results from Study 1, we found that cultural priming significantly affected willingness to pay. Collapsing across the four types of message frames, subjects in the U.S.-primed conditions were willing to pay significantly more relative to those in the Singapore-primed conditions for the one-day delivery option (\$8.30 > \$6.49,  $p < .01$ ).<sup>12</sup>

In sum, our empirical efforts offer compelling evidence in support of the following conclusions:

1. A situationally induced cultural orientation has an impact on the willingness to pay;
2. The impact of this situationally induced cultural orientation on willingness to pay can be influenced by subtle changes in emphasis on the purpose of the consumption, so that (a) the prospect of alleviating a loss can enhance willingness to pay, and (b) the enhanced willingness to pay due to the prospect of alleviating a loss is effective for Easterners only when consumption fulfills a prevention goal, and for Westerners only when consumption fulfills a promotion goal.

## Discussion and Implications

In this paper, we document systematic variations in consumer impatience that lead to a differential willingness to pay higher prices for expedited delivery. These differences are attributable to differences between American and Asian cultures and to the manner in which the consumption opportunity is framed. Employing bicultural subjects, in Study 1 we observe that U.S. culture-primed subjects valued immediate consumption significantly more than subjects primed with one of the Asian cultures. This difference was confirmed in a second study that directly measured American subjects' valuation of immediate consumption. Then, drawing upon regulatory focus theory, we observe in a third study of bicultural subjects that the cross-cultural difference is sensitive to the manner in which outcomes are framed—Westerners are more apt to expend monetary resources to achieve a desirable outcome, while Easterners are more apt to expend monetary resources to avoid an undesirable outcome.

The contributions of our research effort can be evaluated in three domains. Theoretically, we offer new insights on the topics of time discounting and intertemporal choice with particular relevance to the area of cross-cultural psychology and behavioral pricing. Methodologically, the employment of a priming technique on bicultural subjects is a novel approach that is new to the marketing discipline. Finally, from a managerial standpoint, we speak to the firm's ability to price-discriminate across cultures by employing appropriate message frames, a topic that is likely to be of considerable interest to corporations (be they multinational or domestic) attempting to appeal to diverse cultures. Next we highlight the managerial implications of the current research.

### Contributions to practice

Our first managerial insight is that different cultures may be primed in bicultural individuals through the use of appropriate cues, and that the priming of these different cultures has

important practical significance in terms of an individual's willingness to pay. We use visual primes, but it is likely that the provision of auditory cues can also prime a particular culture. As our findings indicate, U.S. culture exhibits a substantially higher level of impatience than Eastern cultures (Singapore, and by extension, Hong Kong, Malaysia, Thailand, Indonesia, and possibly the Indian subcontinent). So, a bi-cultural customer in the Orient is likely to expect relatively quick service from an American firm when compared to a local firm, especially when the immediate consumption environment makes the American culture more accessible (e.g., via company logos, music in the stores, or designs on the website).

Second, firms may wish to consider how to frame the message associated with their delivery options. In the U.S. (and perhaps in other Western cultures that emphasize promotion goals), suggesting that using standard delivery will limit the early enjoyment of the product may yield higher degrees of impatience and associated willingness to pay for expedient delivery. In the Orient, messages emphasizing how using standard delivery will extend the waiting time for the product to arrive will likely yield enhanced impatience and associated willingness to pay for expedient delivery.

A third speculation we offer pertains to the differing levels of impatience we observed across cultures. If it is true that the future is discounted less in the Orient, financial instruments and investments that emphasize long-run benefits are likely to prove more attractive there, while short-run returns are likely to be preferred in the U.S. For example, while savings for education and retirement involve immediate sacrifice for the sake of future benefits, revolving credit usage has the effect of borrowing from the

future for immediate consumption. Therefore, our general premise that Asian cultures are less impatient and exhibit a smaller discount rate than the U.S. culture is also consistent with anecdotal evidence that Asians value education, have a higher savings rate (e.g., Katzner 2002), and are less likely to use credit cards.

### Future research

Several interesting avenues for future research emerge from our research. First, as alluded to earlier, there is some persuasive evidence that people prefer to defer desirable outcomes (i.e., they display *negative* time discounting by preferring happy endings (cf. Loewenstein 1987; Loewenstein and Sicherman 1991; Loewenstein and Prelec 1993; Chen and Rao 2002). Whether and how this occurs in more future-oriented cultures would be an issue worthy of empirical scrutiny. Second, whether and how discount rates vary with stimulus magnitudes in different cultures is an intriguing question; in relatively impoverished economies, large numeric values may be rarely encountered and may be subject to excessive discounting because they are less credible. Finally, a natural next step is to fully understand the cultural underpinnings of loss aversion. As Wang (1996) has demonstrated, risk preferences based on reactions to the Asian disease problem are quite different in China than the U.S., suggesting that the parameters of the prospect theory value function are substantially influenced by culture. ■

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### Notes

1. Another premise of the normative approach is that the future is always discounted positively. But, in an ingenious demonstration of subjects' preference for delayed gratifica-

tion, which would suggest that people do not engage in positive time discounting, Loewenstein (1987) showed that subjects were willing to pay more for a kiss from a movie star of their choice later rather than immediately. Seemingly, under some conditions, people may derive

utility from the preconsumption “savoring” of a positive outcome (Loewenstein 1987; Loewenstein and Prelec 1993; Prelec and Loewenstein 1998). Similarly, Loewenstein and Sicherman (1991; see also Loewenstein and Prelec 1993) demonstrated that individuals sometimes behaved as if they discounted the future negatively; subjects expressed a preference for a wage profile comprising an increasing series of annual compensation figures, and a preference for an increasing sequence of rental incomes over time.

2. Such variations in discount rates may also exist for gains and losses; seemingly losses are discounted more slowly than gains (Loewenstein and Prelec 1992, p. 575). Therefore, the cash equivalent of an immediate loss is smaller than that of a corresponding gain, given the same amount of time delay (Thaler 1981).

3. Other perspectives on time orientation are also consistent with the notion that Asians and Americans differ in their time orientation. For instance, Graham (1981) distinguishes (among other dimensions) between the “linear-separable” perspective (typical of “Anglos”) which views time as a continuum and accommodates the notion of time being money, and the “circular-traditional” perspective which treats time as a circular concept and does not accommodate the concept of time value of money. Similarly, Ko and Gentry (1991) suggest that the future might be relatively more dynamic and less extended for Americans because Asian cultures, due to their long histories, are both more past-oriented and more future-oriented than the American culture. These perspectives would imply that, relatively speaking, the present is more important to Americans than to Asians.

4. Even though a regulatory focus is largely chronic, it turns out that it can also be situationally manipulated through strategic framing (for a review, see Higgins 1997), a property that is critical for our empirical work.

5. Our classification of promotion gain, promotion loss, prevention gain, and prevention loss corresponds to Idson, Liberman, and Higgins’ (2000) gain, non-gain, non-loss, and loss. Idson et al. found that the pleasure of a gain should be more intense than the pleasure of a non-loss, whereas the pain of a non-gain should be less intense than the pain of a loss. Since they focus on the comparison between a promotion outcome and a corresponding prevention outcome, i.e., the two rows in Table 1, and our H2 focuses on the comparison between a gain and a loss, i.e., the two columns in Table 1, H2 is not inconsistent with their conclusion.

6. Shih, Pittinsky, and Ambady (1999) employ a similar priming procedure on Asian women. Subjects primed with stimuli that surface their feminine selves performed worse than a control group, while subjects primed with stimuli that surfaced their Asian selves performed better than a

control group on a math aptitude test.

7. In all studies, we also collected data on subjects’ willingness to pay for two-day delivery. Our purpose in doing this was to assess the parameters of the discount function observed in different experimental conditions. In the interest of brevity, and because cross-cultural variations in discount rate parameters is a relatively esoteric theoretical issue, we do not expand on that topic further in this paper.

8. The results were replicated in a separate study ( $n = 36$ ) without the collage manipulation.

9. To eliminate the possibility that economic inequivalence drove the results, we also included in this study additional conditions employing U.S. dollar equivalents of the Singapore study (U.S. \$11.37 and U.S. \$1.69 instead of Sing \$19.95 and Sing \$2.99), based on the prevailing exchange rate at the time of the study (U.S. \$1 = Sing \$1.754). When the price responses in the two conditions (with and without the visual priming) were transformed into Singapore dollars using the aforementioned exchange rate, the results were qualitatively similar to the results reported above. In addition, discount rates calculated from these prices were higher for small magnitudes than for large magnitudes, a result that is consistent with Thaler (1981) and Loewenstein and Prelec (1992).

10. When only the U.S. politicians were coded as Western, and Singaporean politicians as Eastern, treating all other responses as missing (e.g., Tony Blair, Jiang Zemin), a similar result was obtained ( $p < .01$ ).

11. To check the self-view evoked by cultural priming, subjects were asked in a pretest to indicate their degree of agreement with each of the six statements that captured people’s independent versus interdependent self-views (Aaker and Lee 2001). The two scales exhibited desirable psychometric properties (the three questions that measured independent self-view loaded on the same factor, eigenvalue = 3.86, variance explained = 64.40%, and Cronbach’s alpha = .86; the three questions that measured interdependent self-view loaded on the same factor, eigenvalue = 2.68, variance explained = 89.18%, Cronbach’s alpha = .94). Consistent with research reviewed above (e.g., Hofstede 1980; Hong and Chiu 2001), subjects primed with the U.S. culture scored higher on the independent self-view than those primed with the Singapore culture ( $5.11 > 3.92$ ,  $p = .002$ ), and the opposite was observed for the interdependent self-view ( $3.61 < 5.15$ ,  $p = .000$ ).

12. As we noted in note 7, subjects also provided price responses for two-day delivery. One purpose in collecting this response was to compute two discount rates. An analysis that employs these computed discount rates as the dependent variable yields the same substantive results as the principal analysis reported thus far. For the sake of brevity, we skip the details of this analysis.



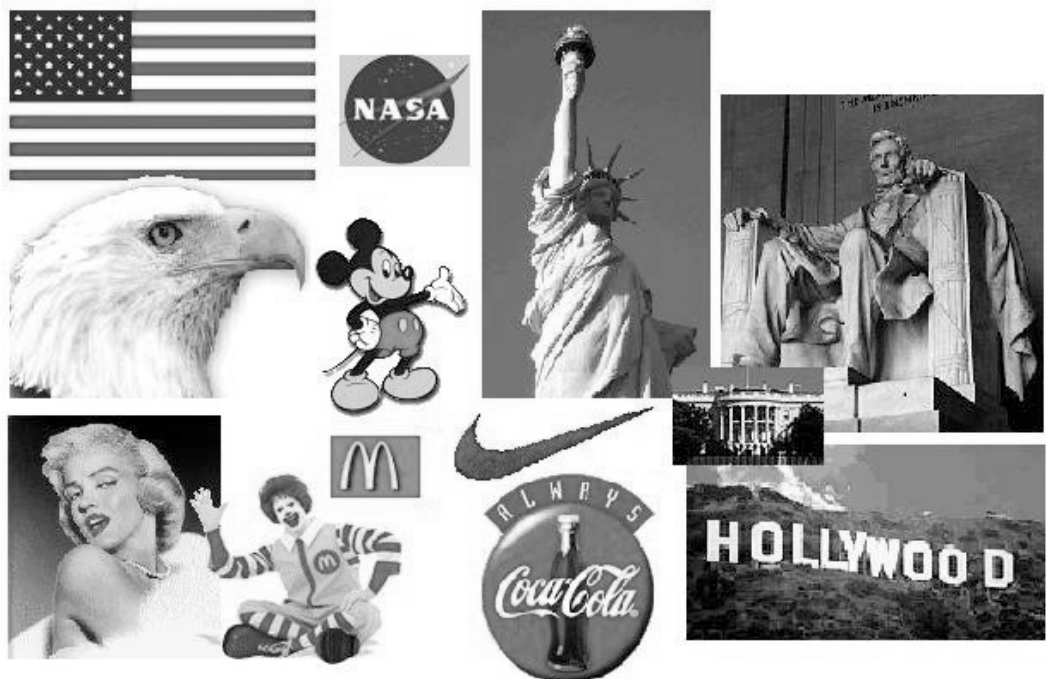
## Appendix 1

### Singapore Cultural Collage



## Appendix 2

### U.S. Cultural Collage



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