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This research documents an intriguing empirical phenomenon whereby states of relaxation increase the monetary valuation of products. The authors demonstrate this phenomenon in six experiments involving two methods of inducing relaxation, a large number of products of different types, and various methods of assessing monetary valuation. In all six experiments, participants who were put into a relaxed affective state reported higher monetary valuations than participants who were put into an equally pleasant but less relaxed state. This effect seems to be caused by differences in relaxed and nonrelaxed people's mental construals of the value of the products. Specifically, compared with less relaxed people, relaxed people seem to represent the value of products at a higher level of abstraction, which increases their perceptions of these products' value. The phenomenon appears to reflect an inflation of value by relaxed people rather than a deflation of value by less relaxed people.

Keywords: relaxation, monetary valuations, construal levels, willingness to pay, emotions

Relaxation Increases Monetary Valuations

Whether a person is buying a house, negotiating the price of a car, deciding which university to attend, or considering whether to invest in the stock market, common wisdom holds that people should be relaxed and at ease during the decision-making process. It is indeed generally assumed that the calmer people are, the better their decisions will be. However, little research has been done on the effects of relaxation on consumer judgment and decision making (for some exceptions, see Bosmans and Baumgartner 2005; Gorn et al. 2004; Park, Kim, and Schwarz 2009). This is particularly surprising considering that of all the consumer

experiences that marketers try to create, states of relaxation are among the most common (e.g., in hotel rooms, business-class cabins, airport lounges, spas).

The purpose of this research is to investigate the effects of relaxation on an important dimension of consumer judgment: the monetary valuation of products. Although it is typically not in consumers' interest to inflate perceptions of value, we document across six experiments an intriguing phenomenon: States of relaxation consistently increase the monetary valuations of products. This increased valuation effect seems to reflect differences in how relaxed and nonrelaxed people mentally construe the products they evaluate. Specifically, compared with less relaxed people, relaxed people appear to mentally represent the products whose monetary value they are assessing at a higher level of abstraction, which leads them to perceive these products as being more valuable.

RELAXATION, CONSTRUAL, AND VALUATION

While lay conceptions of relaxation tend to be relatively simple, relaxation, which can be considered the opposite of the stress response (Benson 2000), is actually a fairly complex state with multiple underlying components (Lichstein 1988; Smith 1999). At the physiological level, relaxation is characterized by a reduced activation of the autonomic nervous system (e.g., slower breathing, reduced blood flow) and a lowering of muscular-skeletal tension. Many contemporary relaxation techniques such as progressive muscle

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relaxation (Jacobson 1938) and controlled breathing focus primarily on this physiological component. At the emotional level, relaxation is characterized by feelings of calmness and peacefulness, which, from an appraisal perspective, may serve as signals of the absence of threats in the environment (Gilbert et al. 2008).¹ As an affective state, relaxation is generally experienced as pleasant (Russell 1980). Finally, at the cognitive level, relaxation is characterized by a lack of worry and preoccupation and a sense of detachment (Smith et al. 1996). Many meditation-based techniques to induce relaxation operate at this level, reducing worry and preoccupation by having people repeat positive phrases such as mantras (Lichstein 1988). In summary, relaxation is a complex physiological, emotional, cognitive state that can be induced by a variety of means, and one that marketers often try to induce in consumers.

Why would it be in a marketer's interest to induce relaxation? One understandable reason is that relaxation is inherently pleasant. This seems to be the primary motivation behind the design of many relaxing environments in the marketplace. However, there may be another reason, one that is less obvious. This second reason can be derived through a combination of insights from two literature streams.

One stream of research in the relaxation literature suggests that states of relaxation may encourage a broader and more contemplative form of thinking. For example, Fredrickson and Branigan (2005) find that participants who were made to feel serene by watching a movie processed geometric figures more globally (less locally) than participants who were made to feel neutral. Similar results were found among participants who scored low on Spielberger's (1968) Trait Anxiety Scale—that is, participants who were chronically more relaxed (Tyler and Tucker 1982).² Other studies suggest that states of relaxation promote creativity. For example, Hershey and Kearns (1979) find that, compared with control participants, participants induced into a relaxed state perform better on several dimensions of the Torrance Tests of Creative Thinking (for conceptually related results, see Mehta and Zhu 2009). Taken together, this first stream of research suggests that relaxed consumers are likely to have more global and abstract representations of marketplace information than nonrelaxed consumers.

A second stream of research, the construal-level theory literature (Trope and Liberman 2003), suggests that various dimensions of psychological distance—such as time, space, or social distance—encourage more abstract representations (or construals) of goal-relevant objects. Such changes in level of representation (or construal) of goal objects can fundamentally alter the way the objects are appraised (Liberman and Trope 1998; Liberman, Trope, and Stephen 2007; Trope and Liberman 2003). In particular, under higher levels of construal, objects or activities (e.g., reading a science fiction book) are more likely to be assessed in light of higher-order (superordinate) goals (e.g., “expanding

one's horizon”), whereas under lower levels of construal, the same activities are more likely to be perceived in terms of subordinate considerations (e.g., “the plot is easy to follow”). In addition, under higher levels of construal, goal-directed activities (e.g., going on a vacation in Mexico) are also more likely to be evaluated in terms of their overall desirability (e.g., how appealing Mexico is), whereas under lower levels of construal, these activities are more likely to be evaluated in terms of their feasibility (e.g., the timing of the vacation, the cost, the amount of travel involved). Finally, under higher levels of construal, potential courses of actions tend to be evaluated more in terms of their potential advantages, whereas under lower levels of construal, potential disadvantages tend to carry more weight (Eyal et al. 2004). Given that most products and services are meant to fulfill broadly desirable goals, in general, a higher level of construal should increase their perceived monetary worth because products and services should be perceived as more valuable when they are appraised (1) in terms of higher-order goals (e.g., “Traveling in business class allows me to be more productive”) rather than lower-level considerations (e.g., “I have more leg room”), (2) with a focus on desirability (e.g., “How much do I want it?”) rather than feasibility (e.g., “Can I afford it?”), and (3) with more attention to the advantages than to the disadvantages. Consistent with this general prediction, Liu (2008) recently found that interrupting the decision-making process, which results in a higher level of construal of the decision, decreases price sensitivity and increases preference for highly desirable (but less feasible) options.

Combining insights from these two literatures leads to the prediction that relaxation should encourage a more abstract representation (or higher-level construal) of the value of products. This higher level of construal should result in most products or services being valued more by more relaxed consumers than by less relaxed consumers. For example, when assessing the monetary value of a digital camera, compared with less relaxed consumers, more relaxed consumers would tend to focus more on what the camera will enable them to do (e.g., collect memories) and how desirable and advantageous it is to own it rather than the concrete features of the camera itself (e.g., the number of megapixels, the shutter speed), its potential disadvantages, and the practicality of its purchase. This higher level of representation would result in relaxed consumers perceiving the camera as more valuable than less relaxed consumers might.

In the current research, we tested the general hypothesis that relaxation results in higher monetary valuations in a series of six controlled lab experiments. Across studies, more than 670 participants were induced either into a state of relaxation or into an equally pleasant but less relaxed affective state. Then, as part of a supposedly unrelated study, they were asked to assess the monetary value of products. We used different measures of monetary valuation across studies. We found that participants who were more relaxed consistently had higher monetary valuations of the products than participants who were less relaxed.

The first study demonstrates the basic phenomenon across various products. The second study replicates this effect using more refined measures of monetary valuation. The third study shows that the effect is eliminated when

¹In this respect, feelings of relaxation can be distinguished from feelings of contentment in that the latter seem to be signals that encourage the person to savor his or her present circumstances.

²In Spielberger's (1968) Trait Anxiety scale, many items taken to indicate low anxiety are actually assessing relaxation (e.g., “I feel calm,” “I am relaxed,” “I feel at ease”).

consumers are encouraged to think about the specific characteristics of the product before they assess its monetary value, which is consistent with the idea that the effect of relaxation on monetary valuation is driven by differences in representation of the product's value. The fourth study provides more direct support for this construal-level explanation by directly manipulating participants' levels of representation. The fifth study provides further evidence of the proposed explanation through process measures. The final study shows that the effects are not specific to the particular manipulation of relaxation used in the first five studies and generalize across a variety of product types. The overall evidence suggests that it is relaxed people who inflate the monetary value of products rather than less relaxed people who deflate it.

PRETEST

Given that the purpose of the research was to investigate the specific effects of relaxation rather than the more general effects of pleasant states, it was critical to design a procedure that would vary participants' relaxation while holding constant the pleasantness of their affective state. We conducted a series of pretests to identify two stimulus videos: one that ideally would be very relaxing and another that would be equally pleasant but less relaxing (though not exciting or tension inducing). The selection was eventually narrowed down to two particular videos. The relaxing video was a ten-minute, professionally edited selection of segments from a relaxation DVD produced by a medical team. The segments depicted various nature scenes with soft music in the background while a soothing voice provided relaxation-inducing instructions (e.g., about controlled breathing). The control video was a ten-minute television documentary about the future role of robots in society. It featured scenes of robots engaging in various activities (e.g., playing music, shaking hands with celebrities).

We subjected these two videos to a final pretest with 32 participants from the same population as in the main studies. Participants were randomly assigned to view either the relaxing video or the control (less relaxing) video, which they viewed on individual computers equipped with headphones. After viewing the video, participants reported their current feelings on five items from Gorn et al. (1997), each rated on a 1 ("not at all") to 9 ("very much so") scale. Three items assessed relaxation—"I feel relaxed," "I feel calm," and "I feel peaceful" ($\alpha = .81$)—and two items assessed the sheer pleasantness of the affective state—"I feel pleasant" and "I feel good" ($\alpha = .87$). As expected, the relaxing video induced stronger feelings of relaxation ($M = 7.20$) than the control video ($M = 6.06$; $F(1, 30) = 5.53, p < .03$). Note that while the control video was less relaxing than the relaxing video, the control video was still somewhat relaxing ($M = 6.06$ on a nine-point scale). Therefore, the control conditions in our studies did not elicit tension or excitement but rather a lower level of relaxation compared with the experimental conditions. A similar analysis of the pleasantness ratings indicated that both videos were relatively pleasant and were equally so ($M_{\text{More relaxed}} = 6.83$ and $M_{\text{Less relaxed}} = 6.41$ on nine-point scale; $F < 1$). This is important because it makes it difficult to explain the effects of our relaxation manipulation in terms of sheer affect valence.

STUDY 1

This first study provides an initial test of the effects of relaxation on the monetary valuations of products. Participants who were induced into either a relaxed state or an equally pleasant but less relaxed state were asked to assess the monetary value of a series of products. We then compared the perceived monetary value of these products across conditions.

Method

We conducted all studies among business undergraduate students who participated either for a small fee or in exchange for course credit. The first four studies were conducted in Hong Kong, and the last two studies were conducted in Singapore. All studies were run in small controlled lab sessions with participants assigned to separate partitioned stations equipped with computers and headphones, which were used to administer the relaxation manipulation.

In the first experiment, 45 participants were randomly assigned to either a more relaxed or a less relaxed condition. As in all our studies, the experiment was cast as two unrelated studies. The real purpose of the "first" study was to administer the relaxation manipulation. Participants were told that the researchers were pretesting a variety of videos to be used in a future study. They viewed either the relaxing video or the control video for ten minutes. Then they were asked to write down their thoughts about the video and rate it on a series of seven-point semantic differential items. Two items anchored by "relaxing/not relaxing" and "calming/not calming" assessed feelings of relaxation elicited by the program ($\alpha = .86$) and served as a manipulation check. One item anchored by "pleasant/unpleasant" assessed the felt pleasantness of the program and served as a further check that the videos were matched in terms of valence. Three more items, serving as confounding checks, assessed evaluations of the program on various dimensions: "interesting/not interesting," "difficult to understand/easy to understand," and "poorly done/well done." After the video response questionnaires were completed and collected, participants were thanked for their participation in the video evaluation study.

The "second" study was then introduced. It was purportedly about the monetary value that people assign to various products they encounter in daily life. Participants were shown the names and pictures of ten products, presented one at a time in a counterbalanced sequence: a backpack, a crystal tulip, a digital gauge for car tires, an LCD monitor, a magazine rack, a paper shredder, a picture frame, a scarf, a tennis racket, and a vacuum cleaner. For each product, participants were asked, "How much is [the product] worth?" For each product, they were given a choice of five price brackets of equal width, whose levels varied across products to reflect their different prices in the marketplace. Participants were asked to indicate the price bracket that best reflected how much they thought each product was worth. We converted their responses into a five-point scale (the higher the price bracket, the higher the number).

Results

Preliminary analyses. As expected, participants in the more relaxed condition reported being more relaxed ($M =$

6.26) than participants in the less relaxed condition ($M = 4.23$; $F(1, 43) = 54.08$, $p < .001$). However, feelings of pleasantness did not differ between the two conditions ($M_{\text{More relaxed}} = 4.14$ vs. $M_{\text{Less relaxed}} = 4.54$; $F(1, 43) = 1.00$, $p = .32$), consistent with the results of the pretest. In addition, the two videos were not evaluated differently in terms of how interesting they were ($M_{\text{More relaxed}} = 4.38$ vs. $M_{\text{Less relaxed}} = 4.75$; $p = .28$), how easy they were to understand ($M_{\text{More relaxed}} = 5.86$ vs. $M_{\text{Less relaxed}} = 6.00$; $p = .66$), and how well done they were ($M_{\text{More relaxed}} = 3.52$ vs. $M_{\text{Less relaxed}} = 2.92$; $p = .11$).

Perceived monetary worth. We submitted the perceived monetary worth scores for the ten products (see Table 1) to a mixed analysis of variance (ANOVA) with relaxation as a between-subjects factor and the ten products as a repeated factor.³ There was a within-subject main effect of products ($F(9, 387) = 56.56$, $p < .0001$), which simply indicates that valuations varied across products. More important, there was a significant between-subjects main effect of relaxation ($F(1, 43) = 9.72$, $p < .003$, $\omega^2 = .02$), indicating that the average monetary valuation pooled across products was higher in the more relaxed condition ($M = 2.61$) than in the less relaxed condition ($M = 2.23$). This effect was not qualified by a product \times relaxation interaction ($F < 1$), indicating that it was essentially parallel across products. Simple-effect (univariate) tests indicated that monetary valuation scores were significantly higher in the more relaxed condition than in the less relaxed condition for six of the ten products. For the other four products, the direction of the effect was the same, but the differences were smaller and not significant. There were no instances of reversal of the effect for any of the ten products. Note that controlling for partici-

pants' pleasantness of feelings in an analysis of covariance of the perceived monetary worth scores did not attenuate the main effect of relaxation ($F(1, 42) = 11.30$, $p < .01$), which is consistent with the finding that the manipulation of relaxation did not alter the pleasantness of participants' mood. (The same was also true for the remaining studies; therefore, we do not discuss it further.)

Discussion

These results provide initial evidence that states of relaxation increase the monetary valuations of products. On average across products, participants in the more relaxed condition assigned higher monetary valuations than did participants in the less relaxed condition. As the subsequent studies show, this increased monetary valuation effect of relaxation is robust. We examine the explanation for this effect in the subsequent studies. However, a mere mood-congruency explanation can be ruled out because in all our studies, the conditions were equated in level of pleasantness of feelings.

We could argue that the effects are due to uncontrolled aspects of the content of the videos (e.g., the use of nature scenes in the relaxation video versus robots in the control video) rather than to relaxation per se. However, two sets of results do not seem to support this alternative interpretation. First, we obtained similar results in Study 6 with a different manipulation of relaxation that simply uses instrumental music (no lyrics). Second, participants judged the two videos as largely equivalent on several evaluative dimensions such as interestingness, ease of understanding, and professional quality.⁴

STUDY 2

One potential reservation regarding Study 1 is that although the average monetary valuation across products was significantly higher in the more relaxed condition than in the less relaxed condition, this effect was not significant for every single product. A second potential reservation is that the monetary valuation measure, which involved price brackets, was not very refined. A third potential reservation is that information about each product was limited: We provided only the names and pictures of the products. The purpose of Study 2 was to address these possible reservations in the following ways. First, to assess the robustness and generalizability of the phenomenon, we used another product category (a digital camera) and changed the context to a bidding context. Second, we used more precise measures of monetary valuations. Third, we provided more detailed information about the product to add realism.

Participants were first put into either a more relaxed state or a less relaxed state and then were asked to imagine that they were interested in a digital camera available on eBay. Two measures of monetary valuation were collected: (1) the maximum amount of money that participants were willing to bid for the camera and (2) their estimates of how much the camera was really worth. If relaxation increases the monetary valuation of products, these two measures should be higher among participants who are more relaxed than among those who are less relaxed.

³Although the ten product monetary valuations were conceptually independent, it could be argued that they were not statistically independent, in which case a multivariate analysis of variance (MANOVA) may be more appropriate. A MANOVA also revealed a significant main effect of relaxation (Hotelling $T = 16.23$, exact $F(9, 35) = 63.12$, $p < .0001$), showing that the vector of valuation was higher in the more relaxed condition than in the less relaxed condition. The product \times relaxation interaction was not significant ($F < 1$). A mixed-model analysis treating the different products as a random factor also revealed a significant main effect of relaxation ($F(1, 43) = 9.46$, $p < .01$).

Table 1
MEAN PERCEIVED WORTH (HIGH NUMBERS INDICATING HIGHER PERCEIVED WORTH) AS A FUNCTION OF RELAXATION (STUDY 1)

	<i>More Relaxed</i> (<i>n</i> = 21)	<i>Less Relaxed</i> (<i>n</i> = 24)	<i>Difference</i> (<i>More Relaxed</i> – <i>Less Relaxed</i>)
Backpack	3.24	2.63	+.61*
Crystal tulip	3.33	3.17	+.16
Digital gauge for car tires	3.81	3.21	+.60*
LCD monitor	4.62	4.08	+.54*
Magazine rack	1.86	1.71	+.15
Paper shredder	2.19	1.58	+.61*
Picture frame	1.57	1.08	+.49*
Scarf	1.76	1.17	+.59*
Tennis racquet	1.57	1.54	+.03
Vacuum cleaner	2.19	2.08	+.11
Mean across products	2.61	2.23	+.38*

*Significant difference at $p < .05$.

⁴There were also no differences on any of these measures in the subsequent experiments. Thus, we do not discuss these measures further.

Method

Fifty-one participants randomly assigned to conditions underwent the same relaxation induction procedure as in Study 1, including the same measures of responses to the video. The monetary valuation task was administered in the “second” study, which simulated bidding for a product on eBay. Participants were asked to imagine that they wanted to buy a particular digital camera that was available brand-new on eBay, free of shipping costs. A picture of the camera was provided with a description of its attributes, such as its resolution, weight, and shutter speed, along with its suggested retail price (HK\$2,700). Participants could examine the camera for as long as they wanted. After examining the camera, as a first monetary valuation measure, participants were asked to indicate “the maximum bid (offer) you would be willing to make for this camera on eBay.” Next, they were asked to estimate the likelihood that they would be able to get the camera for the price they bid (1 = “very unlikely,” and 7 = “very likely”). Then, as a second measure of monetary valuation, participants were asked to estimate “How much do you think this camera is really worth?” Participants next rated their perceptions of the camera on four seven-point bipolar scales: “not easy/very easy to use,” “has poor/good features,” “not nice-looking/nice-looking,” and “not convenient to use/convenient to use.” To assess task involvement as a potential alternative explanation, participants rated their involvement on three seven-point bipolar scales: “a little distracted/not distracted at all,” “did not/did take the task very seriously,” and “not very focused/very focused” ($\alpha = .70$). Finally, to check for demand characteristics, participants were asked to guess the purpose of the study.

Results

Preliminary analyses. None of the participants guessed the true purpose of the study or even that the two studies were connected. As in the pretest and in Study 1, participants in the more relaxed condition reported being more relaxed ($M = 5.75$) than participants in the less relaxed condition ($M = 4.90$; $F(1, 49) = 6.93, p < .01$). Again, feelings of pleasantness did not differ between the two conditions ($M_{\text{More relaxed}} = 3.81$ vs. $M_{\text{Less relaxed}} = 4.36$; $F(1, 49) = 2.08, p > .15$). Task involvement was also equivalent across conditions ($M_{\text{More relaxed}} = 4.14$ vs. $M_{\text{Less relaxed}} = 3.60$; $F(1, 49) = 2.43, p > .12$).

Effects on monetary valuation. As expected, participants’ maximum bids were higher in the more relaxed condition ($M = \$2,550$) than in the less relaxed condition ($M = \$2,293$; $F(1, 49) = 6.29, p < .02, \omega^2 = .09$; see means in Table 2), again suggesting that relaxation increases monetary valuation. (There was no difference in the perceived likelihood of bid acceptance; $F < 1$.) Participants also estimated the product to be worth more in the more relaxed condition ($M = \$2,600$) than in the less relaxed condition ($M = \$2,288$; $F(1, 49) = 3.93, p = .05, \omega^2 = .07$).

Effects on product perceptions. It is noteworthy that there were no significant effects of relaxation on more specific perceptions of the product, whether it was ease of use ($F < 1, p = .53$), features ($F(1, 49) = 3.10, p = .084$), visual appeal ($F(1, 49) = 1.91, p = .17$), or convenience ($F < 1, p = .89$) (MANOVA- $F(4, 46) = 1.89, p = .13$). Therefore, it appears

that relaxation influenced monetary valuations without necessarily affecting more specific perceptions of the product.

Discussion

Again, we found that monetary valuations were higher among more relaxed participants than among less relaxed participants. We observed this effect in both participants’ bids for the product and their estimates of the monetary worth of the product. The finding that relaxation had similar effects on three different measures of monetary valuation—estimated price bracket, amount bid, and estimated monetary worth—provides converging evidence that states of relaxation do indeed increase monetary valuations. Moreover, the finding that this phenomenon was observed for multiple product categories in Study 1 and another product category in this study suggests that the phenomenon is somewhat generalizable. (Study 6 provides further evidence of generalizability.) Finally, the finding that the results of Study 1 were replicated when participants were given more extensive product information suggests that the phenomenon is not restricted to situations in which consumers have very limited information about a product.

We also found that relaxation did not have parallel effects on more specific perceptions of the product. This suggests that the effects of relaxation on monetary valuation are not driven by changes in product perceptions. Then why do states of relaxation increase monetary valuations? A possible explanation is that when assessing the monetary value of a product, relaxed people access a more abstract representation of this product’s value than less relaxed people. The finding that relaxation did not influence more specific ratings of product perception may be interpreted in light of this explanation. It could be that these specific ratings of product perceptions, which were solicited *after* the monetary valuation judgments were made, directed all participants’ attention to more concrete aspects of the product, thereby bringing all participants, more relaxed and less relaxed, to a common concrete representation level of the product. If this interpretation is correct, assessing the more specific (lower-level) product perceptions *before* the monetary valuation judgments should attenuate the effect of relaxation on monetary valuation. Such an interaction would provide initial evidence that the effects of relaxation on monetary valuation are indeed due to differences in levels of representation of the product’s value among relaxed versus less relaxed people. This initial test was done in Study 3.

Table 2
MEAN MONETARY VALUES AND PRODUCT ATTRIBUTE RATINGS AS A FUNCTION OF RELAXATION (STUDY 2)

	More Relaxed (n = 26)	Less Relaxed (n = 25)
<i>Monetary Valuation</i>		
Maximum bid (in HK\$)	2550.00	2292.68
Perceived worth (in HK\$)	2600.00	2288.00
<i>Product Attribute Ratings</i>		
Ease of use	1.73	1.44
Features	1.92	1.16
Look	1.62	.92
Convenience	1.62	1.68

STUDY 3

In Study 3, we expanded Study 2’s design to include an additional factor that manipulated the order in which the more general monetary valuation judgments and the more specific product perception ratings were solicited. Because this study is a direct replication and conceptual extension of Study 2, we report it briefly.

A total of 159 participants were put into either a more relaxed state or a less relaxed state and then presented with the same camera bidding scenario and monetary valuation task as in Study 2. In one condition, replicating Study 2, participants provided their monetary valuations of the camera *before* rating it on specific dimensions (e.g., ease of use, features). We expected that in this condition, more relaxed participants would provide higher monetary valuations than less relaxed participants, as in Study 2. In the other condition, participants provided their monetary valuations of the camera *after* rating it on the same specific dimensions. We expected that in this condition, the effects of relaxation on monetary valuations would be weaker because rating the product on specific dimensions first should bring both the more relaxed and less relaxed participants down to a more concrete level of product representation before making their monetary valuation judgments.

A two-way ANOVA of participants’ maximum bids revealed the predicted relaxation × order interaction ($F(1, 155) = 3.83, p = .05$; see Table 3).⁵ As Figure 1 illustrates, when monetary valuation was assessed first, participants in the more relaxed condition offered higher bids ($M = \$2,419$) than participants in the less relaxed condition ($M = \$2,174$; $F(1, 155) = 6.17, p < .02, \omega^2 = .07$), replicating the results of Study 2. However, when specific product perceptions were measured first, participants offered comparable bids in the more relaxed condition ($M = \$2,111$) and in the less relaxed condition ($M = \$2,104$; $F < 1$). As Table 3 summarizes, estimates of the product’s worth exhibited a parallel pattern. As in Study 2, product perceptions were largely unaffected across relaxation conditions.

The finding that merely assessing the product on specific dimensions before judgments of monetary value strongly

attenuated the effect of relaxation on monetary valuation is consistent with the notion that this effect may be due to different levels of representation of the product by more relaxed and less relaxed people. When more relaxed people are prompted to think about the product at a more concrete level, their valuations return to a level comparable to that of less relaxed people. We provide more direct evidence of this proposed explanation in the next two studies.

It is also noteworthy that the effects of the order manipulation on monetary valuations were stronger among more relaxed participants than among less relaxed participants (see Figure 1). This asymmetry suggests that it is the representations of the more relaxed participants that are affected by this manipulation and not those of the less relaxed participants. In turn, this suggests that the monetary valuation effects of relaxation are likely driven by a positive shift in valuations among relaxed people rather than a negative shift in valuations among less relaxed people. Study 4 provides additional evidence consistent with this interpretation.

STUDY 4

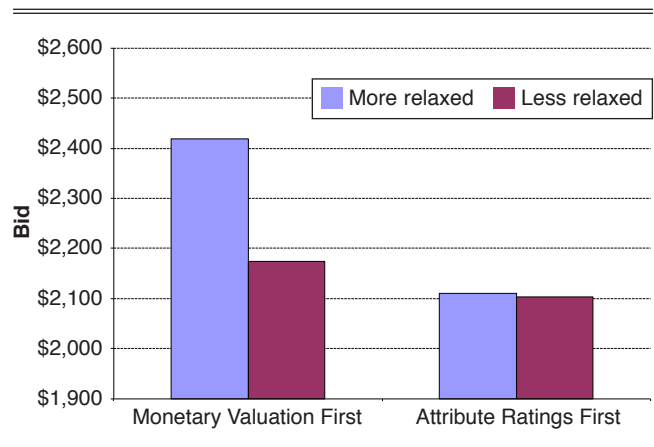
A standard methodological approach for assessing the role of a presumed mediating variable in a causal chain is to manipulate this variable to test whether variation in this variable moderates the link between the independent variable and the dependent variable. This is known as the moderation-of-process strategy for testing mediation (Spencer, Zanna, and Fong 2005). This strategy is especially effective when the hypothesized mediating construct—here, level of construal of the product’s value—is not easy to measure but is relatively easy to experimentally manipulate. Consistent with this approach, this study examines whether the priming of a higher or lower level of construal moderates the effects of relaxation on monetary valuation. If the effect of relaxation on monetary valuation is indeed due to higher levels of representation, priming an abstract level of thinking should amplify this effect by reinforcing relaxed people’s tendency to represent the value of products at a higher level. Conversely, priming a lower level of construal should attenuate this effect by inhibiting relaxed people’s tendency to represent products at a higher level.

⁵Because the distribution of bids was skewed in this study, we performed this ANOVA on log-transformed bids.

Table 3
MEAN MONETARY VALUES AND PRODUCT ATTRIBUTE RATINGS AS A FUNCTION OF RELAXATION AND ORDER OF TASKS (STUDY 3)

	Monetary Valuation First		Product Attribute Ratings First	
	More Relaxed (n = 40)	Less Relaxed (n = 42)	More Relaxed (n = 37)	Less Relaxed (n = 40)
<i>Monetary Valuation</i>				
Maximum bid	2418.78	2173.81	2110.81	2103.75
Perceived worth	2388.75	1966.67	2091.89	2147.50
<i>Product Attribute Ratings</i>				
Ease of use	4.83	4.81	4.89	5.05
Features	4.30	4.71	4.73	4.83
Look	3.95	3.67	4.24	3.73
Convenience	4.80	4.91	4.68	5.03

Figure 1
STUDY 3: EFFECT OF RELAXATION AND ORDER ON MONETARY VALUATION (BID)



Method

Design and procedure. A total of 199 participants were randomly assigned to the conditions of a 2×2 between-subjects design. The first factor manipulated relaxation as in the previous studies. The second factor primed different levels of construal (higher vs. lower). Participants were told that they would be participating in three separate studies. The “first” study served as the guise for priming different levels of construal. The “second” study manipulated relaxation. The “third” study consisted of the same camera bidding task as in Studies 2 and 3. (The order of the measures was the same as in Study 2, with the monetary valuation measures administered first.)

Priming of level of construal. We primed different levels of construal using a procedure developed by Fujita et al. (2006). Participants in the high-level construal condition were given a list of 40 items such as “fruit” and “magazine” and were asked to identify a higher-order category to which each item belonged. They provided their answers by filling in the blanks of statements in the form of “Pasta is an example of _____.” Participants in the low-level construal condition were given the same list of items and asked to identify a lower-order category that would belong to each item. They provided their answers by filling in the blanks of statements in the form of “An example of pasta is _____.” To lessen the chance that the relaxation manipulation in the “second” study would weaken the construal manipulation (and vice versa), we split the 40 items into two halves. Participants responded to half the items before the relaxation manipulation and half the items after the relaxation manipulation. As a cover story for the splitting the task, participants were told that they would receive a break between the first and second half of the task, during which they would watch a video and answer some questions about it.

Results

Preliminary analyses. Again, relaxation scores were higher among participants in the more relaxed condition than among participants in the less relaxed condition. This was true both immediately following the video ($M_{\text{More relaxed}} = 5.91$ vs. $M_{\text{Less relaxed}} = 4.87$; $F(1, 195) = 51.25$, $p < .001$), as in the previous studies, and at the end of the experiment, when relaxation was again assessed on two items (“not relaxed at all/very relaxed” and “not calm at all/very calm”; $\alpha = .83$; $M_{\text{More relaxed}} = 4.88$ vs. $M_{\text{Less relaxed}} = 4.54$; $F(1, 195) = 3.88$, $p < .05$). Neither the main effect of priming of construal nor the relaxation \times priming interaction was significant ($ps > .24$). Again, there were no effects of the relaxation manipulation on the valence of participants’ affective states either immediately after viewing the video ($M_{\text{More relaxed}} = 4.01$ vs. $M_{\text{Less relaxed}} = 4.03$; $F < 1$), as in the previous studies, or at the end of the experiment, when we assessed participants’ mood on two items (“in a bad mood/in a good mood” and “unhappy/happy”; $\alpha = .90$; $M_{\text{More relaxed}} = 4.47$ vs. $M_{\text{Less relaxed}} = 4.21$; $F(1, 195) = 1.92$, $p = .17$). Neither the main effect of priming of construal nor the relaxation \times priming interaction was significant ($Fs < 1$). We assessed the effectiveness of the construal priming manipulation as in Fujita et al. (2006), confirming that participants in the high-level construal condition related the target words to superordinate concepts ($M = 37.27$),

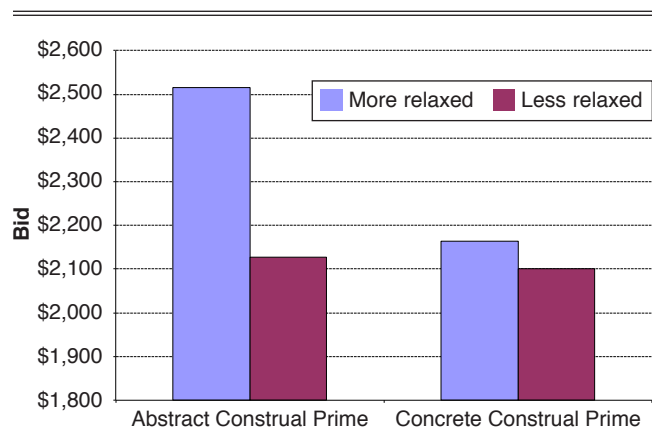
whereas those in the low-level construal condition related the same words to subordinate concepts ($M = -38.41$; $F(1, 195) = 48,192.18$, $p < .001$). There was no main effect of relaxation and no relaxation \times priming interaction ($F(1, 195) = 2.98$, $p = .09$, and $F < 1$, respectively). As in Studies 2 and 3, task involvement was equivalent across conditions (all $Fs < 1$).

Effects on monetary valuation. Table 4 reports the mean maximum bids in each condition, as well as the means for the other dependent measures. An ANOVA of these bids revealed a main effect of primed construal ($F(1, 195) = 7.61$, $p < .01$): Participants in the higher-level construal condition bid higher ($M = \$2,303$) than participants in the lower-level construal condition ($M = \$2,130$). This main effect of construal priming is consistent with the part of our explanation that links higher monetary valuations to higher levels of construal. There was also a main effect of relaxation ($F(1, 195) = 10.72$, $p < .001$, $\omega^2 = .04$): Again, participants bid higher in the more relaxed condition ($M = \$2,341$) than in the less relaxed condition ($M = \$2,115$). Importantly, these main effects were qualified by a significant relaxation \times priming interaction ($F(1, 195) = 5.64$, $p < .02$; see Figure 2).

Table 4
MEAN MONETARY VALUES AND PRODUCT ATTRIBUTE RATINGS AS A FUNCTION OF RELAXATION AND CONSTRUAL PRIMING LEVEL (STUDY 4)

	Abstractness Construal Prime		Concreteness Construal Prime	
	More Relaxed (n = 46)	Less Relaxed (n = 56)	More Relaxed (n = 45)	Less Relaxed (n = 52)
<i>Monetary Valuation</i> (in HK\$)				
Maximum bid	2515.22	2128.00	2163.33	2101.71
Perceived worth	2567.09	2099.05	2061.11	2002.58
<i>Product Attribute Ratings</i>				
Ease of use	4.89	5.00	5.24	4.91
Features	5.02	4.68	4.60	4.65
Look	4.22	4.04	4.42	3.96
Convenience	5.02	4.96	4.96	4.83

Figure 2
STUDY 4: EFFECT OF RELAXATION AND CONSTRUAL-LEVEL PRIMING ON MONETARY VALUATION (BID)



When participants were primed with a higher level of construal, those who were more relaxed were willing to bid significantly more ($M = \$2,515$) than those who were less relaxed ($M = \$2,128$; $F(1, 195) = 16.34, p < .001, \omega^2 = .12$). However, when participants were primed with a lower level of construal, those who were more relaxed were not willing to bid more ($M = \$2,163$) than those who were less relaxed ($M = \$2,101$; $F < 1$). This interaction pattern is consistent with the notion that relaxed people have higher monetary valuations of products (at least in part) because they construe these products at a higher level of abstraction. As in Studies 2 and 3, there were no main or interaction effects of the manipulations on participants' perceptions of the likelihood that their bids would be accepted ($ps > .11$).

Participants' estimates of the product's worth exhibited a parallel pattern (see Table 4). Again, participants in the more relaxed condition perceived the product to be worth more ($M = \$2,321$) than participants in the less relaxed condition ($M = \$2,053$; $F(1, 195) = 14.93, p < .001, \omega^2 = .05$), and participants in the higher-level construal condition perceived the product to be worth more ($M = \$2,314$) than participants in the lower-level construal condition ($M = \$2,030$; $F(1, 195) = 19.46, p < .001$). More important, a significant relaxation \times priming interaction ($F(1, 195) = 9.12, p < .01$) indicates that when participants were primed with a higher level of construal, those who were more relaxed perceived the product to be worth more ($M = \$2,576$) than those who were less relaxed ($M = \$2,099$; $F(1, 195) = 24.80, p < .001, \omega^2 = .18$). In contrast, when participants were primed with a lower level of construal, those who were more relaxed did not perceive the product to be worth more ($M = \$2,061$) than did those who were less relaxed ($M = \$2,003$; $F < 1$).

Effects on product perceptions. We performed separate ANOVAs on each of the four product attribute ratings (see Table 4). None of the main effects of relaxation was significant (the p -values for ease of use, features, looks, and convenience were .54, .40, .11, and .49, respectively). There were no main effects of primed construal on any of these ratings ($ps > .18$) and no relaxation \times primed construal interaction ($ps > .14$). Thus, as in Studies 2 and 3, relaxation had little effect on specific product perceptions.

Discussion

This study replicates once more the basic finding that states of relaxation increase monetary valuation compared with equally pleasant but less relaxed states. Moreover, the study provides further evidence that this phenomenon may be driven by differences in how relaxed people and less relaxed people mentally represent the value of the product. Two findings support this explanation. First, participants who were primed with a higher level of construal had higher monetary valuations than those who were primed with a lower level of construal. This finding is consistent with the part of our general theoretical explanation that links higher monetary valuations to higher levels of construal. More important, we found that priming a higher level of construal, which should theoretically exaggerate the effect of relaxation on representation, indeed magnified the effect of relaxation on monetary valuation. For example, in this study, when a higher level of construal was primed, the size of the relaxation effect on participants' bids was $\omega^2 = .12$. By comparison, in Study 2 the size of this effect was $\omega^2 =$

.09, and in Study 3 the size of this effect was $\omega^2 = .07$ in the monetary-valuation-first condition. In contrast, priming a lower level of construal, which should theoretically disrupt the effect of relaxation on representation, greatly attenuated the effect of relaxation on monetary valuations. Therefore, by using a construal-priming procedure to directly manipulate the presumed mediator of the relationship between relaxation and monetary valuation, we were able to either amplify or attenuate this relationship. As Spencer, Zanna, and Fong (2005) explain, under the logic of moderation-of-process designs for testing mediation, such a pattern of findings supports the proposed causal chain: relaxation \rightarrow higher construal \rightarrow higher monetary valuation.

Whereas our main predictions focused on the simple effects of relaxation when a higher level of construal was primed compared with when a lower level of construal was primed, it is also instructive to examine the simple effects of construal priming for each level of relaxation. As Figure 2 illustrates (see also Table 4), whereas the level of construal primed influenced the more relaxed participants' valuations significantly, it did not influence the less relaxed participants' valuations. This pattern of results is consistent with the pattern observed in Study 3. It seems to suggest that it is the representations of the more relaxed participants that are affected, not those of the less relaxed participants. In turn, this would suggest that the monetary valuation effects of relaxation are likely driven by a positive shift in valuations among relaxed people rather than a negative shift in valuations among less relaxed people.

One may wonder why the concrete-construal priming was more effective in bringing the monetary valuations of more relaxed participants downward than the abstract-construal priming was in bringing the monetary valuations of less relaxed participants upward. Because higher levels of construal generally arise from a loss of representational detail that usually comes with time and distance (Liberman, Trope, and Stephan 2007), we speculate that in situations such as in this study, in which concrete stimulus information (the product's attribute description) was available to all participants, it is often easier to bring higher-level-of-construal people down to a more concrete level of thinking than it is to bring lower-level-of-construal people up to a more abstract level of thinking. This asymmetry in ease of movement is consistent with the finding that, in general, higher-level considerations are considered before lower-level considerations are ("big-picture first, details next") rather than the reverse—a notion known as asymmetric conditional importance (Eyal et al. 2004; Sagristano, Trope, and Liberman 2002). For example, in gambles, people typically examine payoffs (which have been shown to be higher-level considerations) before they examine probabilities (which have been shown to be lower-level considerations) (Sagristano, Trope, and Liberman 2002). Similarly, in evaluating courses of actions, people typically examine the pros (which have been found to be higher-level considerations) before they examine the cons (which have been found to be lower-level considerations) (Eyal et al. 2004). Therefore, considering the sequence in which higher and lower level of representations are typically accessed, it is possible that when less relaxed participants saw the product and its attributes, it was difficult for them to abstract away from these concrete considerations, even after completing the abstract-construal-

priming task. As the next study demonstrates, relaxation does result in different levels of construal of a product's value.

STUDY 5

The purpose of Study 5 was to provide more direct process evidence for our construal-level explanation of the phenomenon. Again, participants who were induced into a more relaxed or less relaxed state were asked for their monetary valuations of a digital camera. Unlike in the previous studies, in this study, after reporting their monetary valuations, participants were also asked to report on the extent to which they engaged in abstract- and concrete-level thinking when assessing their monetary valuations. We predicted that more relaxed participants would report more abstract-level thinking and less concrete-level thinking than less relaxed participants.

Method

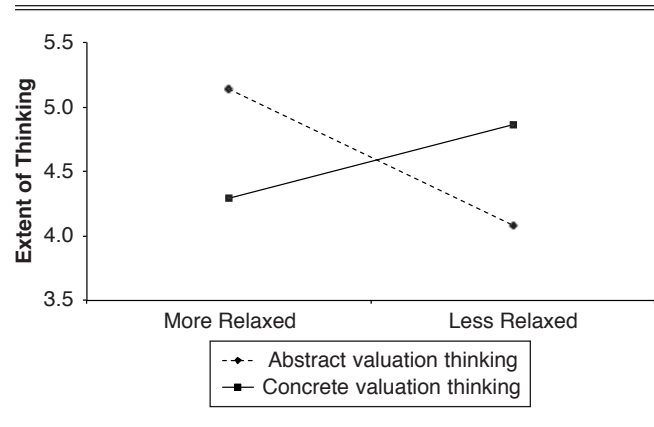
One hundred twenty Singaporean undergraduate students were induced into either a more relaxed or a less relaxed state through the same video manipulation used in the previous studies. They were then presented with the camera bidding task. After reporting their maximum bid for the camera and their estimates of how much it was worth, participants answered four questions designed to capture their level of thinking when assessing the monetary value of the camera. The four questions were intermixed, and responses were assessed on a 1 ("not at all") to 7 ("very much") scale. Two questions focused on abstract-level thinking: "To what extent did you think about 'why you might want this camera'?" and "To what extent did you think about 'capturing moments, objects, or faces' with it?" ($\alpha = .74$). We averaged responses to form an abstract-thinking score. Two questions focused on concrete-level thinking: "To what extent did you think about how useful each specific feature of the camera was (e.g., number of pixels, zoom, LCD display, shutter speed, image format, flash, etc.)?" and "To what extent did you think about 'how to take good pictures with it'?" ($\alpha = .70$). We averaged responses to form a concrete-thinking score. We assessed perceptions of the camera's features as in the previous studies, again showing no effects of relaxation. We also administered and assessed the same manipulation check for relaxation and confounding checks for pleasantness, involvement, and evaluations of the video as in the previous studies. Only the check for relaxation was significant.

Results and Discussion

Effects on monetary valuation. Again, participants in the more relaxed condition bid higher and estimated the camera to be worth more than participants in the less relaxed condition ($M_{\text{Bid}} = 635$ vs. 583; $F(1, 118) = 6.24, p < .02, \omega^2 = .04$; $M_{\text{Worth}} = 615$ vs. 558, $F(1, 118) = 5.97, p < .02, \omega^2 = .04$).

Effects on level of thinking. A mixed ANOVA of the abstract- and concrete-thinking scores, with relaxation as a between-subjects factor and level of thinking as a repeated factor, revealed a significant interaction between relaxation and level of thinking ($F(1, 118) = 37.50, p < .001$). As expected (see Figure 3), abstract-thinking scores were higher in the more relaxed condition ($M = 5.40$) than in the less relaxed condition ($M = 4.12$; $F(1, 118) = 21.33, p < .001$). In contrast, concrete-thinking scores were lower in the more relaxed condition ($M = 4.33$) than in the less relaxed condi-

Figure 3
STUDY 5: EFFECT OF RELAXATION ON EXTENT OF
ABSTRACT AND CONCRETE VALUATION THINKING



tion ($M = 4.95$; $F(1, 118) = 9.40, p < .01$). Thus, relaxation indeed seems to trigger a higher level of thinking and representation when assessing the monetary value of a product.

Mediation analysis. To verify that a difference in level of thinking was indeed responsible for the valuation effect of relaxation, we constructed a thinking differential index by subtracting participants' concrete-thinking score from their abstract-thinking score. When we entered this index as a covariate in analyses of covariance of participants' bids and perceived worth, two findings emerged. First, this covariate was a significant predictor of both bid ($F(1, 116) = 36.03, p < .001$) and perceived worth ($F(1, 116) = 28.36, p < .001$). More importantly, controlling for this covariate completely removed the effects of relaxation on both bid and perceived worth ($F_s < 1$; mean squares reduced by more than 90%; see Pham and Muthukrishnan 2002), providing yet another piece of evidence that the effects of relaxation on monetary valuations are driven by differences in level of construal.

STUDY 6

One limitation of the previous studies is that they were all based on a single manipulation of relaxation. This singularity of method raises the possibility that something about the method itself rather than relaxation per se was the real driver of the observed effects. For example, given that the relaxing video consisted of scenes of nature, whereas the control video consisted of man-made settings, the former may have required fewer attentional resources than the latter (Berman, Jonides, and Kaplan 2008), leaving more resources for abstract thinking. It may also be that explicit instructions to relax in the relaxing video subtly encouraged participants to "let go" of things, including concerns about money, thereby increasing their willingness to pay. To examine these alternative explanations, in this study, we used a purely musical manipulation of relaxation containing no visual content and no explicit instructions to relax.

A second objective was to further investigate the generalizability of the effects. Although in the previous studies, we observed the effect of relaxation on monetary evaluation across multiple product categories, the range of product categories to which this effect extends is not clear. For example, a natural question is whether the effect is more likely

to be observed for products that are inherently relaxing (e.g., a spa, a cruise) than for products that are nonrelaxing/higher-activity (e.g., gym membership, bungee jumping), in a pattern that would be consistent with an affect-as-information effect (Kim, Park, and Schwartz 2010; Pham 2004; Schwarz and Clore 1983). One may also wonder whether the effect extends to indulgence-type products, whose consumption could lead to subsequent regret (e.g., an unhealthy dessert, alcohol). To address these generalizability issues, Study 6 tests the effects of relaxation on three types of products: (1) products generally considered relaxing, (2) products generally considered nonrelaxing/higher activity, and (3) products generally considered indulgences.

Method

Design and procedure. The design of this experiment was a 2 (relaxation: more or less) \times 3 (product type: relaxing, nonrelaxing/higher-activity, indulgence) mixed design, with relaxation as a between-subjects factor and product type as a within-subject factor. Under the guise of a study on how in-store atmospheric factors influence product perceptions, 97 Singaporean undergraduate students listened to a piece of music that was either more relaxing or less relaxing for five minutes. They then rated the music and indicated how it made them feel. Next, after the music was lowered to 10% of its original volume (so that it would not be distracting), participants were asked to assess the monetary value of 15 products (5 of each of the three major types). Participants made these assessments by selecting one of five possible price points for each product (converted to a 1–5 scale). To investigate the possibility that the effects of relaxation on monetary valuations are due to a lower pain of payment among relaxed people, we then gave participants a suggested price for each product and asked them to indicate on a seven-point scale how much it would bother them to pay that price. Next, as manipulation checks for product type, participants indicated the degree to which each product was (1) relaxing, (2) exciting, (3) typically consumed on impulse, and (4) tempting but not good if consumed in excess. Finally, to verify that the manipulation of relaxation lasted throughout the various rating tasks, participants rated how relaxed they were and how pleasant they felt on seven-point scales.

Music manipulation of relaxation. Similar to the pretest-ing done to select the videos, we conducted a series of pretests to identify two instrumental pieces of music that would differ in terms of level of relaxation induced but be equivalent in terms of pleasantness. In a final pretest, 83 participants were asked to listen to one of the two pieces of music for five minutes and then indicate how they were feeling on a series of seven-point scales that included three relaxation items (“relaxed,” “calm,” and “serene”; $\alpha = .84$) and three pleasantness items (“happy,” “joyful,” and “pleasant”; $\alpha = .82$). Participants who listened to the more relaxing piece reported being more relaxed ($M = 5.50$) than participants who listened to the less relaxing piece ($M = 4.63$; $F(1, 81) = 8.29, p < .01$). However, participants reported feeling equally pleasant in the two conditions ($M = 4.41$ vs. 4.44 , for more relaxed and less relaxed participants, respectively; $F < 1$).

Product types. To identify relaxing-type, nonrelaxing/higher-activity-type, and indulgence-type products, 95 pretest

participants were asked to rate 27 products in terms of whether these products (1) were generally relaxing, (2) were generally bought on impulse, and (3) could have negative long-term consequences. This pretest led to the selection of five relaxing-type products (a cruise, a spa treatment, a massage chair, a four-day vacation in Tahiti, aroma candles), five nonrelaxing-type products (a gym membership, bungee-jumping sessions, an entrance ticket to a nightclub, tickets to a water park, an energy drink), and five indulgence-type products (a casino membership, a bottle of vodka, an ice-cream sundae, a bag of potato chips, and a slice of cheesecake). In the main study, these products were intermixed and presented in one of two random sequences (which did not moderate the results).

Results and Discussion

Preliminary analyses. After listening to the music for five minutes and before the monetary valuation task, participants reported being more relaxed in the more relaxing music condition ($M = 5.72$) than in the less relaxing music condition ($M = 4.68$; $F(1, 95) = 27.02, p < .001$), but they felt equally pleasant across conditions ($M = 4.71$ and 4.93 , respectively; $F(1, 95) = 1.39, p > .25$). Similar ratings collected at the end of the study exhibited the same pattern. A series of mixed ANOVAs confirmed that (1) participants judged relaxing products to be more relaxing ($M = 4.50$) than either nonrelaxing/higher-activity products ($M = 2.75$; $F(1, 95) = 305.35, p < .001$) or indulgence products ($M = 3.21$; $F(1, 95) = 221.11, p < .001$), and (2) they judged nonrelaxing/higher-activity products to be more exciting ($M = 4.23$) than either relaxing products ($M = 3.13$; $F(1, 95) = 244.54, p < .001$) or indulgence products ($M = 3.48$; $F(1, 95) = 109.21, p < .001$). Participants judged indulgence products to be more typically consumed on impulse ($M = 4.37$) than either relaxing products ($M = 2.48$; $F(1, 95) = 415.41, p < .001$) or nonrelaxing/higher-activity products ($M = 2.84$; $F(1, 95) = 456.37, p < .001$); they also judged the former to be more “tempting but not good if consumed in excess” ($M = 4.26$) than either relaxing products ($M = 2.59$; $F(1, 95) = 380.33, p < .001$) or nonrelaxing/higher-activity products ($M = 3.30$; $F(1, 95) = 129.10, p < .001$).

Perceived monetary worth. A 2 (relaxation) \times 3 (product type) mixed ANOVA of 15 products’ monetary worth scores uncovered a main effect of product type ($F(2, 190) = 17.97, p < .001$), which was not of theoretical interest. More importantly, there was again a main effect of relaxation ($F(1, 95) = 11.19, p < .002, \omega^2 = .05$). As in the previous studies, monetary valuations were higher in the more relaxed condition ($M = 2.82$) than in the less relaxed condition ($M = 2.48$), suggesting that the effects are not limited to the specific manipulation of relaxation used in the previous studies. Interestingly, the effect of relaxation was not qualified by an interaction with product type ($F < 1$), suggesting that relaxation is equally likely to increase the monetary valuations of relaxing products, nonrelaxing/higher-activity products, and indulgence products (see Table 5).⁶

⁶A mixed-model analysis treating relaxation and product type as fixed effects and product replicates as a random effect nested within product type yields similar results. The main effect of relaxation remains significant ($F(1, 95) = 11.73, p < .001$) and is not qualified by an interaction with product type ($F < 1$). The only difference is that the main effect of product type becomes nonsignificant ($F < 1$).

Table 5
 MEAN PERCEIVED WORTH (HIGH NUMBERS INDICATING
 HIGHER PERCEIVED WORTH) AS A FUNCTION OF
 RELAXATION AND PRODUCT TYPE (STUDY 6)

	<i>More Relaxed</i> (<i>n</i> = 21)	<i>Less Relaxed</i> (<i>n</i> = 24)	<i>Difference</i> (<i>More Relaxed</i> – <i>Less Relaxed</i>)
<i>Relaxing Products</i>			
Cruise	2.98	2.20	+ .78*
Spa treatment	3.17	2.33	+ .84*
Massage chair	2.22	2.31	– .09
Vacation in Tahiti	3.44	2.78	+ .66*
Aroma candles	1.27	1.44	– .17
Mean across relaxing products	2.61	2.21	+ .40*
<i>Nonrelaxing/High-Activity Products</i>			
Gym membership	3.35	2.64	+ .71*
Bungee jumping sessions	4.08	3.27	+ .81*
Entrance to nightclub	2.81	2.71	+ .10
Tickets to water park	2.00	1.93	+ .07
Energy drink	2.39	2.38	+ .01
Mean across nonrelaxing products	2.92	2.59	+ .33*
<i>Indulgence Products</i>			
Casino membership	3.90	3.11	+ .79*
Bottle of vodka	2.46	2.73	– .27
Ice cream sundae	3.00	2.49	+ .51*
Bag of potato chips	1.52	1.73	+ .11
Slice of cheesecake	3.69	3.07	+ .62*
Mean across indulgence products	2.92	2.63	+ .29*
Mean across all 15 products	2.82	2.48	+ .34*

*Significant difference at $p < .05$.

The finding that the effects of relaxation were largely parallel for relaxing and nonrelaxing products seems to suggest that these effects are not due to affect-as-information-like evaluative inferences. The finding that the effects do not completely disappear or reverse for indulgence products seems to suggest that a greater attention to desirability is not the sole driver of these effects; a tendency to relate the product to higher-order goals and focus on advantages rather than disadvantages may be at work as well.

Pain of payment. A 2×3 mixed ANOVA of how bothered participants would be if they had to pay the price that was suggested to them for each product revealed a main effect of product type ($F(2, 190) = 17.97, p < .001$), which again was not of theoretical interest in this research. More important, there was no main effect of relaxation ($F < 1$) and no relaxation \times product type interaction ($F < 1$). This suggests that the effects of relaxation on monetary valuation are not due to relaxed people experiencing a lower pain of payment.

GENERAL DISCUSSION

Although marketers often try to create states of relaxation, the effects of relaxation on consumers have received very little attention. While it is obvious that states of relaxation are pleasant, our research indicates that they have additional effects of marketing importance. Specifically, states of relaxation increase consumers' monetary valuations of products compared with equally pleasant but less relaxed states. We observed this effect in six studies using various measures of monetary valuation across a wide range of products. As we observed in Study 6, this effect holds as

much for products that are nonrelaxing as it does for products that are relaxing and even holds for indulgence products whose consumption might sometimes be regretted later. This effect has important marketing implications. All else being equal, consumers will be willing to pay higher prices if marketers are able to relax them first. This may partly explain why luxury products and services (e.g., luxury hotels, high-end boutiques, first-class lounges) are typically provided in relaxing environments.

The robust effect of relaxation on monetary valuations observed in this research seems to be due to relaxed people having higher-level construals of value for products. When assessing the monetary value of products, relaxed people tend to think of higher-order benefits and goals that might be fulfilled by having and using the product, whereas less relaxed people tend to have lower-level construals that focus on the specific characteristics of the product itself. Two types of findings support this interpretation. First, we found that the effect of relaxation on monetary valuations is eliminated when relaxed participants are encouraged to think of the product's value at a more concrete level—whether it is by having them rate the specific characteristics of the product before assessing its monetary value (Study 3) or by priming more concrete-level thinking (Study 4). More direct process evidence comes from the finding that more relaxed participants reported more abstract thinking and less concrete thinking than less relaxed participants—a difference that statistically mediated the effect of relaxation on monetary valuations (Study 5).

The effect cannot be explained in terms of mood-congruent evaluation, because the experimental conditions were consistently equated in terms of pleasantness of affective states. Moreover, the effect does not appear to be due to the specifics of the relaxing video used in the first five studies. It may be argued that compared with the control video, the nature scenes in the relaxing video required fewer attentional resources (Berman, Jonides, and Kaplan 2008), leaving more resources for abstract thinking during monetary valuation. It is also possible that explicit instructions to relax in the relaxation video encouraged participants to “let go” of things, causing them to become less concerned about money. However, the finding in Study 6 that a purely musical manipulation of relaxation produces the same effect suggests that the findings were not specific to the relaxing video used in this research.

Given that relaxation can reduce physical pain (e.g., Krout 2001), another explanation may be that relaxed people experienced a lesser pain of payment for the products, which could account for their higher monetary valuations. However, in Studies 1 and 6, relaxation had similar effects on simple judgments of monetary worth (judgments that involved no presumption of purchase and payment), which suggests that a reduced-pain-of-payment explanation is not sufficient. Moreover, in Study 6, more relaxed participants reported being no less bothered to pay the prices that were suggested to them for the various products than did less relaxed participants.

A final alternative explanation is that relaxation decreases task involvement, leading to more heuristic processing, which in turn would lead to higher valuations. This explanation would be consistent with the finding that high arousal and anxiety (and presumably low relaxation)

encourages a more diagnostic processing of information (Pham 1996). However, the data do not seem to support this explanation. First, in the studies in which we measured involvement (Studies 2–5), we found participants to be equally involved across relaxation conditions. Second, in Study 6, the amount of time that participants took to do the monetary valuation task was recorded: more relaxed and less relaxed participants took virtually the same amount of time ($M = 692$ seconds vs. 686 seconds, respectively; $F < 1$).

One may wonder whether the main finding is due to more relaxed people inflating their valuations or less relaxed people deflating them. Two lines of evidence suggest that it is the former. The first line of evidence comes from comparing the monetary values that participants assigned to the camera to its actual market price. In Studies 2–4, the camera manufacturer's suggested retail price was HK\$2,700. At the time the studies were conducted, comparable cameras sold on eBay at 75.2% of their manufacturer's suggested retail price, putting the camera's eBay market value at HK\$2,030. This number is close to the valuations of less relaxed participants (which were approximately HK\$2,100) and is substantially lower than those of more relaxed participants (which were in the HK\$2,400–HK\$2,500 range; see Tables 2–4). We obtained similar results for Study 5, conducted in Singapore, where the estimated eBay price of the camera was SG\$549, whereas more relaxed participants' valuations were in the range of SG\$615–SG\$635 and less relaxed participants' valuations were in the range of SG\$558–SG\$583.

The second line of evidence is based on the pattern of finding in Studies 3 and 4, in which only the more relaxed participants were affected by manipulations of levels of representation of the product, whereas the less relaxed participants were unaffected (see Figures 1 and 2). This asymmetry suggests that it is the more relaxed participants, not the less relaxed participants, who had different representations of the product's value when being put into these particular states. Specifically, the more relaxed participants appeared to have more abstract representations than they would otherwise and, as a result, had higher monetary valuations. When these participants were induced to think more concretely about the product's value, the effect of relaxation dissipated.

Looking forward, two research questions deserve particular attention. First, given our main primary finding that relaxation increases monetary valuation compared with states of lower relaxation (holding the pleasantness of the state constant), it would be helpful to study what would happen at the opposite end of the continuum: Would states of higher stress decrease monetary valuations compared with states of lower stress (a continuation of the trend observed in our research), or would the effect be qualitatively different? It is possible that when the full relaxation-to-stress continuum is considered, the relationship between this continuum and monetary valuation is nonmonotonic. The prediction is not obvious and warrants further investigation. Second, it should be noted that we conducted all our studies among Asian participants in Hong Kong and Singapore. Although our conceptualization of the phenomenon is not culture specific, it is possible that this phenomenon does not generalize beyond Asian cultures. For example, it is conceivable that our results may have been influenced in part by the fact that

dominant religions and philosophies in Asia tend to place a strong emphasis on the virtues of calmness and meditation. It has also been observed that Chinese people tend to be chronically more anxious and thus less relaxed than Caucasian people (Dong, Leong, and Feng 2008). We leave it to further research to examine the cross-cultural generalizability of our findings.

On a more general note, common wisdom holds that, in general, relaxation should improve decision making. However, to the extent that consumers should not overestimate the value of products they are considering purchasing, it may sometimes be disadvantageous for consumers to be more relaxed. Moreover, while our findings pertain to the effects of relaxation in particular, it is possible that *any* factor that induces a momentary state of decreased vigilance (e.g., sleepiness, a confidence prime) may produce a similar effect. Should this be the case, this would have obvious marketing and public policy implications.

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Erratum

In the print version of this article, Michel Tuan Pham's name mistakenly appeared as Michel Tuan Phan. The editors of the *Journal of Marketing Research* deeply regret the error.

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