

How Power States Influence Consumers' Perceptions of Price Unfairness

LIYIN JIN
YANQUN HE
YING ZHANG

The present research explores how the power state interacts with comparative references in shaping consumer perceptions of price unfairness. Five experiments found that high-power consumers perceive stronger price unfairness when paying more than other consumers do, whereas low-power consumers perceive stronger unfairness when paying more than they themselves paid in previous transactions. The distinction occurs because consumers experience a threat to their self-importance from different types of disadvantaged comparisons depending on their power states. These results show that the state of power determines consumers' respective channels for maintaining their self-importance and alters the relevance of different comparative standards.

Discriminatory pricing is a common firm practice in today's market. While helping to increase profit by taking advantage of the market situation, such price variations also risk inducing a sense of price unfairness. For example, when a customer learns that he or she is paying more than another individual, he or she may become upset and perceive this as unfair treatment. This sense of price unfairness can result in negative word of mouth (Campbell 1999), decreases in purchase intentions (Blinder 1991; Piron and Fernandez 1995), increased switching and complaining behavior (Huppertz, Arenson, and Evans 1978), or even customer revenge (Bougie, Pieters, and Zeelenberg 2003). No firm can afford to ignore these negative consequences; therefore, it is of paramount importance to understand the

factors that contribute to consumer perceptions of price unfairness.

Although the literature has traditionally emphasized the importance of comparative references (i.e., reference prices) in fairness judgments (Bolton, Keh, and Alba 2010; Bolton, Warlop, and Alba 2003; Xia, Monroe, and Cox 2004), relatively little research has examined how people can perceive the same price as being fair or unfair when different comparative references are available. In particular, when evaluating the fairness of a particular price, consumers can make comparisons with themselves (i.e., self-comparison) and ask, "How does this price compare with what I paid in the past?" or make comparisons with other people (i.e., other-comparison) and ask, "How does this price compare with what other customers are paying?" (Haws and Bearden 2006; Xia et al. 2004). Which one of these two comparisons has a greater influence on a person's price fairness judgment? For example, holding the actual price paid constant, which would upset customers more: knowing that the current price paid is higher than he or she has previously paid or knowing that he or she is paying more than other people are paying? More importantly, would these perceptions vary depending on the person's psychological state?

The present research approaches this question from the perspective of the power state, a pervasive psychological force that defines who and what consumers value (Rucker and Galinsky 2008; Rucker, Galinsky, and Dubois 2012). We propose that the degree to which one feels powerful influences which type of price comparison threatens their sense of self-importance and in turn affects their emotional reactions and perceptions of price unfairness. Specifically,

Liyin Jin (jinliyin@fudan.edu.cn) and Yanqun He (yanqun_he@fudan.edu.cn) are associate professors of marketing at the School of Management, Fudan University, No. 670 Guoshun Road, Shanghai 200433; Ying Zhang (Ying.Zhang@mcombs.utexas.edu) is an associate professor of marketing at McCombs School of Business, University of Texas at Austin, B6700, 1 University Station, Austin, TX 78702 and a JM honorary service professor at Guanghua School of Management, Peking University. This research was supported in part by National Science Foundation of China grants nos. 71272075 and 71272038. The authors thank Li Xiao for her help in data collection. The authors also acknowledge the helpful input of the editor, the associate editor, and the reviewers. Address correspondence to Liyin Jin.

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for high-power individuals, receiving a disadvantaged price relative to other consumers (i.e., other-comparison) poses a greater threat to their sense of self-importance and thus induces greater perceptions of price unfairness and triggers more approach-related affect and behavioral tendencies (i.e., anger and complaints). In contrast, for low-power individuals, a price disadvantage compared with the purchases that they made in the past (i.e., self-comparison) poses a greater threat to their sense of self-importance, which in turn fosters a greater perception of price unfairness and triggers more avoidance-related affect and behavioral tendencies (i.e., sadness and termination of relationship).

THEORETICAL DEVELOPMENT

Price Unfairness Judgment

Perceptions of price unfairness are products of comparison (Monroe 2003) and are induced only when the comparative prices are unequal. From a consumer's perspective, price inequity can be either advantaged (i.e., his or her price is lower than the reference price) or disadvantaged (i.e., his or her price is higher than the reference price; Xia and Monroe 2010). Although both advantaged and disadvantaged price inequities can lead to perceptions of unfairness (Finkel 2001; Van den Bos et al. 1997), the present research focuses on disadvantage-induced emotions and explores unfairness perceptions in situations in which consumers encounter a disadvantaged price inequity because the sense of unfairness is more severe in these situations and has more pronounced downstream consequences (Martins 1995; Xia et al. 2004).

When evaluating prices, customers use different comparative references, including another person, a class of people, an organization, or themselves in relation to their own experiences from an earlier point in time (Jacoby 1976). The research shows that the most commonly adopted comparative references are self-comparison and other-comparison references (Haws and Bearden 2006; Monroe 2003; Xia et al. 2004). In self-comparisons, a customer uses previous similar transactions as a reference (e.g., "Am I paying more than I used to?") and experiences a sense of unfairness if a price inequity occurs relative to the previous prices. In contrast, other-comparisons highlight the price paid by others when consumers evaluate their own price entitlement (e.g., "Am I paying more than other customers?"), and people experience unfairness if their prices are higher than the prices that others are paying.

The reason that both oneself and others can serve as benchmarks for price comparisons is that the transactions share certain similarities (Major 1994; Xia et al. 2004). The degree of similarity between the transactions determines the likelihood of comparison (Bolton et al. 2003; Wood 1989), and such transactions are used as references only when they are perceived to be sufficiently similar. Among all transactions, consumers' past transactions serve as powerful benchmarks because the past self is perceived to be more similar to the present self than another individual and because information about the self is often easily accessible. Egocentrism (for a review, see Dunning

[2000]), for example, suggests that people are particularly sensitive to self-comparison information because a comparison with one's past self is an important way for people to monitor whether they are doing better than before and, in turn, to form an accurate self-assessment. As a result, self-comparisons are cognitively easier and are likely to be the "default" option when the need for comparative judgment arises (Kulik and Ambrose 1992).

In the context of price comparisons, prior transaction experiences create a price memory, which in turn shapes a predictive price expectation (Briesch et al. 1997). The retrieved price in memory thus serves as a useful internal reference point when consumers evaluate the price of similar transactions at a later time (Wagstaff 1994). For example, a consumer who has paid \$35 for a particular wine many times would assume that \$35 is the standard price for this wine and would be sensitive to any deviation. Therefore, this internal price point serves as an important benchmark for evaluating whether a price for this wine is fair.

However, one's own prior experience is by no means the only benchmark in price comparisons. In addition to the price that an individual paid for a certain product in the past, the prices that others are paying for the same item are also relevant when evaluating the fairness of a price (Haws and Bearden 2006; Major and Testa 1989; Xia et al. 2004). The literature has repeatedly shown that when individuals encounter uncertainty, they make judgments by comparing themselves to others (Festinger 1954) and generally seek targets that are similar regarding related attributes to increase confidence in their judgments (Goethals and Darley 1977). Therefore, when attempting to judge the fairness of a price, consumers are also likely to consult the experiences of similar others and use their transaction prices as a standard for evaluation (Martins 1995; Van den Bos et al. 1997). For example, when a person must evaluate whether paying \$35 for a bottle of wine is fair, he or she is likely to consider whether another person paid that price and to then form a subsequent assessment.

Although both purchases made by oneself and those made by others can serve as benchmarks for price comparisons, the relative influence of these judgments has yet to be fully explored. The extant research on this topic has shown that the effectiveness of these comparisons varies depending on the situation. For example, Xia et al. (2004) argue that compared with previous purchases made by oneself, similar purchases made by others have a greater effect on the perception of price unfairness, particularly when this information is salient and when the other individuals in consideration are immediately relevant to the buyer. Similarly, Haws and Bearden (2006) report that paying a higher price than that paid by another customer leads to particularly strong perceptions of unfairness relative to price differences across products, vendors, or time. However, research also shows that people tend to assess entitlement on the basis of intrapersonal comparisons; thus, the outcome of a self-comparison should have a greater effect on the sense of price unfairness, particularly when cost and outcome information is unavailable (Major

1994). For example, when the number of transactions with a particular vendor increases or when the previously encoded price information becomes more accessible, consumers tend to rely more on previous prices when judging the appropriateness of the current prices (Briesch et al. 1997).

The abundance of findings in this domain suggests that any simple answer to the relative effectiveness of self- versus other-comparisons in price fairness judgments may be overgeneralizing and that a closer examination of this issue is required. Although significant research has explored how contextual factors (e.g., the availability of social cues and product category; Bolton et al. 2003; Mazumdar, Raj, and Sinha 2005) and demographic variables such as age and gender (Major 1994) may affect such assessments, much less research has attempted to study how the psychological states of consumers can influence their sensitivity to different reference prices. In the current study, we explore the influence of an important psychological state—namely, the power state—and examine how people respond to disadvantaged price discrepancies depending on the extent to which they feel powerful.

Power and Its Influence

Power has traditionally been defined as a capacity to influence others or as immunity to the influence of others (French and Raven 1959). Research on power has reported on a variety of psychological consequences that are a function of power states, such as illusionary perceptions of personal control (Fast et al. 2009), perceptions of competitiveness (Tost, Gino, and Larrick 2012), and a sense of entitlement (Lammers, Stapel, and Galinsky 2010). As an important psychological state, power also has a profound effect on various consumer behaviors, such as compensatory consumption (Rucker and Galinsky 2008) and spending preferences (Rucker, Dubois, and Galinsky 2011). For example, Rucker and Galinsky (2008) find that when a product is associated with status, low-power participants are willing to pay more for the product than high-power participants, but power has no influence on people's willingness to pay when the product is not associated with status.

At the conceptual level, power is inherently a social construct that involves a comparison or an interaction between two or more parties (Magee and Galinsky 2008). This social aspect of power makes it a particularly relevant construct for the study of price fairness judgments, which also involve social interactions between multiple parties (Monroe 2003). By influencing the manner in which people think and interact with their environments (Rucker et al. 2012), one's psychological state of power should trigger different responses to a disadvantaged price discrepancy.

Let us begin with the state of high power, which often fosters an agentic orientation and leads individuals to place greater weight and value on the self because power facilitates a sense of entitlement (Rucker et al. 2012). When seeking to fulfill their sense of entitlement, high-power individuals show more interpersonal sensitivity (Mast, Jonas, and Hall 2009) and are more likely to pay attention to the social aspect of comparisons because, compared with self-comparisons, other-comparisons have a greater effect on feelings of entitlement (Austin,

McGinn, and Susmilch 1980; Major and Testa 1989; Van den Bos et al. 2006). From this perspective, how others are performing in similar situations becomes an instrumental lens that allows high-power individuals to assess their position in the social dynamic. When others perform better in a similar situation, this disadvantaged comparison poses a serious threat to the high-power individual's sense of self-importance.

Along this line of reasoning, in the context of evaluating price fairness, high-power individuals should exhibit greater sensitivity to disadvantaged prices in other-comparisons (vs. self-comparisons) because such discrepancies are perceived to be a greater threat to their self-importance. This increased threat should in turn lead to a stronger perception of unfairness.

How would consumers' responses to the same disadvantaged price differ when they are in a relatively low-power state? Compared with high-power individuals, low-power individuals tend to be more dependent on others (Rucker et al. 2011) and often lack the resources to influence others or to change their environment. This social dependence fosters a communal orientation (Rucker et al. 2012) and discourages low-power people from interpreting comparisons against others as indicative of their self-importance because such actions are inherently risky and often result in undesirable outcomes. For example, low-power individuals may feel more comfortable with others receiving a bargain because others being better off would not threaten individuals with a communal orientation.

When evaluations against others are not viewed as informative for self-importance, intrapersonal comparisons provide an alternative channel for this assessment, and low-power consumers are therefore more likely to seek value confirmation from this type of comparisons (e.g., "Am I doing better than I did before?"). Compared with other-comparisons, a disadvantaged price disparity against the self is thus more indicative of status and poses a greater threat to the sense of self-importance of these low-power consumers. As a result, low-power consumers should be more sensitive to disadvantaged self-comparisons and pay more attention to price information that is associated with their previous purchases. When a self-comparison (vs. other-comparison) reveals a disadvantaged price, low-power consumers should react more strongly to this information and in turn perceive a greater sense of price unfairness.

In addition to the psychological sense of price unfairness, such disadvantaged price discrepancy should also trigger different emotional reactions, given the close association between unfairness perceptions and affect (Finkel 2001; Xia et al. 2004). Although both anger and sadness are inseparable from the fairness construct (Kam and Bond 2008), they are two distinctive types of emotions (Harmon-Jones and Seligman 2001): sadness is primarily an avoidance-oriented negative emotion, whereas anger is an approach-oriented emotion (Adams and Kleck 2005). According to the approach/inhibition theory of power (Anderson and Berdahl 2002; Keltner, Gruenfeld, and Anderson 2003), although a high sense of power activates the approach system and triggers approach-

related affect and behavioral tendencies, a low sense of power often activates the inhibition system and triggers avoidance-related affect and behavioral tendencies. Therefore, anger should be the primary response for high-power individuals when experiencing unfairness, whereas sadness should be the primary negative emotion for low-power people. Following this reasoning, we expect that the high-power participants should experience more anger in disadvantaged other-comparisons than in self-comparisons but that the anger levels of low-power individuals should not differ between these two types of comparisons. In contrast, low-power individuals should experience more sadness in disadvantaged self-comparisons than in other-comparisons, whereas high-power people should not experience different levels of sadness when making disadvantaged self- or other-comparisons.

The core of our hypothesis is that depending on the level of power, consumers derive their sense of self-importance from different sources: high-power individuals focus on other-comparisons for self-importance, whereas low-power people focus on self-comparisons. Because unfairness judgments depend on the extent to which the disadvantaged price impairs self-importance, this difference in sources in turn influences how people respond to different types of disadvantaged prices. High-power individuals experience greater unfairness and more approach-related affect (i.e., anger) when encountering disadvantaged prices in other-comparisons; by contrast, low-power consumers experience greater unfairness and avoidance-related affect (i.e., sadness) when encountering a disadvantaged price in self-comparisons. In the next section, we report five studies that tested this general hypothesis.

STUDY 1: RESPONSE TO PRICE ADJUSTMENT

In this study, we tested our basic hypothesis that high-power consumers experience a stronger sense of price unfairness and display more approach-related reactions when they pay more than others (i.e., other-comparison) but that low-power consumers experience a stronger sense of unfairness and display more avoidance-related reactions when they pay more than they did previously (i.e., self-comparison).

Method

A total of 149 undergraduate students from Fudan University (79 females and 70 males) participated in this study for partial course credit. The study used a 2 (power state: low vs. high) \times 2 (reference: self-comparison vs. other-comparison) between-subjects design.

This experiment was conducted in an experimental lab. The participants arrived in groups of four or five. Upon arrival, the participants were told that they needed to complete two separate studies. We followed Galinsky, Gruenfeld, and Magee (2003, experiment 1) and manipulated the participants' power state in the first "study." We told the participants that they would be given a coordination task and that completion required them to play the role of either a manager or a sub-

ordinate. As part of this task, the participants first needed to complete a leadership questionnaire and, based on their answers, they would be assigned the role of either a manager or a subordinate.

The participants were then asked to complete the leadership survey together in a room. After the completion of the leadership questionnaire, the experimenter collected the questionnaires and analyzed them on a nearby table. In fact, the roles of manager and subordinate were randomly assigned before the participants arrived. The experimenter then announced which of the participants was selected to be the manager and asked those participants to enter a different room one by one. There, the experimenter described the subsequent coordination task (i.e., building a Tanagram using Legos) and informed each participant that based on their responses in the leadership questionnaire, he or she was best suited for the role of manager. Each manager was given instructions that emphasized that he or she would have complete control over the work process, the evaluation of the subordinates, and the division of rewards. Each participant who was assigned to the role of subordinate was told that he or she was best suited for the role of subordinate and was given instructions that emphasized that he or she would have no control over how the work was done, the evaluation process, or the division of resources. It is important to note that the experimenter did not inform the participants as to whether they performed well or poorly, and this manipulation of power has been shown to have no effect on mood (e.g., Galinsky et al. 2003; Rucker et al. 2011). When the role assignment was completed, the participants were told that the experimenter was preparing the materials for the coordination task and that they could proceed to the second study while waiting to save time.

The second study professed to be a marketing survey pertaining to price, and the participants were asked to report their reactions in a hypothetical shopping scenario in which they either paid more than other people or paid more than they did in the past. Specifically, the participants in the other-comparison condition read the following: "Imagine that you were wine shopping for an upcoming party at an online store. You clicked on a wine and saw that the price was RMB 228 (\approx US\$38). However, you remembered that a colleague told you that he had just bought exactly the same wine from the same store for RMB 192 (\approx US\$32) a little while ago. Because the party was coming up soon and there wasn't a better option, you ended up paying RMB 228 (\approx US\$38) and bought this wine." In contrast, the participants in the self-comparison condition read the following: "Imagine that you were wine shopping for an upcoming party at an online store. You clicked on a wine and saw that the price was RMB 228 (\approx US\$38). However, you remembered that you had paid RMB 192 (\approx US\$32) for exactly the same wine from the same store a little while ago. Because the party was coming up soon and there wasn't a better option, you ended up paying RMB 228 (\approx US\$38) and bought this wine."

After reading the scenario, the participants were again asked to imagine how they would feel in that scenario and

to answer a few questions. They were first asked to indicate their perceptions of price unfairness: "How unfair was the price (RMB 228 [\approx US\$38]) that you paid?" (1 = extremely fair, 7 = extremely unfair). We then probed their emotional experiences ("How would you feel in this situation?") with regard to sadness and anger, both on 7-point scales (1 = not at all, 7 = extremely). We were also interested in how people would respond behaviorally in these situations; therefore, we asked them about their intention to complain ("How likely is it that you would complain to the store?") and to repurchase ("How likely is it that you would shop at this store again?"), both on 7-point scales (1 = extremely unlikely, 7 = extremely likely).

As planned, the participants did not actually complete the coordination task. After finishing the questionnaire on price fairness, the participants were debriefed and thanked. No participant was able to guess the true intention of the experiment.

Results and Discussion

Manipulation Check. To ensure the validity of our power manipulation, 93 participants drawn from the same sample completed the same manipulation and then indicated the extent to which they felt powerful on a 7-point scale (1 = not powerful, 7 = powerful). As expected, the participants reported feeling more powerful in the high-power condition ($M = 5.58$, $SD = 1.25$) than in the low-power condition ($M = 3.33$, $SD = 1.96$; $F(1, 91) = 43.91$, $p < .001$).

Unfairness Perception. An ANOVA of perceived unfairness yielded a power state \times reference interaction ($F(1, 145) = 13.28$, $p < .01$). The high-power participants perceived greater unfairness when the referent was another customer ($M = 5.14$, $SD = 1.73$) than when the referent was the self ($M = 3.97$, $SD = 1.78$; $t(70) = 2.82$, $p < .01$). In contrast, the low-power participants reported a greater perception of unfairness when the referent was the self ($M = 4.72$, $SD = 1.59$) than when the referent was another customer ($M = 3.74$, $SD = 2.06$; $t(75) = 2.34$, $p < .05$; see table 1). No other effects emerged in this analysis.

Emotional Response. Both anger ($r = .48$, $p < .01$) and sadness ($r = .37$, $p < .01$) were correlated with perceived unfairness, and there was also a correlation between these

two emotions themselves ($r = .27$, $p < .01$). Specifically, the low-power participants felt greater sadness when the referent was the self than when the referent was another customer. However, for the high-power participants, there was no difference between self-comparison and other-comparison with regard to the level of sadness. Interestingly, the high-power participants felt more anger when the reference was another customer than when the referent was the self, whereas the low-power participants experienced no difference between the self-comparison and the other-comparison with regard to the level of anger. The specific statistics are presented in table 1.

Behavioral Intentions. The intention to complain was positively correlated with perceived unfairness ($r = .40$, $p < .001$). An ANOVA on this variable revealed a significant main effect of power ($F(1, 145) = 9.00$, $p < .01$), suggesting that the high-power participants were more likely to complain ($M = 4.18$, $SD = 2.03$) than those in low-power states ($M = 3.27$, $SD = 1.78$). This pattern is consistent with Fast and Chen's (2009) finding, which demonstrates that high-power individuals show more aggressive tendencies when detecting external changes that may threaten the status quo of the power dynamic. More importantly, this main effect was qualified by a power state \times reference interaction ($F(1, 145) = 8.75$, $p < .01$), such that for the high-power participants, the intention to complain was higher when the referent was another customer ($M = 4.86$, $SD = 2.15$) than when it was the self ($M = 3.50$, $SD = 1.67$; $t(70) = 3.00$, $p < .01$). However, there was no significant difference between self-comparison ($M = 3.49$, $SD = 1.79$) and other-comparison ($M = 3.05$, $SD = 1.77$) for the low-power participants ($t(75) = 1.07$, NS).

Customers' repurchase intention was negatively correlated with perceived unfairness ($r = -.44$, $p < .001$). An ANOVA for this variable yielded a power state \times reference interaction ($F(1, 145) = 10.67$, $p < .01$), and no main effect emerged in this analysis. The repurchase intentions of the high-power participants was lower when the referent was another customer ($M = 2.97$, $SD = 1.86$) than when the referent was the self ($M = 3.89$, $SD = 1.92$; $t(70) = 2.06$, $p < .05$). In contrast, the repurchase intentions of the low-power participants was lower when the referent was the self ($M = 3.33$, $SD = 2.19$) than when it was another customer ($M = 4.55$, $SD = 1.97$; $t(75) = 2.57$, $p < .05$). There was no gender

TABLE 1

MEAN VALUE OF UNFAIRNESS PERCEPTION, EMOTIONAL RESPONSE, AND BEHAVIORAL INTENTIONS IN EACH CONDITION (STUDY 1)

	High-power		Low-power	
	Self-comparison	Other-comparison	Self-comparison	Other-comparison
Unfairness perception	3.97 _a	5.14 _b	4.72 _a	3.74 _b
Sadness	3.11 _a	3.44 _a	4.23 _a	2.97 _b
Anger	4.08 _a	5.14 _b	4.05 _a	3.71 _a
Repurchase intention	3.89 _a	2.97 _b	3.33 _a	4.55 _b
Complaint intention	3.50 _a	4.86 _b	3.49 _a	3.05 _a

NOTE.—Within the high- and low-power conditions, the means in the same row with different subscripts are significantly different at $p < .05$.

effect in this study or in other studies, and we therefore omitted it from further discussion.

It is particularly interesting to note that for low-power participants, while they experienced more sadness in self-comparisons than in other-comparisons, their intention to complain did not differ in these two situations. More interesting, their intention to repurchase at the store was more consistent with their sadness experiences and showed the difference in these two conditions. This diverging pattern illustrates that when facing unfairness, while high-power leads people to more approach-related actions, low-power individuals may not express their emotions in active responses (e.g., feel angry, complain), but often opt for avoidance approaches (Keltner et al. 2003) such as no longer shopping at the store.

In summary, the findings from study 1 provided initial support for our hypothesis that high-power individuals perceive greater unfairness when they pay more than other consumers, but low-power people experience more unfairness when they pay more than they paid in the past. Because the findings of previous studies (Finkel 2001; Xia et al. 2004) and of this study have reliably demonstrated the relations between consumers' unfairness perceptions and their emotional reactions, we focused solely on the unfairness perception in subsequent studies and omitted further exploration of consumers' emotional and behavioral responses for the sake of brevity.

While providing supporting evidence, there are two important limitations in study 1: first, our participants' sense of power was experimentally induced and may not be consistent with their chronic power status; moreover, our participants were exposed to only one type of reference price in their judgments. In real-life situations, consumers are likely to shop with their chronic sense of power and have both self-comparative and other-comparative references available. We were curious to observe whether our findings would still hold in these more realistic settings and attempted to find an answer in study 2.

STUDY 2: CHRONIC SENSE OF POWER

The sense of power is derived from one's own experiences accumulated across various social contexts over time (Anderson and Berdahl 2002) and can be a relatively stable psychological state. Rather than manipulating the momentary sense of power, study 2 treated the power states as an individual difference factor and further examined how this variable interacts with reference to influence consumer perceptions of price unfairness.

Method

A total of 155 undergraduate students from Fudan University (88 females and 67 males) participated in this study. We employed a 2 (power state: low vs. high) \times 2 (reference: self-comparison vs. other-comparison) mixed design in which the first factor was measured as an individual trait and the latter was manipulated between subjects.

Upon arrival, the participants were informed that the ex-

periment was in collaboration with an online retailer and involved two parts. The first part was a general "Lifestyle and Personality Survey" that was intended to help the retailer understand college students' lifestyle and personalities so that they could better serve the students. There were approximately 50 questions in the survey, and among the filter questions, we embedded the Sense of Power Scale (Anderson and Galinsky 2006) and measured the participants' chronic sense of power. As in previous research (Anderson and Galinsky 2006; Rucker and Galinsky 2009), the scale showed high internal consistency ($\alpha = .82$, $M = 4.26$, $SD = .81$).

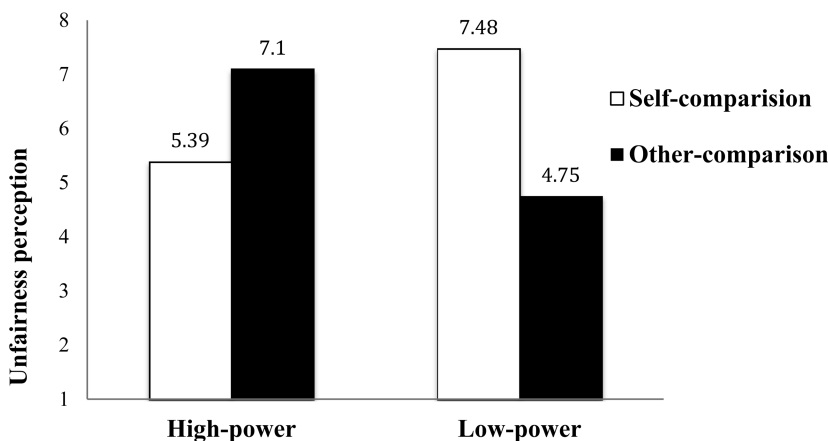
After completing the Lifestyle and Personality Survey, the participants were told that they had finished the first experiment. They were then instructed to proceed to the second part of the study. The cover story informed the participants that this part of the experiment would be used to help the retailer learn more about consumer shopping experiences at their online store. The participants were given a RMB 36 (\approx US\$6 voucher), in addition to the participation fee, and were told to shop in a specific product category using this voucher. The participants were further told that, to ensure a full experience of the store, they needed to make two separate purchases and would receive the actual items that they purchased. The participants were further informed that the remaining value on the voucher could be redeemed for cash after completing the two purchases. This offer ensured that the participants would actually feel the unfairness when their prices were higher because that would change the actual cash that they would receive. It was also emphasized that the voucher carried no value unless they completed the entire experiment session, which meant that they would need to make two purchases. All of the participants were told that in these purchases, the retailer would test different marketing strategies and that the price that they would see on the website may thus vary from time to time and from person to person.

Next, the participants entered the retailer's web store and were taken to the toothpaste section. All of the participants saw four different flavors of Colgate toothpaste, each at RMB 12 (\approx US\$2). The participants then began the first task of the study and made their first purchase. They clicked on the toothpaste that they would like to purchase and then checked out. After completing the first transaction, the participants were asked to complete a survey regarding the experience of online shopping, including the design of the page. After this survey, the participants were directed to return to the shopping page to make the second purchase. This page appeared identical to the previous page, with the same four toothpastes on the screen, except for a small change: only the flavor that the participants purchased in the first round was shown as available, and the other three flavors were all shown as "out of stock." By making this change, we ensured that all participants purchased the same item in their two transactions, thus making the perception of price unfairness more legitimate.

We manipulated the reference price in the second purchase by presenting different price information. Specifically, in the self-comparison condition, we priced the toothpaste at RMB 18 (\approx US\$3), which was more expensive than in the first trans-

FIGURE 1

UNFAIRNESS PERCEPTION AS A FUNCTION OF CHRONIC POWER STATE AND REFERENCE (STUDY 2)



action (RMB 12 [\approx US\$2]). There was also a scrolling information bar on the screen, with a rolling list of “recent transactions” that showed the three most recently completed transactions, with the buyers’ IDs, the flavor they purchased, and the price that they paid. All of the participants shown in these transactions paid RMB 18 (\approx US\$3) for the same toothpaste. With this design, we provided the participants with access to two separate pieces of information that could serve as a benchmark for comparison: the price that they themselves paid in the previous purchase, which would lead to a sense of price unfairness (because it was lower than the current price), and the price that other people paid in this transaction, which would not lead to a sense of price unfairness (because it was the same price that they would pay). The simultaneous availability of both types of comparisons closely simulated the real market dynamics that consumers encounter in their everyday lives. The divergent consequences of the two pieces of information also allowed us to identify which piece of information our participants were more sensitive to when both types of information were available. Following the same logic, in the other-comparison conditions, the price of toothpaste for the second purchase was unchanged at RMB 12 (\approx US\$2), and the “recent purchases” in the scrolling information bar showed that three other participants paid only RMB 6 (\approx US\$1) for the same toothpaste in their recent purchases.

The participants made their second purchase and were then directed to a page that ostensibly collected anonymous feedback regarding the experimental procedures. Among the filter questions, such as an item pertaining to their enjoyment of the experiment, we asked the participants to answer the following question: “To what extent do you think that the price you paid for the second toothpaste was fair/unfair?” (1 = extremely fair, 9 = extremely unfair). After answering these questions, the participants were given the two tubes of toothpaste that they

purchased, and the voucher was redeemed for cash before the participants were debriefed and dismissed.

Results and Discussion

To explore the impact of power and reference price on the participants’ perceived unfairness, we conducted a linear regression for unfairness perception with sense of power, reference price and their interaction term as predictors. The analysis yielded a (chronic) power state \times reference interaction ($\beta = 0.43$, $t(155) = 5.92$, $p < .001$), and there were no other effects ($t < 1.36$, NS).

To better understand the interaction, we followed the spotlight analysis procedures (Irwin and McClelland 2001) and explored how the participants’ perceived price unfairness was influenced by the chronic power state and the reference price. Specifically, the participants who were in a high chronic power state (one SD above the mean) perceived the price as being more unfair when they paid more than others ($M = 7.10$) compared with when they paid more than their own previous transaction ($M = 5.39$; $\beta = 0.33$, $t(155) = 3.25$, $p < .01$). In contrast, the participants who were in a low chronic power state (one SD below the mean) perceived the price as being more unfair when they paid more than their own previous purchase ($M = 7.48$) compared with when they paid more than others ($M = 4.75$; $\beta = -0.53$, $t(155) = -5.13$, $p < .01$; see fig. 1).

Thus far, the findings from both the scenario-based and real purchases supported our central hypothesis that high-power consumers tend to perceive a disadvantaged price as being more unfair when they pay more than others, whereas low-power consumers perceive more unfairness when they pay more than they previously paid. As in many real-life situations, it was not clear to the participants in the self-

comparison conditions whether other people also experienced the same price increase as they did, as all participants paid RMB 18 (\approx US\$3) in their second transactions. Thus, our findings are particularly interesting because low-power participants, even if they might have imagined that others had experienced the same price increase, which would have made the situation objectively more acceptable, still found the price increase to be unfair. This counterintuitive finding implies that although it is unclear a priori that people would find the price increase unfair if others experienced the same price increase, the price change was still regarded as unfair only by low-power individuals. By contrast, when the participants in other-comparison conditions paid more than others, which appears even more obviously unfair, this price discrepancy resonated only with those who are in a high-power state. In combination, these findings suggest that although the objective situations are certainly relevant, unfairness perceptions arise only to the extent that they resonate with the respondents on the basis of their psychological state of power.

Although the participants in both studies were in the position of a paying customer, a disadvantaged transaction in real life may also occur as a result of being paid unfairly (e.g., lower wage). If our theorizing holds, then people should react the same when they are on the other end of the bargain: we theorized that people of high versus low power would react differently to different types of comparisons because their sense of self-importance depends primarily on other-comparisons or self-comparisons, respectively. Therefore, the relative sensitivity to self versus other information should be influenced only by a person's power state and not by their role in a transaction. By enabling people to assume the role of the seller, we hope to conduct a stronger test of our theorizing and to examine whether our effect indeed occurs because of the power-dependent sensitivity to different types of information rather than because the participant assumes the role of a paying customer.

STUDY 3: UNDERPAID AND UNFAIR

In study 3, we examined a situation in which people are being paid unfairly and explored how their power states influence their reactions to different reference prices in fairness judgments. In this study, we also assessed the threat to self-importance that people experienced when they detected a disadvantaged price through self-comparison versus other-comparison. We expect that high-power individuals would experience a greater threat to self-importance and therefore greater unfairness when being paid less than others, whereas low-power people would experience a greater threat and unfairness when being paid less than previously.

Method

A total of 134 undergraduate students from Fudan University (79 females and 55 males) participated in this study for monetary compensation. The study used a 2 (power state:

low vs. high) \times 2 (reference: self-comparison vs. other-comparison) between-subjects design.

We recruited only participants who had participated in our lab experiments for different studies during the previous month. We did not specify the exact amount of the participation fee when we recruited subjects. We adopted the power manipulation from Rucker et al. (2011) and told our participants that they were about to participate in a study on human memory and that their task was to recall and write down a particular incident in which they had power over another individual (i.e., high-power condition) or in which someone else had power over them (i.e., low-power condition).

After the recall task, the participants were told that they had completed the experiment session, and they received an envelope containing a RMB 30 (\approx US\$5) participation fee and a thank-you note explaining why the participation fee was RMB 30 (\approx US\$5). For the self-comparison condition, the participants were reminded that approximately 1 month before, they had participated in another study of a similar difficulty level that required approximately the same amount of time and that they were paid RMB 42 (\approx US\$7) for that experiment. The participants were then told that they could be paid only RMB 30 (\approx US\$5) this time for budget reasons. In contrast, the participants in the other-comparison condition were told that for budget reasons, some participants would receive RMB 42 (\approx US\$7) for participating in the study, whereas others might receive only RMB 30 (\approx US\$5). The participants were further informed that they were randomly chosen as the unfortunate recipients of the RMB 30 (\approx US\$5) payment.

After all of the participants received their participation fees and opened the envelope, they were further asked to complete a brief questionnaire, ostensibly to collect feedback on the experimental procedures. The participants were assured that their answers would remain anonymous. Among various filtering questions, such as questions pertaining to their enjoyment of the experiment, the participants were asked to indicate the following: "To what extent do you think that your participation fee is fair/unfair?" (0 = very fair, 100 = very unfair) and "To what extent do you think that your self-importance is threatened when receiving a lower participation fee?" (1 = not at all, 5 = very much so). After completing the questionnaire, we debriefed the participants and dismissed them.

Results and Discussion

Unfairness Perception. An ANOVA for the perceived unfairness yielded a marginal main effect of power ($F(1, 130) = 3.62, p = .06$) and, more importantly, a power state \times reference interaction ($F(1, 130) = 8.87, p < .01$). Specifically, the participants who were in a high-power state perceived the RMB 30 (US\$5) participation fee as being more unfair when they were paid less than the other participants ($M = 59.59, SD = 23.01$) compared with when they were paid less than their previous participation ($M = 48.12, SD = 22.79; t(65) = 2.05, p < .05$). In contrast, the

participants who were in a low-power state perceived the participants' fee as being more unfair when they had been paid less than their previous participation ($M = 52.48$, $SD = 24.97$), compared with when they had been paid less than the other participants ($M = 39.76$, $SD = 23.22$; $t(65) = 2.16$, $p < .05$).

Threat to Self-Importance. A similar ANOVA for the participants' experienced threat to self-importance yielded a power state \times reference interaction ($F(1, 130) = 11.99$, $p < .01$). The participants in a high-power state experienced a greater threat to self-importance ($M = 2.82$, $SD = 1.19$) when they learned that they were paid less than the other participants compared with when they were paid less than their previous pay ($M = 2.09$, $SD = 0.77$; $t(65) = 2.98$, $p < .01$). Conversely, the participants in a low-power state experienced a stronger threat to self-importance when they were paid less than the previous time ($M = 2.76$, $SD = 1.03$) compared with when they were paid less than the other participants ($M = 2.26$, $SD = 1.05$; $t(65) = 1.95$, $p = .05$; see fig. 2). No other effects emerged in this analysis.

Our theorizing suggests that the difference in price unfairness perception occurs because consumers derive unfairness perception from self-comparisons or other-comparisons, depending on their power state. Study 3 provided strong support for this hypothesis by showing that the patterns still persisted even when people are in the positions of the seller. This pattern demonstrated that it was indeed the sensitivity to different comparisons that drove the discrepancy, rather than something specific about being a buyer.

Logically, our next question should be to examine the specific process through which self- versus other-comparisons affect unfairness perceptions. Our theorizing points to a change in perceived self-importance. Study 3 provided initial evidence that people in different power states expe-

rience a different degree of threat to self-importance when engaging in self- versus other-comparisons, but we limited our measure to the perception that self-importance was being threatened without directly assessing the consequences of these threats. Our next study continues this investigation and tests the full model using a more comprehensive and direct measure of self-importance.

STUDY 4: SELF-IMPORTANCE

Study 4 aimed to directly investigate the underlying mechanisms. In addition to the general sense of unfairness, we specifically measured people's perceived self-importance when encountering disadvantaged prices and assessed how these perceptions influenced unfairness judgments.

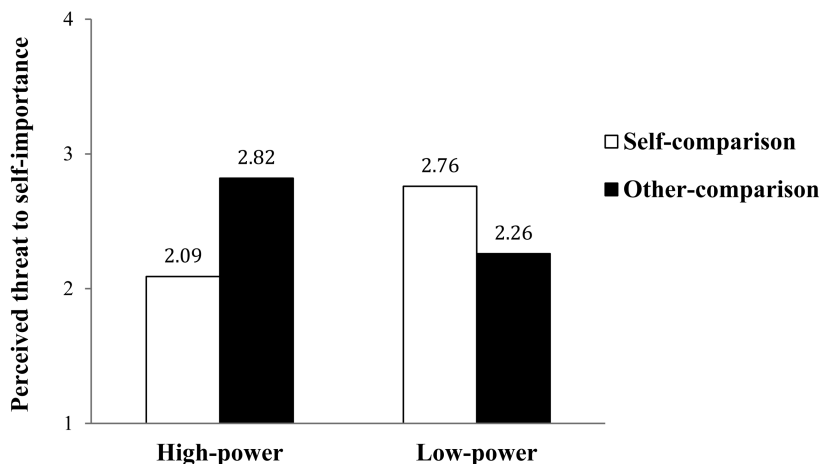
Method

A total of 249 undergraduate students from Fudan University (108 males and 141 females) participated in the experiment for monetary compensation. The study used a 2 (reference: self-comparison vs. other-comparison) \times 3 (power state: low vs. high vs. control) between-subjects design.

Similar to study 2, we used a two-stage task to create an actual shopping experience for our participants. The participants were told that the experiment was in collaboration with an online retailer that was interested in the online shopping behaviors of college students. The participants again learned that the experiment would have two separate parts, with the first being a general questionnaire on past online shopping experiences. After completing the questionnaire, the participants were given a RMB 30 (\approx US\$5) voucher that was valid for purchases at the retailer's store. Similar to study 2, we told the participants that they would need to use the voucher to make two purchases at the retailer's

FIGURE 2

PERCEIVED THREAT TO SELF-IMPORTANCE AS A FUNCTION OF POWER STATE AND REFERENCE (STUDY 3)



online store and then to answer some questions. The participants were told they would receive the actual items that they purchased and the remaining value on the voucher in cash after completing the two purchases.

For the shopping task, the participants were taken to the chewing gum category of the online store and shown four different flavors of gum (same brand and same size). As in study 2, the actual packs of gum were physically presented in the lab to enhance the feeling that the purchases were real. The gum was priced at RMB 9 (\approx US\$1.50) for all of the participants in their first purchase. After making their first purchase, the participants encountered a waiting page that informed them that the system was checking inventory for different flavors. To save time, the participants would be taken to the “Memory Study” that they would need to complete after this online shopping study while the system was busy. We then manipulated power states via an episodic prime (Galinsky et al. 2003) during the memory study, which claimed to be exploring the individuals’ memories pertaining to personally relevant incidents. Among other questions, the survey asked the participants to recall and write down a particular incident in which they had power over another individual (i.e., a high-power condition) or in which someone else had power over them (i.e., a low-power condition). We also included a control condition in which the participants recalled and wrote down the specific steps in a particular online shopping experience.

After completing the memory survey, the participants returned to the shopping task. Similar to study 2, we offered only the exact item that the participants purchased in the previous round, and we manipulated the reference price by presenting different price information. In the self-comparison condition, we priced the same gum at RMB 12 (\approx US\$2), thus making it more expensive than in the first transaction (RMB 9 [\approx US\$1.50]). We also presented a scrolling bar of “Recent purchases” containing information regarding who had recently made a purchase. The list showed that three other participants also paid RMB 12 (\approx US\$2) for the same flavor in the second purchase. Therefore, the participants in this condition would perceive unfairness if they compared it with their previous purchase price but not if they compared with others’ purchase prices. In the other-comparison condition, the price was maintained at RMB 9 (\approx US\$1.50), the same as in the first transaction, but the information in the scrolling bar indicated that three other participants paid only RMB 6 (\approx US\$1) for the same gum in their second transaction. In this condition, people would perceive unfairness if they compared their price with others but would not have such perceptions if they compared their price with their past transaction.

After all of the participants completed their two shopping tasks, we collected their demographic information and asked them some other questions. Among these questions, we measured their perceived self-importance and price unfairness. Following Rucker et al. (2011), we measured self-importance with the following items: “How important are you as an individual?” (1 = not important at all, 9 = extremely

important) and “I am a person of worth” (1 = totally disagree, 9 = totally agree). We then assessed perceived price unfairness by asking the following question: “To what extent do you think that the price you paid for your second gum is fair/unfair?” (1 = extremely fair, 9 = extremely unfair). After answering these questions, the participants were offered the two packs of gum that they purchased, and the participants collected their unspent money before being debriefed and dismissed.

Results and Discussion

Unfairness Perception. An ANOVA on the perception of price unfairness yielded a significant power state \times reference interaction ($F(2, 243) = 7.59, p < .01$; see fig. 3). The participants in the high-power condition perceived that the price was more unfair when the reference was the price paid by others ($M = 6.79, SD = 1.69$) than when the reference was themselves ($M = 5.36, SD = 1.71; t(79) = 3.80, p < .01$). In contrast, the participants in the low-power conditions perceived that the price was more unfair when the reference was themselves ($M = 6.24, SD = 2.02$) than when the reference was others ($M = 5.43, SD = 2.03; t(79) = 1.79, p < .08$). Moreover, the participants in the control conditions reported a similar unfairness perception, regardless of whether the reference was themselves ($M = 5.48, SD = 1.97$) or others ($M = 5.99, SD = 1.58; t(85) = 1.36, NS$). No other effects emerged in this analysis.

Self-Importance. In this study, we directly measured the perceived self-importance using two items, which were highly correlated ($r = .81, p < .001$). Following Rucker et al. (2011), we collapsed these two measures for an index of self-importance, where a higher number indicates a greater sense of self-importance. An ANOVA of this variable yielded a marginal main effect of power ($F(2, 234) = 2.34, p < .10$) and, more importantly, a power state \times reference interaction ($F(2, 234) = 10.86, p < .01$). Specifically, the participants in the high-power conditions perceived lower self-importance when they paid more than the others ($M = 5.02, SD = 2.58$) than when they paid more than they had paid previously ($M = 6.97, SD = 2.07; t(79) = 3.73, p < .01$). Conversely, the participants in the low-power conditions perceived lower self-importance when they were paid more than previously ($M = 4.70, SD = 2.31$) than when paid more than others ($M = 6.11, SD = 2.17; t(79) = 2.81, p < .01$). For the participants in the control conditions, the perceived self-importance did not differ between an other-comparison ($M = 6.04, SD = 2.16$) and a self-comparison ($M = 6.23, SD = 2.39; t(85) = 0.37, NS$).

Mediated Moderation Analysis. One important objective of this study is to fully test whether the power state and reference jointly impact the consumers’ price unfairness perception through the sense of self-importance. We conducted a mediated moderation analysis with the participants in the high- and low-power conditions. In accordance with Zhao, Lynch, and Chen (2010) and Preacher, Rucker, and Hayes

FIGURE 3

UNFAIRNESS PERCEPTION AS A FUNCTION OF POWER STATES AND REFERENCE (STUDY 4)

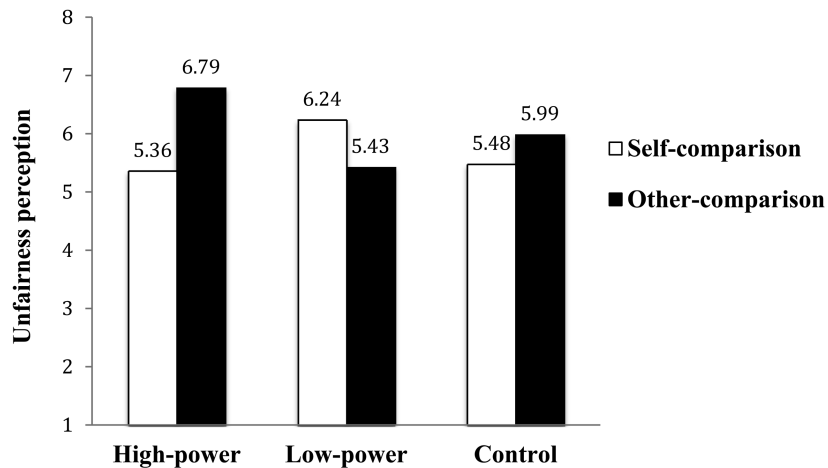
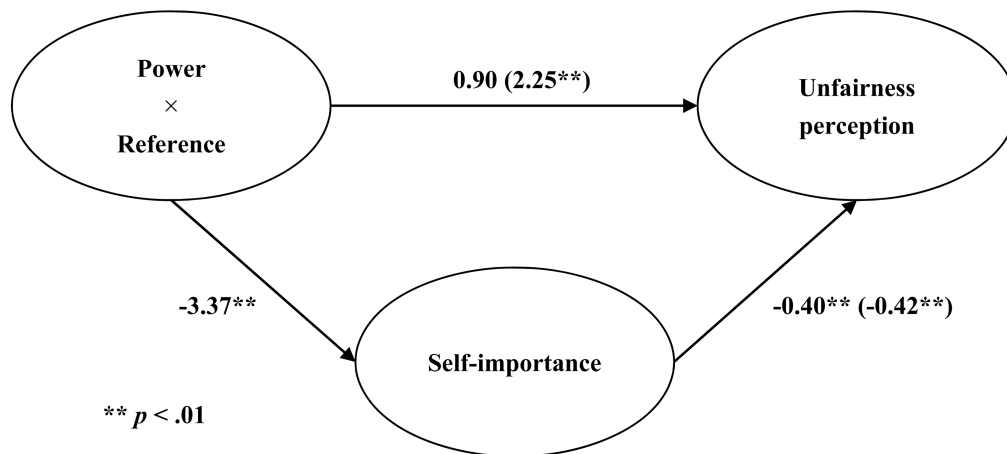


FIGURE 4

PATH MODEL OF THE MEDIATION EFFECTS OF SELF-IMPORTANCE (STUDY 4)



(2007, model 8), we used a bootstrapping procedure that generated a sample size of 5,000 to assess the regression models. The results of this analysis indicated that the perceived self-importance was predicted by the power state \times reference interaction in the mediator model ($B = -3.37$, $t = -7.07$, $p < .01$). In the dependent-variable model, the perceived self-importance predicted the price unfairness perception ($B = -0.40$, $t = 3.84$, $p < .01$), whereas the power \times reference interaction was no longer significant ($B = 0.90$, $t = 1.64$, NS). Furthermore, the indirect effect of the power state \times the reference interaction through the perceived self-importance was significant (95%, $B = 1.35$, $CI = 0.88$ to

2.09), indicating a successful mediation through this path (fig. 4).

The results of study 4 provided important process evidence for our hypothesis by showing that the disadvantaged prices affect the sense of unfairness by influencing self-importance. Following this line of reasoning, when such disadvantaged prices do not threaten one's sense of self-importance, consumers' unfairness perception should no longer vary depending on their power states. For example, if people can justify the disadvantaged price with a personally meaningful reason, then paying a disadvantaged price should not threaten their sense of self-importance and should therefore

have no influence on the perception of unfairness. Our next and final study tests this important moderator.

STUDY 5: JUSTIFYING A DISADVANTAGED PRICE

In study 5, we further investigated the underlying mechanism of self-importance by testing an important moderator. The participants performed a two-stage shopping task that was similar to those in the previous studies, but they were provided with a personally meaningful justification to ensure that they would not feel that the disadvantaged price reflected their self-importance.

Method

A total of 223 undergraduate students from Fudan University (88 males and 135 females) participated in the experiment for monetary compensation. The study used a 2 (reference: self-comparison vs. other-comparison) \times 2 (power state: low vs. high) \times 2 (concern about stray animals: low vs. high) mixed design in which the reference and power state were manipulated between subjects and the concern for stray animals was an individual difference measure.

We manipulated the power states of the participants using a role-playing task that was similar to that employed in study 1. The participants first completed a leadership questionnaire and were told that the purpose of the questionnaire was to determine their role (as either a manager or a subordinate) in the subsequent coordination task. In addition, we also embedded the following two questions ($r = .81, p < .001$) in this questionnaire to assess the participants' concern for stray animals: (1) "To what extent do you care about stray animals?" (1 = not at all, 9 = extremely); (2) "How important is it to help stray animals?" (1 = not at all, 9 = extremely). After completing the questionnaire, the participants were told that the experimenters were analyzing their answers and that, to save time, they should move on to the second part of the study, which was a shopping task that was similar to that used in study 4.

Similar to the previous studies, the participants received a RMB 36 (\approx US\$6) voucher and were instructed to make two purchases at an online store. The important difference was that we told the participants that all of the revenues from these transactions would be donated to support a stray animal shelter. We expected that this explanation would be a meaningful justification for individuals who cared about stray animals but would not serve as an adequate justification for those who did not express such concern.

The other procedures were similar to those of study 4. In this shopping task, we presented the participants with four photo albums of different designs from which they could choose. All of the albums were priced at RMB 12 (\approx US\$2) each in the first transaction. After all participants completed their first purchase, we manipulated their power states: the participants were told that based on their answers in the leadership survey, they had been assigned a specific role (as either a manager or a subordinate) for the subsequent co-

ordination task based on their leadership score. Similar to the previous studies, the assignment was random, and the coordination task was not actually conducted. After we informed the participants of their role for the coordination task, we also told them that the experimenter was preparing the materials for the coordination task and that they should continue with the shopping task to save time.

Again, we manipulated the reference price in the second transaction. In the self-comparison condition, the album was priced at RMB 18 (\approx US\$3), more expensive than the first transaction, and the scrolling "recent transaction" bar showed that the other customers were also paying RMB 18 (\approx US\$3) for the album. In contrast, in the other-comparison conditions, the album was priced at RMB 12 (\approx US\$2), the same price as the first transaction, and we showed that the other people were paying RMB 6 (\approx US\$1) for the same album in this transaction.

After all of the participants completed the two purchases, we collected their demographic information and feedback on the experiments. We assessed the participants' perceived self-importance and price unfairness using the same items as reported in study 4. At the end of the survey, we also assessed the participants' willingness to complain by inviting them to leave comments for the experimenter. After completing this survey, the participants were told that the coordination task was cancelled as a result of the researcher's insufficient preparation. The participants then collected their albums and unspent money before being debriefed and dismissed.

Results and Discussion

Unfairness Perception. We first analyzed the perception of price unfairness using a regression model that included power (0 = low-power, 1 = high-power), reference (0 = self-comparison, 1 = other-comparison), concern about stray animals, and all of their interaction terms as predictors. The analysis yielded a main effect of concern about stray animals ($\beta = -0.28, t(223) = -4.40, p < .01$), a power state \times reference interaction ($\beta = 0.12, t(223) = 1.99, p < .05$), and, more importantly, a power state \times reference \times concern about stray animals three-way interaction ($\beta = -0.23, t(223) = -3.63, p < .01$).

To better understand the three-way interaction, we followed the spotlight analysis procedures (Irwin and McClelland 2001). Among the participants who were less concerned about stray animals (one SD below the mean), there was a power state \times reference interaction ($\beta = 0.35, t(223) = 3.95, p < .01$). The high-power individuals perceived the price as being more unfair when they paid more than the others ($M = 7.12$) compared with when they paid more than they did previously ($M = 5.05$), whereas the low-power participants perceived the price as being more unfair when they paid more than previously ($M = 6.14$) compared with when they paid more than others ($M = 4.91$). This pattern was identical to our previous studies, suggesting that the participants who did not have a personally meaningful justification perceived the disadvantaged price as a threat to their self-importance and experienced a different degree of

unfairness depending on the power state and the type of comparison.

The results, however, were different for the participants who had a personally meaningful justification. For those individuals who were concerned about stray animals (one SD above the mean), the power state \times reference interaction was no longer significant ($\beta = -0.11$, $t(223) = -1.19$, NS). The participants in the high-power conditions reported a similar level of unfairness perception, regardless of whether the reference was themselves ($M = 4.72$) or others ($M = 4.45$). Similarly, the low-power individuals' unfairness perception did not differ between the self-comparison ($M = 4.09$) and the other-comparison ($M = 4.80$). This pattern suggests that whenever one can easily justify paying more, the power state no longer influenced the unfairness perception (see table 2).

Self-Importance. A regression model of perceived self-importance on the power state, reference, concerns about stray animals, and all of their interaction terms revealed a main effect of the power state ($\beta = 0.15$, $t(223) = 2.23$, $p < .05$), a main effect of concerns about stray animals ($\beta = 0.14$, $t(223) = 2.03$, $p < .05$), a power state \times reference interaction ($\beta = -0.17$, $t(223) = 2.55$, $p < .05$), and a three-way interaction ($\beta = 0.15$, $t(223) = 2.29$, $p < .05$). A similar spotlight analysis showed that for the participants who showed little concern about stray animals (one SD below the mean), there was a marginal main effect of power ($\beta = 0.17$, $t(223) = 1.77$, $p < .08$) and a power state \times reference interaction ($\beta = -0.32$, $t(223) = -3.40$, $p < .01$). While the high-power participants perceived a lower self-importance when they paid more than others ($M = 5.68$) compared with when they paid more than they did previously ($M = 6.87$), the low-power participants perceived lower self-importance when they paid more than they did previously ($M = 4.75$) compared with when they paid more than others ($M = 6.31$).

However, for the participants who were concerned about stray animals (one SD above the mean), the power \times reference two-way interaction became nonsignificant ($\beta = -0.02$, $t(223) = -0.17$, NS). Both the high- and low-power participants reported a similar sense of self-importance, regardless of whether the referent was themselves ($M_{\text{high-power}} = 6.94$; $M_{\text{low-power}} = 6.46$) or others ($M_{\text{high-power}}$

$= 7.23$; $M_{\text{low-power}} = 6.62$), suggesting that whenever people could easily justify paying more using a personally relevant reason, their sense of self-importance was immune to the influence of power state and reference.

Complaint Behavior. Three independent undergraduate students coded the comments that the participants left for the experimenter to explore whether they included complaints with regard to the price of the second purchase. The participants who made explicit price complaints (e.g., "Why is the second album more expensive?" or "The price is not fair!") were coded as 1 and those who did not were coded as 0. The majority rule was used to resolve any conflict among the three evaluators. We then submitted this binary measure of actual complaint behavior into a logistic regression model, which included power state, reference, concerns about stray animals, and all of their interaction terms as predictors. The analysis yielded a main effect of power ($B = 0.81$, Wald $\chi^2(1, 223) = 4.92$, $p < .05$) and no other effects, suggesting that feeling powerful promoted more action to complain (complaint rate: $M_{\text{high-power}} = 28\%$, $M_{\text{low-power}} = 15\%$).

GENERAL DISCUSSION

With advances in price management technologies, the practice of discriminatory pricing is becoming more prevalent (Xia and Monroe 2010). However, this potentially profitable practice also assumes the risk of inducing perceptions of unfairness and thus harming the future of firms (Bolton et al. 2010). Although a large body of research has investigated reference prices and their influence on consumers' price fairness perceptions (Bolton et al. 2003, 2010; Haws and Bearden 2006), the current study advances our extant knowledge by addressing how the power states of consumers may shift their sensitivity to different reference prices and thus influence the experience of price unfairness.

Study 1 demonstrated our basic hypotheses that people in high-power states experience greater unfairness when they pay more than others and that those in low-power states experience greater unfairness when paying more than they did in the past. Study 2 confirmed our findings using the chronic sense of power rather than an experimentally induced power state. Study 3 demonstrated that the power-

TABLE 2

MEAN VALUE OF UNFAIRNESS PERCEPTION AND SELF-IMPORTANCE IN EACH CONDITION (STUDY 5)

	High-power		Low-power	
	Self-comparison	Other-comparison	Self-comparison	Other-comparison
Unfairness perception				
Low concern about stray animals	5.05 _a	7.12 _b	6.14 _a	4.91 _b
High concern about stray animals	4.72 _a	4.45 _a	4.09 _a	4.80 _a
Self-importance				
Low concern about stray animals	6.87 _a	5.68 _b	4.75 _a	6.31 _b
High concern about stray animals	6.94 _a	7.23 _a	6.46 _a	6.62 _a

NOTE.—Means are displayed following the spotlight analysis procedures (Irwin and McClelland 2001). Within the high- and low-power conditions, the means in the same row with different subscripts are significantly different at $p < .05$.

dependent sensitivity to different types of comparisons still persists even when the subject is on the other end of the bargain and is being paid unfairly. Study 4 investigated self-importance as the key mechanism through which different types of disadvantaged prices induce the perception of price unfairness. Finally, study 5 explored a critical moderator and found that when people no longer perceive the disadvantaged price as a threat to their self-importance (e.g., when they have a personally meaningful justification for paying more), the power states no longer influence their sensitivity to different referent prices, and they do not experience different degree of unfairness.

Theoretical and Practical Implications

The perception of fairness is an inevitable consequence of comparison. The social comparison literature has repeatedly shown that people seek social standards for comparison depending on their relevance (e.g., Adams 1965; Festinger 1954). For example, individuals prefer to select referents who are similar to themselves in abilities and opinions (Festinger 1954), and a person can also use his or her own experience in another situation or social role as a reference because of the similarity (Adams 1965). Our present findings contribute to this literature by showing that the choice of the benchmarks depends not only on the nature of the standards but also on one's internal psychological state. In particular, we demonstrated that one's power state determines the usefulness of different comparative standards. From this perspective, relevance should be defined not only based on characteristics such as similarity or accessibility but also based on the extent to which the reference serves the momentary needs of an individual. Depending on a person's momentary psychological state, these needs could be satisfied in different ways. In the current study, power states shaped consumers' respective channels for maintaining their self-importance, therefore altering the relevance of different comparative standards.

From an economic perspective, the fairness of a price should be evaluated only against the goods that one obtains in this transaction (Kalapurakal, Dickson, and Urbany 1991; Oliver and Swan 1989). Consistent with other research, our findings demonstrated that this perspective does not reflect how people actually evaluate the fairness of transactions. Prices not only are evaluated in the context of the present exchange but also serve one's internal psychological needs by allowing interpersonal and intrapersonal comparisons. From this perspective, prices have an important social aspect in addition to their transactional functionality; therefore, when the social aspect of prices outweighs their transactional functionality, people may violate basic economic rules and focus instead on the social properties of prices. For example, high-power individuals might be willing to pay more for a product if they can obtain a better price than other people can.

Following this line of reasoning, our present findings have important marketing implications in terms of identifying effective pricing strategies for different groups of customers. For example, compared with high-power individuals, low-

power individuals may need a stronger justification for price increases, but at the same time, the relative insensitivity of these consumers to other-comparisons may be helpful when firms provide differentiated products to different groups of customers.

In addition, our findings suggest important ways that marketing professionals can engage customers of different power statuses. For example, when marketing to high-power customers, one can better elicit preference by highlighting the special treatment that they are receiving in relation to other customers. Conversely, when the target customers are relatively low in power, loyalty may be better cultivated by highlighting the consistency in service or the level of commitment to these customers.

One tricky question in the application of these theoretical findings to practice is how we can separate our customers based on their power states. Although market segmentation can be performed based on variables that are highly correlated with the chronic sense of power (e.g., high- vs. low-socio-economic status), it is also possible that feelings of power can be easily and unobtrusively activated in the real world: for example, a psychological state of power can be induced by being exposed to words and advertisements (Rucker et al. 2011) related to power. Therefore, marketers can effectively change consumers' relative sensitivity to different comparative standards by providing environmental cues that can momentarily shift individuals' current state of power.

It is important to note that although power states can foster different psychological orientations (e.g., communal vs. agentic), at the core of our findings is how power states alter consumer responses to different types of comparisons. For example, as we demonstrated in studies 1 and 4, when both groups of participants encountered disadvantaged prices compared with others, they responded differently: the powerful offered an agentic response (i.e., becoming upset about differences with respect to others) and angry complaints, whereas the powerless appeared to respond in a communal manner (i.e., being more comfortable with the others obtaining a good deal). These findings enrich the power literature by demonstrating that power-dependent psychological orientations influence not only people's comparative benchmarks but also the downstream implications from these comparisons. More generally, our findings suggest that power states, to some extent, define the meaning of other psychological terms, such as fairness: for high-power individuals, fairness means not being treated worse than others, whereas for low-power people, fairness means not being treated worse than they were treated previously. In contrast to the former definition, which relates more to the issue of equality, the latter relates more to the idea of consistency.

Limitations and Further Research

Must paying higher prices be viewed as negative? The present research rests on this important assumption that individuals, regardless of their power states, wish to spend less, and we acknowledge that this assumption is nontrivial. For example, for a powerful individual, paying more might trigger the sense

that he or she is superior, which could in turn be expected to influence their subsequent fairness judgments. Similarly, there are also situations in which high-power consumers may become hypersensitive to their own past treatment (e.g., when paying more than they previously did signals a loss of status). Examining how individuals perceive the same price differently depending on their social positions should prove to be a fruitful avenue for future research.

Another important limitation of the present research is that although we attempted to simulate what actually occurs in the real world, we strictly controlled for the relevance of the comparative standards. When others were presented in the shopping scenarios, for example, we painstakingly avoided any specific information on the identity of these others to ensure that characteristics of others would theoretically have minimal influence on fairness judgments. However, the absence of this parameter is again nontrivial. For example, another consumer in real life could be a close friend or stranger or an in-group or out-group member, and unfairness perceptions would undoubtedly change if this information became available. We believe that future research should address the omission of this parameter and explore how consumers in different power states respond to an other-comparative disadvantaged price differently when the background of the referenced other person is considered.

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