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Several influential streams of research in marketing, psychology, and economics conclude that when an offer a seller makes to a buyer is held fixed, the buyer will be repelled if he or she learns that some other group of buyers is getting a better price for the same benefits or receiving more benefits for the same price. Prior work has attributed this repulsion to perceptions that the offer is inequitable, that it fits others better, or that it suggests that the core product is of low value. In six experiments, the authors show conditions under which exactly the opposite can occur; that is, consumers judge the same offer to be more attractive when a seller offers a better price or more benefits to another group than when the seller treats everyone equally.

How to Attract Customers by Giving Them the Short End of the Stick

Firms have long practiced target marketing. They offer special deals to specific groups of customers or tailor their offerings to appeal to specific sets of consumers. Charging different prices or providing differential benefit across different customer groups enables firms to increase the attractiveness of their offerings to specific groups without undercutting their profits from other groups. However, whenever targeted customers are favored, the nontargeted customers “get the short end of the stick.” That is, they either (1) pay more to receive the same quality or (2) receive less utility than the favored customers even though they pay the same price.

If, as some evidence suggests, an action intended to lure a target group has the side effect of repelling a (perhaps larger) set of nontargeted customers, managers may grossly overestimate the net benefits of their promotions to the bottom line. This article explores this phenomenon and shows

that in certain situations, the nontargeted customers may prefer the option that gives them the short end of the stick.

How can it be determined a priori whether nontargeted customers will be repelled or attracted by paying relatively more than targets or by observing that a nonprice promotion is a better fit for others than for themselves? Consider the following examples: The manufacturer of Fastskin, a product designed to help competitive swimmers go through the water faster, gave away its product to all the Olympic teams but not to other swimmers (Murphy 2000). The super-premium Belvedere vodka was launched by holding free vodka-tasting events exclusively for bartenders (Silverstein and Fiske 2005, p. 74). Victoria’s Secret distributed catalogs with different prices for the same goods based on the buyers’ demographics and zip codes (*Katzman v. Victoria’s Secret Catalog* 1996), and Amazon.com experimented with different prices for different customers (*The Wall Street Journal* 2000). Safeway U.K. provided discounts to loyalty card members but not to nonmembers (Nelson 2000). A Raleigh, N.C., newspaper offered a 60% subscription discount to residents of nearby Durham, N.C., but not to its other customers. Pillsbury provided the option of buying a collector’s plate at a reduced price to buyers of its product; this option is presumably valuable to collectors but not to others.

We present a theory that posits why nontargeted customers might be attracted in the first two examples and repelled in the other five. We begin by reviewing evidence for repulsion.

REPELLING CONSUMERS BY RELATIVE MISTREATMENT

To date, academic evidence has shown that consumers react negatively when they are treated less well than some

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other group. Researchers offer three main explanations. First, an offer may be judged to be less attractive when another segment receives a better price or promotional offer because differential treatment is “unfair” (e.g., Anderson and Simester, 2005, in press; Bolton, Warlop, and Alba 2003; Campbell 1999; Darke and Dahl 2003; Feinberg, Krishna, and Zhang 2002). People prefer equity to disadvantageous inequity (Loewenstein, Thompson, and Bazerman 1989).

Second, sometimes consumers are repelled by relative mistreatment because of their use of the “idiosyncratic fit” heuristic (Kivetz and Simonson 2003; Simonson, Carmon, and O’Curry 1994) when they are uncertain of their preferences for the core products, whereas the value of the promotional offer is more “evaluable” (Hsee 1996). Here, consumers may rely on their perceptions of the relative fit of the seller’s promotional offers to them versus to others (i.e., the idiosyncratic fit heuristic). The use of this comparison-induced heuristic can lead to choice anomalies, both negating/offsetting the attraction of a promotion offer and turning the disutility of higher effort into an attraction. Thus, Simonson, Carmon, and O’Curry (1994) show that adding a promotion premium that fits an individual worse than other consumers actually reduces the attractiveness of the product + promotion bundle compared with that of the same product without promotion. In one study, they show that a promotional offer of the option to purchase a collector’s plate with the purchase of a particular brand of cake mix reduced participants’ tendency to choose that particular brand compared with a second, comparable cake mix brand. Just as a benefit can repel consumers if another group benefits more, a cost can attract consumers if the cost is less painful for them than for other consumers. In Kivetz and Simonson’s (2003) study, participants who liked sushi were more likely to sign up for a loyalty program for a prize of a \$10 phone card if they were required to purchase 12 sandwich meals and 12 sushi meals to qualify than if they were required to purchase only 12 sandwich meals.

The third explanation does not operate through the fairness of the seller or fit of the promotion. Rather, it posits that consumers use the promotional offer to infer the value of the core product. If consumers find the promotion unattractive to them relative to others, they will infer that the core product is of lower value to them than when the same product is sold to everyone without a promotion (Anderson and Simester 2001; Lichtenstein, Burton, and O’Hara 1989; Raghubir, Inman, and Grande 2004). The logic behind this quality inference explanation is that the cost of the promotional offer is embedded in the list price of the core product, and thus the core product is overpriced to nontargets relative to others who like the promotion better.

This article builds on the aforementioned work. We conceptually replicate the finding that nontargeted consumers can be repelled by getting the short end of the stick. However, we also posit and show that consumers who are disadvantaged by the promotions make positive inferences about the value (quality) of the core product if they perceive the group that receives the promotion as expert in judging quality. Thus, we put forth a new explanation for how consumers might react to being treated worse than others, and we augment the existing literature on fairness, idiosyncratic fit, and quality inferences by identifying conditions in which consumers will and will not behave as theories pre-

dict. Next, we discuss four conditions that are necessary for consumers to be attracted rather than repelled by getting the short end of the stick. Then, we present six studies that provide support for this formulation.

CONDITIONS FOR ATTRACTING CONSUMERS BY RELATIVE MISTREATMENT

Our interest is in situations in which firms practice various forms of price or promotion discrimination among their customers and in which consumers believe (1) that there are quality differences among products and (2) that customers differ in the ability to discern quality before purchase. Alba and colleagues (1997) point out that such differences in ability are common; many products are “search goods” for experts but “experience goods” for novices (Nelson 1974).

We posit that when a seller provides a better deal to a set of buyers who are perceived as experts in determining quality, a disadvantaged buyer might use this to infer higher quality of the core brand. This can occur even when the disadvantaged buyer does not observe the experts’ actual purchase. Although an economic argument might be made for why these quality inferences are “rational,” we do not advance a model of rational seller and buyer behavior in this article; rather, we study the psychology of consumers’ inferences from receiving the short end of the stick and try to determine when such inferences dominate choices.

We believe that quality inferences that attract nontargeted consumers operate parallel to thoughts about idiosyncratic fit and fairness that repel these consumers. Four conditions must be met before these posited positive quality inferences will dominate idiosyncratic fit and fairness in affecting novice consumers’ choices.

First, the disadvantaged customers must believe that the advantaged customers are better able than they are to judge quality before purchase. Second, it must be costly for the seller to provide a promotion to lure the advantaged group to inspect the core product, so a low-quality seller would be harmed by appeals to discerning experts who would not purchase after inspection. Third, the uncertainty of disadvantaged consumers must be associated primarily with concerns about “more-is-better” attributes. Such attributes are sometimes referred to as “vertical attributes” (Lancaster 1971). If the attributes of uncertain value are matters of idiosyncratic taste (i.e., ideal point rather than vector attributes), novice consumers could not rely on expert consumers’ inferred attraction to the product to determine what they want themselves. Fourth, quality uncertainty must be salient, and an inference rule to infer quality must be accessible and diagnostic. Extant behavioral work shows that inferences play a small part in decisions if consumers have other diagnostic bases for judging quality, but they can dominate decisions if uncertainty is high and other diagnostic bases for decisions are not accessible (Alba and Cooke 2004; Dick, Chakravarti, and Biehal 1990; Feldman and Lynch 1988; Johar and Simmons 2000; Kardes 1988; Kivetz and Simonson 2000; Simmons and Lynch 1991). In the following six experiments, we test these psychological moderators.

STUDY 1: PROMOTION TO ANOTHER GROUP STIMULATES DEMAND BY SLIGHTED CUSTOMERS

We proposed four conditions needed for consumers to make positive quality inferences for the core product based

on the promotion offered. In Study 1, we manipulate two of these conditions: the seller's cost to provide the promotion and the target group's ability to judge quality. Respondents were told that they were looking for a crystal product and that there was uncertainty about the quality level of the item. One store carrying the product offered a promotion that subsidizes another group's travel costs to visit that store. This subsidy was a sunk cost because the store's expenditure was independent of whether the subsidized group members actually bought the merchandise they came to inspect. We varied the magnitude of the subsidy and the subsidized group's ability to discern quality from inspection.

We expected that when the better deal was given to customers who were more able to discern quality, respondents would reason that a low-quality seller would not offer this type of promotion because discerning consumers would recognize the low quality of the promoted offering and not buy it after they arrived at the store. Only high-quality sellers would be able to recoup the sunk costs associated with promotion to discerning customers through sales to those customers.

In contrast, if the promotion was given to buyers who were not able to discern quality when they came to the store, even a low-quality seller might mimic to attract potential buyers to the store who otherwise would not have shopped there. Therefore, we hypothesize that a promotion will attract the excluded customers (i.e., our respondents) if they perceive the beneficiaries as quality discerning but will repel the excluded consumers if the target group has no special expertise in judging quality. This latter result would be consistent with prior findings on fairness, idiosyncratic fit, and price-quality inference.

In addition to manipulating the identity of the target group, we manipulated the cost of the subsidized ride given to this group. Extant fairness and idiosyncratic fit theories predict that increasing the benefits to another group always increasingly repels nontarget customers (though it might be argued that the size of the disutility depends on the target group's characteristics). In contrast, we predict that because the high sunk cost of a more costly ride would thwart the low-quality seller's attempt to mimic if the beneficiaries are experts, these high costs would enhance the credibility of the quality signal. Consequently giving benefits to the experts would make the store more attractive to our (novice) respondents (cf. Kirmani and Wright 1989). However, consistent with fairness and idiosyncratic fit, we predict that when the promotion is to a nonexpert group, the more costly and extravagant the free ride they receive, the less attractive the promoting store will be to our respondents who are ineligible for this benefit.

Method

Overview and design. Two hundred fifteen undergraduate and graduate students responded to a scenario in which they were to buy a specific crystal product available at two stores. One seller, Store C, offered the crystal product at a "(C)ertain" level of quality, and the other seller, Store U, offered the crystal product for the same price with an "(U)ncertain" level of quality. The quality sold at Store U was equally likely to be worth \$70 more or \$70 less than the quality sold at Store C. In the experimental conditions,

Store U offered a promotion to another group that excluded the participants. The promotion was in the form of free transportation to Store U, and the subsidized ride did not require any purchase when potential buyers arrived at the store. We manipulated whether any group benefited from a free ride, the expertise of this group, and the luxuriousness of the free ride.

We told respondents that travel to the nonpromoting Store C would cost \$20 for a 20-minute ferry ride to the store. The key dependent variable was how much the respondents would pay for the 30-minute ferry ride to Store U, which offers free transportation to the other group of customers. Before this question, participants answered questions about their perceptions of the target group's ability to discern quality relative to their own and their estimates of the relative quality of the products at the two stores.

Respondents were randomly assigned to one of five conditions. We used a 2 (promotion recipients: expert versus nonexpert target group) \times 2 (promotion recipients: luxury versus standard ride) completely between-subjects design, and we augmented this with a control group that read the same scenario with no mention of a free ride for any group.

In all conditions except for the control condition, the participants got the short end of the stick in that they were ineligible for the preferential treatment that the other customer group received. For the four treatment groups, participants assigned to the experts + free ride conditions read the following: "The promotion is given to 100 attendees to a conference on gemstones and geology held in the hotel." Participants assigned to the nonexperts + free ride conditions read the following: "The promotion is given to 100 hotel guests who stay in harbor-view rooms." The respondents were told that they were staying in "the standard, city-view room." There was never any mention of the expertise of the participants or of the advantaged group.

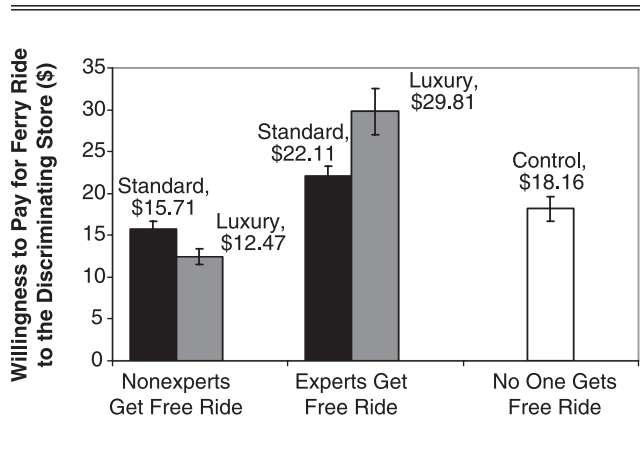
In the standard promotion condition, the advantaged group receiving the free ferry ride would be sitting in the regular, non-air-conditioned deck—the same accommodations as the respondents, except that respondents would need to pay for the ferry ride. In the luxury promotion condition, the group receiving the free ride would ride in an air-conditioned VIP room that served free drinks and snacks at no extra charge.

Results

Manipulation check. Participants judged the gemstone conference attendees to be reliably more informed than they were ($M = 8.96$; 1 = "They should be much worse than me," and 11 = "They should be much better than me"). They judged the harbor-view room occupants to be roughly as informed as themselves ($M = 6.25$). The two averages differed significantly ($F(1, 169) = 162.71$, $p < .0001$, $\omega^2 = .48$).

Willingness to pay to travel to the store with uncertain quality. Our major variable of interest is how much the participant is willing to pay to shop at Store U, the store with uncertain quality. Figure 1 shows that the willingness-to-pay means in the five conditions were consistent with our predictions. When we collapse the results across standard and luxury conditions, promotion to the nonexpert group reduced willingness to pay to travel to Store U compared

Figure 1
WILLINGNESS TO PAY FOR FERRY RIDE TO THE
DISCRIMINATING STORE IN STUDY 1: EFFECT OF BEING
EXCLUDED FROM THE PROMOTION DEPENDS ON THE
EXPERTISE OF THE TARGET



Notes: Error bars show standard errors of the means.

with the control condition ($M = \$14.09$ versus $\$18.16$; $F(1, 210) = 4.33$, $p = .04$). However, promotion to the expert group increased willingness to pay ($M = \$25.96$ versus $\$18.16$; $F(1, 210) = 15.98$, $p < .0001$).

Ignoring the control group and analyzing the remaining cells as a 2×2 factorial design, we observe the predicted interaction between the identity of the advantaged group and the cost of the promotion ($F(1, 167) = 11.22$, $p = .001$). Luxury treatment for nonexperts made respondents directionally less willing to pay than if the nonexperts' free rides were only standard class ($F(1, 167) = 1.97$, $p = .16$). As we predicted, luxury treatment for experts made the disadvantaged respondents more willing to pay than if experts' free rides were only standard class ($F(1, 167) = 11.16$, $p = .001$).

Discussion of Study 1

Study 1 tests two of our four hypothesized conditions for attracting customers by giving them the short end of the stick. We found that promotion to a target group attracted participants who were denied the promotion when they perceived the targets as better judges of quality than themselves. This case resembles the first two examples we presented at the beginning of this article, in which Olympic swimmers received free Fastskin swimsuits and bartenders received free invitations to tastings that included super-premium Belvedere vodka. Furthermore, participants' attraction was stronger when their relative disadvantage increased. These results are opposite to what inequity aversion, fairness, and the idiosyncratic fit heuristic would predict, but they are consistent with our premise that there are situations in which consumers use the promotion to make positive inferences about quality.

In contrast, if participants perceived the advantaged target group as nonexpert, they were repelled by the seller that provided the promotion, as in the last five examples we discussed in the beginning of this article. This repulsion was directionally stronger when the nonexpert target group

received the luxury promotion than when this group received the standard promotion. Our findings for promotion to nonexpert targets agree with several extant theories regarding respondents' perceptions of the promotion, such as jealousy or envy (Feinberg, Krishna and Zhang 2002), unfairness perception (Campbell 1999; Corfman and Lehmann 1993; Loewenstein, Thompson, and Bazerman 1989; Novemsky and Schweitzer 2004), and a heuristic based on misfit (Kivetz and Simonson 2003). Alternatively, respondents may have inferred a lower value of the core product if they believed that the seller might have raised the price to cover the benefits given to the target group (e.g., Lichtenstein, Burton, and O'Hara 1989).

We do not try to distinguish among various explanations of why consumers were put off by better treatment of another group in the nonexpert conditions. Rather, our interest centers on the observed results of higher willingness to pay in the expert conditions and the increase in willingness to pay in the expert + luxury condition compared with the experts + standard or control conditions; these findings are incompatible with prior accounts.

Our results also question the premise that, in general, promotions lead to a negative quality inference (cf. Chernev and Carpenter 2001; Lichtenstein, Burton, and O'Hara 1989; Raghuram, Inman and Grande 2004). We collected direct ratings of quality perceptions. These ratings were higher in the expert conditions ($M = 7.34$) than in the control condition ($M = 5.75$; $F(1, 210) = 23.64$, $p < .0001$). However, mean quality perceptions of the two nonexpert conditions ($M = 5.79$) did not differ from the control ($F < 1$), suggesting that our respondents did not treat promotions to nonexperts as a negative signal of product quality. Instead, jealousy or idiosyncratic misfit may have reduced their interest in buying from the seller without changing beliefs about quality. We test this negative signal effect again in Study 3.

OVERVIEW OF STUDIES 2–5

Study 1 tested the first two conditions for customers to be attracted by the short end of the stick. Studies 2–5 test the last two conditions. A targeted promotion becomes a basis for quality inference when uncertainty about product quality is high and when this dominates concerns with promotion fit. To catalyze this inference process, quality uncertainty must be salient, and the basis for inference must be accessible and seem diagnostic to the undiscerning respondents.

In Study 1, the firm was able to target its offering to a specific group, thus explicitly providing different deals to the different groups. Our participants got the short end of the stick because they paid more to receive the same benefit as another group.

However, in many circumstances, retailers cannot identify customer type and thus cannot charge type-specific prices. Instead, they target consumers by using nonprice promotions that differentially appeal to different types. When nontargeted customers buy the promoted products, they get the short end of the stick because they pay the same price as the target group but receive lower utility for the bundle. Simonson, Carmon, and O'Curry (1994) show that consumers who chose between two cake mixes were less likely to choose Pillsbury when it was accompanied by a

promotion that offered an option to buy a Pillsbury collector's plate than the case in which neither brand offered promotions. Kivetz and Simonson (2003) interpret this finding in terms of consumer repulsion by idiosyncratic misfit; that is, participants found the plate unattractive but assumed that some unspecified others would find the plate appealing.

In Studies 2–5, we examine situations similar to those that Simonson, Carmon, and O'Curry (1994) use. As in their studies, we bundle a core product with a promotional offer, and there is uncertainty about the core product's utility. However, in their studies, choosers were uncertain about their individual tastes; in ours, they are uncertain primarily about objective quality. Moreover, in our studies, the low-fit promotion is a stronger cue to high quality. This leads us to the following overarching prediction for Studies 2–5: When quality is highly uncertain and consumers are driven to resolve this uncertainty, they will prefer a product associated with a promotion that is an idiosyncratic misfit to themselves but a fit to another group of more discerning customers.

STUDY 2: PROMOTION PREMIUM AS A MISFIT VERSUS A QUALITY CUE

In Study 2, respondents chose between two promoted camcorders with short descriptions that we pretested to imply comparable quality. In a control condition, neither option was accompanied by a promotion. In the remaining conditions, we paired one camcorder with a promotion that would be unattractive to respondents but attractive to camcorder experts, and we paired the other camcorder with a promotion that respondents would like but did not signal quality. We varied the pairing of two promotions with the two camcorders. We also manipulated quality salience by asking respondents to choose either before or after they gave quality ratings of the two brands. Prior research on consumer inference has shown that people make certain elaborative inferences when prompted that they would not have made without prompting (Dick, Chakravarti, and Biehal 1990; Feldman and Lynch 1988; Huber and McCann 1982; Simmons and Lynch 1991).

We posit that inferences about core product quality operate parallel to effects of fairness and fit of the promotion premium. If the quality of the two core products is salient at

the time of choice, people will use the promotion premiums to infer which core product has higher quality. The higher-quality implication of the unattractive premium will outweigh its lower direct benefit. However, if quality is not salient, we expect that promotions that fit the respondents' tastes will be more enticing than those that better fit another (unmentioned) customer group.

Method

Overview, stimuli, and design. One hundred forty-six undergraduate students were paid \$1 to respond to a scenario in which they were asked to choose between two hypothetical camcorders (brand names Simmons and Supersonic) calibrated to be similar in attractiveness. Participants were randomly assigned to one of four conditions that permitted a set of planned contrasts. In the control group, these camcorders were presented with no accompanying promotion. In three experimental conditions, each camcorder came with one of two promotions. Pretests and manipulation checks established that most respondents preferred one promotion, a \$30 Wal-Mart gift certificate, but they perceived this as having little association with camcorder quality. Respondents did not prefer the other promotion premium, a \$30 coupon for a rebate on a Seagate external hard drive, but they perceived it as having positive quality implications. (The Seagate premium was correctly described to participants as featuring USB 2.0 and Firewire interfaces, 72,000 rpm, and an 8 MB buffer that let photographers shoot large volumes of high-resolution pictures without changing the card.) Table 1 presents the design for Study 2 and the results, which we discuss in greater detail subsequently.

In the Control_{qs} condition, Supersonic and Simmons had no associated promotion. We made quality salient (thus the *qs* subscript) by asking respondents to rate relative camcorder quality before choosing between them (1 = "Supersonic definitely better," and 8 = "Simmons definitely better"). In the Supersonic + Seagate_{qs} condition, we made quality salient as previously described, and Supersonic was bundled with the high-quality cue and low-fit premium (Seagate rebate), whereas Simmons was bundled with the low-quality cue and high-fit premium (Wal-Mart certificate). In the Simmons + Seagate_{qs} condition, we swapped

Table 1

CONDITIONS AND RESULTS FOR STUDY 2: ATTRACTING CUSTOMERS BY IDIOSYNCRATICALLY MISFITTING PROMOTIONS THAT TARGET EXPERTS WHEN QUALITY IS SALIENT

Condition	Quality Salient	Option A	Option B	Bundle Preference	Camcorder Quality Comparison
Control _{qs}	Yes	Supersonic	Simmons	4.65 (1.51) ^b	4.82 (1.40) ^b
Supersonic + Seagate _{qs}	Yes	Supersonic + Seagate rebate	Simmons + Wal-Mart certificate	3.65 (2.33) ^c	3.94 (1.69) ^c
Simmons + Seagate _{qs}	Yes	Supersonic + Wal-Mart certificate	Simmons + Seagate rebate	5.92 (2.09) ^a	5.92 (1.80) ^a
Simmons + Seagate _{non-qs}	No	Supersonic + Wal-Mart certificate	Simmons + Seagate rebate	3.85 (2.08) ^c	4.66 (1.71) ^b

Notes: We measured items on scales anchored by "Supersonic definitely better" (1) and "Simmons definitely better" (8). Within each of the two rightmost columns, conditions with different superscripts differed significantly at $p < .05$. Standard deviations are in parentheses. The key comparisons are between Rows 1 and 2, 1 and 3, 2 and 3, and 3 and 4.

the premiums for the two core products so that the Wal-Mart gift certificate was associated with the Supersonic rather than the Simmons camcorder. The Simmons + Seagate_{non-qs} condition was identical to the Simmons + Seagate_{qs} condition, except that quality was not made salient. Participants reported their bundle preferences before judging the relative quality of the camcorders.

Finally, after participants chose the camcorder + promotion bundle, they rated their relative preference for the two promotions on an eight-point scale. In the control condition, participants rated the attractiveness of the two promotions that were not associated with any camcorder.

Results

Pretest and manipulation checks on promotion premium. We establish that respondents (1) personally prefer the Wal-Mart gift certificate to the coupon for a Seagate hard drive and (2) believe that the Seagate hard drive would be more appealing to discerning customers but that the Wal-Mart gift certificate would be more appealing to less-quality-sensitive customers. In support of the first point, participants in all conditions of Study 2 reported favoring the Wal-Mart certificate ($M = 2.89$). This response differed significantly from the 4.5 midpoint of our eight-point scale ($t(145) = 9.45, p = .0001$). Responses did not differ across the four experimental conditions ($F(3, 142) = 1.38, p = .25$). In support of the second point, a separate group of 111 undergraduate students evaluated the appeal of the two different promotion premiums that we used to accompany the camcorders (1 = "much more appealing to expert consumers in camcorders than to me," and 7 = "much more appealing to me than to expert consumers in camcorders"). Participants rated the \$30 Wal-Mart certificate as more appealing to themselves than to the experts ($M = 5.30$), and they rated the \$30 Seagate rebate as more appealing to experts than to themselves ($M = 3.09$). These means are different ($t(110) = 12.51, p < .0001, \omega^2 = .76$).

Bundle preferences. The key analyses from Study 2 come from a system of planned one-degree-of-freedom contrasts between conditions that compare the four rows in Table 1. We can assess the effect of varying promotion when quality is salient (Row 1 versus Row 2 and Row 1 versus Row 3). Holding constant the pairing of camcorders with promotions (Row 3 versus Row 4), we can also assess the effect of salience.

Mean preference of the control group was 4.65, which is close to the 4.5 midpoint of the scale. When we made quality salient before choice, as in the Simmons + Seagate_{qs} and Supersonic + Seagate_{qs} conditions, participants preferred the bundle with the promotion that was less attractive to them personally: $M = 5.92$ (they preferred the Simmons + Seagate rebate), and $M = 3.65$ (they preferred the Supersonic + Seagate rebate). Both means differed significantly from the 4.5 indifference point ($t(37) = 2.05$ and $t(34) = 2.07$) and from the control group ($t(142) = 2.63$ and $t(142) = 2.02$). These results run opposite to what idiosyncratic fit would predict, but they support our premise that consumers may infer a signal of quality from a promotion that is a misfit to their personal tastes but fits the tastes of more knowledgeable consumers.

However, we did not observe this result in the Simmons + Seagate_{non-qs} condition, in which we did not

make quality salient before choice. Here, participants' preferences for the Supersonic + Wal-Mart gift certificate bundle ($M = 3.85$) differed from the just-noted preferences for the Simmons + Seagate rebate when quality was salient ($M = 5.92; F(1, 142) = 20.05, p < .0001$). Planned contrasts on quality ratings revealed a pattern similar to that for bundle preferences (see Table 1).

Impact of quality and promotion on choice. We interpret these results to show that participants used the nonpreferred promotion as a signal of quality when quality was salient and as a reason for rejection when quality was not salient. As a further test of this interpretation, we excluded the control condition and regressed bundle preferences on (1) quality rating of the camcorder, (2) preference for the specific promotion that was bundled with the camcorder, (3) quality salience (0 = nonsalient, 1 = salient), and (4) the quality rating \times salience and promotion preference \times salience interactions.

As we expected, both interactions were highly significant (quality rating \times salience: $F(1, 106) = 9.28, p < .005$; promotion preference \times salience: $F(1, 106) = 29.07, p < .0001$). When quality was salient, quality ratings had a strong, positive effect on bundle preference ($b = .89, t = 8.55, p < .0001$), and the participant's assessment of the promotion had no effect ($b = -.07, t = -1.06, p = .3$). When quality was not salient, quality ratings had a reduced effect ($b = .23, t = 1.63, p = .11$), and promotion preference had a strong, positive effect ($b = .67, t = 5.64, p < .0001$).

Discussion of Study 2

The results of Study 2 support our conjecture that an idiosyncratically misfit promotion can be used as a quality signal. When we made core quality salient by prior questioning, participants judged the camcorder that was accompanied by a personally unattractive Seagate hard drive rebate as higher in quality than the camcorder that was accompanied by the personally attractive Wal-Mart gift certificate. Our regression results show that participants chose accordingly. Contrary to the idiosyncratic fit hypothesis, consumers are attracted by the short end of the stick.

However, our results might be explained by "compensatory inferences" (Chernev and Carpenter 2001), in which consumers infer that sellers would not offer promotions unless core product quality was inferior. The more inferior the core product, the more attractive the promotion the seller offers to compensate must be. In Study 2, we pitted a camcorder with the attractive Wal-Mart gift certificate against another camcorder with a less attractive Seagate hard drive, and people preferred the latter bundle. Compensatory inferences might lead people to prefer the camcorder with the Seagate promotion because they might infer that the other camcorder is inferior if it needs a more desirable promotion. Study 3 addresses this alternative explanation.

STUDY 3: TEST OF THE COMPENSATORY INFERENCE ALTERNATIVE EXPLANATION

We test our theoretical perspective against the alternative explanation that people infer that product quality is inversely related to the value of a promotion. In Study 3, one camcorder offers a Seagate hard drive promotion, but the alternative has no promotion. If all promotions signal low quality (Chernev and Carpenter 2001), respondents

should choose the camcorder with the Seagate hard drive less often than in a control condition in which neither camcorder is promoted. The same should be true if a low-fit promotion is a reason against choice because of idiosyncratic misfit (Simonson, Carmon, and O'Curry 1994). In contrast, we predict that when quality is salient, respondents will make a positive quality inference and will choose the product bundled with the Seagate rebate more than when no rebate is offered. If quality is not salient, we expect that respondents will be repelled by the misfitting promotion.

Method

Eighty-three undergraduate students were paid \$1 for participation and were randomly assigned to cells in a 2 (promotion versus no promotion) \times 2 (quality salient versus quality nonsalient) between-subjects design. They compared two camcorder offers that were identical to those we used in Study 2, with one exception: The Supersonic camcorder always appeared without promotion. In the promotion conditions, the Simmons camcorder was paired with the high-quality cue and low-fit Seagate rebate; respondents chose between Supersonic and Simmons + Seagate rebate. In the no-promotion condition, the Simmons alternative had no associated promotion; respondents chose between Supersonic and Simmons. This promotion factor was crossed with a two-level quality-salience manipulation. As in Study 2, respondents in the quality-salient condition rated camcorder quality before they were asked to choose. In the quality-nonsalient condition, respondents chose before rating camcorder quality. The scales were the same as those in Study 2.

Results

Table 2 presents the relevant results from Study 3. We first examine preferences for the camcorder + promotion bundles. We find a significant promotion \times quality-salience interaction ($F(1, 79) = 7.58, p < .01$). When quality was not salient, the addition of the Seagate rebate promotion directionally reduced preferences for Simmons ($M_{\text{rebate, non-qs}} = 3.81$ versus $M_{\text{control, non-qs}} = 4.68; F(1, 79) = 2.61, p = .11$), consistent with idiosyncratic fit. When quality was salient, however, the addition of the same promotion increased relative preferences for Simmons compared with the control ($M_{\text{rebate, qs}} = 5.84$ versus $M_{\text{control, qs}} = 4.57; F(1, 79) = 5.14,$

$p = .03$). Quality ratings showed a weaker pattern. When quality was rated after choice, the Seagate rebate had no significant effect on rated quality of the camcorder ($M = 4.57$ versus $M = 4.77; F(1, 79) = .14, p = .70$). When quality was salient, the same rebate marginally enhanced the quality perception of its associated camcorder compared with the no-promotions group, contrary to a compensatory inference account ($M = 5.53$ versus $M = 4.77; F(1, 79) = 2.94, p = .08$).

Discussion of Study 3

Study 3 supports our quality-signaling account and rules out the interpretation that compensatory inferences drove our results in Study 2. Compensatory inference predicts a lower quality rating for the promoted brand. We found weak evidence for compensatory inferences when quality was not salient but observed the opposite result when quality was salient; that is, respondents rated the quality of the promoted brand marginally higher and preferred it more. Which rules consumers use to make inferences depends on their relative diagnosticity and effort required (Broniarczyk and Alba 1994; Dick, Chakravarti, and Biehal 1990; Ross and Creyer 1992). Our results imply that compensatory inferences are less diagnostic than signal-based ones.

Study 3 contrasted choice of two products when neither is promoted with the case in which one adds a misfit promotion, as in the work of Simonson, Carmon, and O'Curry (1994). Study 3 replicates their finding that the addition of an optional promotion that does not fit the consumer's personal taste can discourage the consumer from buying the associated product, but only when quality concern is not salient. When quality is salient, the same misfitting promotion attracts consumers.

We intended our quality-salience manipulation of whether inferences were prompted before choice to represent a general class of real-world events that trigger reflection on product quality. For example, advertising can prime the dimension of quality, or a salesperson can heighten quality salience by asking, "How much do you want to spend?" In Studies 2 and 3, we observed that people were attracted by the short end of the stick when they were asked to make an explicit quality judgment before choosing between options and not otherwise. Our findings might be criticized as laboratory artifacts because people rarely choose between products after external prompts to infer

Table 2

CONDITIONS AND RESULTS FOR STUDY 3: SIGNAL-BASED INFERENCES DOMINATE COMPENSATORY INFERENCES

Condition	Quality Salient	Option A	Option B	Bundle Preference	Camcorder Quality Comparison
Control _{qs}	Yes	Supersonic	Simmons	4.57 (1.43) ^b	4.76 (1.34) _b
Simmons + rebate _{qs}	Yes	Supersonic	Simmons + Seagate rebate	5.84 (1.84) ^a	5.53 (1.54) _a
Control _{non-qs}	No	Supersonic	Simmons	4.68 (1.21) ^b	4.77 (1.27) _b
Simmons + rebate _{non-qs}	No	Supersonic	Simmons + Seagate rebate	3.81 (2.40) ^b	4.57 (2.38) _b

Notes: We measured items on scales anchored by "Supersonic definitely better" (1) and "Simmons definitely better" (8). Within the columns, conditions with different letter superscripts differed significantly at $p < .05$. Conditions with different letter subscripts differed at $p < .08$. Standard deviations are in parentheses.

quality. Studies 2 and 3 leave open the question whether real-world consumers make the effort to infer product quality from a personally unappealing promotion premium.

In Study 4, we test the conjecture that consumers infer quality spontaneously (i.e., without prompting) when choices have real consequences. People do not make inferences unless it is instrumental to do so (Dick, Chakravarti, and Biehal 1990; Feldman and Lynch 1988; Simmons and Lynch 1991; Wong and Weiner 1981). We have shown that consumers are attracted by the short end of the stick if they make quality inferences. The question then is, Are real and material consequences sufficient to motivate quality inferences in the natural process of choice?

STUDY 4: HYPOTHETICAL VERSUS REAL CHOICES

In Study 4, participants chose between cordless drills or drill + promotion bundles without prior prompting to make explicit quality inferences. We manipulated whether choice was hypothetical or had real consequences. Our key prediction is that participants in the real-choice condition will choose the product bundle that is accompanied by a promotion premium that implies a high-quality core product, even when that promotion has little appeal to them. This would follow if consumers make spontaneous quality inferences based on promotions with low idiosyncratic fit to their own tastes. Conversely, in the hypothetical-choice condition, people will not make these inferences and will choose the bundle with the promotion they like more.

Method

Participants. Three hundred fourteen daytime MBA students participated in this study during a first-year orientation session. They completed the questionnaire together with other paper-and-pencil studies that took approximately 40 minutes. Their compensation was a donation of \$8 to a charity that the MBA program supported.

Stimuli. The stimuli were pairs of drills or drill + promotion pairs. All participants chose between two real drill

options: Option A was a Skil 18 volt 3/8” drill (Model 2887-06), and Option B was a Ridgid 14.4 volt 3/8” drill (Model R83001). We took the photos and descriptions of the drills from a hardware store’s Web site and omitted the price information. In the four promotion conditions, each drill was paired with one of the two promotions offered by the respective drill manufacturers: a \$15 Nordstrom department store gift card or a book, *Graphic Guide to Frame Construction: Details for Builders and Designers*.

Design. Each participant was randomly assigned to one of the six conditions in a 3 (promotions) × 2 (real versus hypothetical choice) between-subjects design. The promotion variable had three levels. In the no-promotion control condition, participants chose between the two drills when neither of the drill manufacturers gave promotion premiums. In the Skil + book condition, the Skil drill was paired with the book promotion, and the Ridgid drill was paired with the Nordstrom gift card. In the Skil + gift card condition, the pairing of drills with promotions was reversed, as Table 3, Panel A, shows.

In the real-choice conditions, participants read the following extra paragraph before they proceeded to the next page to see the drills and the descriptions. “After we collect your response and those of your classmates, we will randomly draw a winner, who will receive as a gift the drill he or she selected. If you are the winner, you will have the option to exchange your chosen drill for the cash equivalent of its retail price. (You will also receive the drill’s accompanying promotion.)” Participants in the hypothetical-choice conditions saw no such paragraph. (The text in parentheses was omitted for participants in the two control conditions, in which the drills were not bundled with promotion premiums.)

Procedure. We first measured participants’ knowledge of nine brand names of drills. On the following page of the booklet, participants read descriptions of the two cordless drills along with their accompanying promotions, if relevant. They were told that they would be asked to choose

Table 3
STUDY 4: DESIGN AND RESULTS

<i>A: The 3 × 2 Between-Subjects Design</i>						
	<i>Promotion Condition</i>					
	<i>No Promotion</i>		<i>Skil + Gift Card</i>		<i>Skil + Book</i>	
	<i>Option A</i>	<i>Option B</i>	<i>Option A</i>	<i>Option B</i>	<i>Option A</i>	<i>Option B</i>
Hypothetical choice	Skil	Ridgid	Skil + gift card	Ridgid + book	Skil + book	Ridgid + gift card
Real choice	Skil	Ridgid	Skil + gift card	Ridgid + book	Skil + book	Ridgid + gift card

<i>B: Percentage of Respondents Choosing Ridgid (Option B): Misfitting Promotions Attract Customers When Real Choices Make Quality Salient</i>			
	<i>No Promotion</i>	<i>Skil + Gift Card (Ridgid + Book)</i>	<i>Skil + Construction Book (Ridgid + Gift Card)</i>
Hypothetical choice	42% ^{b, c}	29% ^{a, b}	55% ^c
Real choice	45% ^b	76% ^c	28% ^a

<i>C: Bundle Preference (1 = “Skil,” and 14 = “Ridgid”)</i>			
	<i>No Promotion</i>	<i>Skil + Gift Card (Ridgid + Book)</i>	<i>Skil + Book (Ridgid + Gift Card)</i>
Hypothetical choice	7.02 (4.20) ^b	5.40 (4.14) ^c	8.56 (4.22) ^a
Real choice	6.81 (4.42) ^b	9.46 (3.74) ^a	5.48 (4.25) ^b

Notes: Cells in the same row or column with different superscripts differed significantly at $p < .05$. Standard deviations are in parentheses.

which of the two drills (or drill + promotion bundles) they would prefer to receive as a free gift. Then, participants in the real-choice conditions read the paragraph on the possibility of winning the chosen drill and the promotional offer. That paragraph was omitted for participants in the hypothetical-choice conditions.

After reviewing the two drills (and the accompanying promotion when relevant), participants indicated their discrete choice of Option A or B and the strength of their preferences (1 = "slightly prefer," and 7 = "strongly prefer"). On the final page, participants expressed their preferences for the two promotion premiums (1 = "definitely prefer book," and 8 = "definitely prefer gift card") and estimated the prices of the two drills on an 11-point scale (1 = "\$50-\$70," and 11 = "\$250-\$270"). Then, participants filled in information on their gender and country of origin. At the end of the session, all participants were made eligible for a drawing, and one participant won the drill and promotion that he had chosen.

Results

Control group ratings of drill attractiveness and promotion attractiveness. In the two control groups, participants evaluated the book and gift card promotions alone rather than bundled with a drill. We found no difference between the two control groups in terms of choice (share of Ridgid: 45%_{real} versus 42%_{hypothetical}, $\chi^2(1) = .01$). Similarly, the control groups did not differ in rated preferences for the drills ($M_{\text{real}} = 6.81$ versus $M_{\text{hypothetical}} = 7.02$; $F(1, 303) = .06$; 1 = "prefer Skil," and 14 = "prefer Ridgid"). The grand mean of the two control conditions ($M = 6.91$) did not differ from the 7.5 midpoint of the scale ($t(97) = 1.35$, $p = .18$; see Table 3, Panels B and C).

We also used the control groups to verify that participants preferred the \$15 Nordstrom gift card over the book on frame construction. The mean of the two control conditions ($M_s = 6.68$ and 7.14) differed significantly from the 4.5 midpoint of the scale (1 = "prefer book," and 8 = "prefer gift card"; $t(102) = 13.9$, $p < .01$). The two control means did not differ from each other.

Effects of promotions on choice. Our key hypothesis states that when the choice is hypothetical, respondents will favor the bundle with the personally preferred Nordstrom gift card. When the choice has real consequences, respondents will favor the bundle with the less preferred book promotion that appeals to quality-discerning drill buyers.

We tested this hypothesis using planned comparisons among the four cells in which promotions accompanied the drills. In a binary logit analysis, we regressed choice of drill as the dependent variable on (1) the type of promotion (gift card versus book), (2) real versus hypothetical choice, and (3) the interaction between these two binary variables. As we predicted, there was significant interaction ($\chi^2(1) = 27.48$, $p < .01$). In the hypothetical-choice condition, participants chose the drill that was paired with the preferred promotion (gift card) over the drill that was paired with the less preferred promotion (book; $\chi^2(1) = 7.24$, $p < .01$). However, in the real-choice condition, the promotions had the opposite effect ($\chi^2(1) = 23.93$, $p < .0001$). Participants chose the drill that was paired with the less preferred (book) promotion over the drill that was paired with the more preferred (gift card) promotion.

We repeated the same type of analysis using the 14-point graded preference measures (1 = "strongly prefer Skil," and 14 = "strongly prefer Ridgid") as the dependent variable and obtained similar results. A 2×2 between-subjects analysis of variance revealed the predicted interaction of real- versus hypothetical-choice \times promotion pairing ($F(1, 207) = 40.11$, $p < .0001$).

Effects of promotions on estimated price of core products. Participants also estimated the prices of the two drills, thus providing an indirect measure of the quality inferences that participants drew from the promotions. In the real-choice conditions, when participants were motivated to make spontaneous quality inferences, we predicted a higher estimated price for the drill paired with the book than for the drill paired with the gift card. The results support this prediction. Participants estimated both Skil and Ridgid to be higher in price when they were paired with the less preferred promotion (the book; $M_{\text{Skil}} = \$136.8$, $M_{\text{Ridgid}} = \$129.2$) than when the same drills were paired with the gift card ($M_{\text{Skil}} = \$108.2$, $M_{\text{Ridgid}} = \$109.6$; $F(1, 102) = 90.70$, $p < .01$). This effect was equally strong for the two brands ($F(1, 102) = 1.44$, $p = .2$). When choice was hypothetical, the pattern we just described was replicated in a weaker form, as evident from a significant real- versus hypothetical-choice \times promotion interaction ($F(1, 209) = 32.18$, $p < .01$).

Finally, participants made these price estimates after they made their choices. Price estimates were unrelated to hypothetical choices, but they significantly predicted real choices. This implies that participants who made real choices drew these quality inferences spontaneously in the process of choice, but participants who made hypothetical choices did not.

Discussion of Study 4

Study 4 extends the findings in Studies 2 and 3 by showing that consumers do not need to be explicitly prompted to make quality inferences and, as a result, be attracted by getting the short end of the stick. It appears that when choices have real consequences, consumers are motivated to use the promotions to make spontaneous quality inferences. When choices are hypothetical, they are more in line with prior work on idiosyncratic fit. Thus, we believe that the inference mechanisms we describe are not a mere laboratory phenomenon but are likely to influence consumer choice in the real world.

STUDY 4A: ROLE OF UNCERTAINTY ON TASTE ATTRIBUTES

Recall that a key condition for quality inferences from idiosyncratic misfit to outweigh consumers' ongoing preferences for idiosyncratically fitting promotions is that uncertainty is high on quality attributes rather than on taste attributes. In Study 4, we intentionally allowed the winning participant to exchange the chosen drill for cash. By doing so, we maximized the relevance of uncertainty on "vertical" quality attributes relative to "horizontal" taste attributes in judging core product utility; presumably, all respondents prefer more money to less.

To test the role of balance of horizontal to vertical attributes, we replicated Study 4 on 372 new MBA students dur-

ing their orientation. The design was identical to that in Study 4 except that the chosen drill could not be exchanged for cash. (We also added several measures after choice that we discuss further in the “General Discussion” section.) If a drill can be sold for cash, the fit or lack of fit of drill characteristics to personal tastes is irrelevant. However, these personal tastes are likely to increase in importance relative to the cash value of the drill after the option of returning the drill for cash is removed. Consequently, the importance of subjective tastes (horizontal attributes) should increase relative to the quality of the drill (vertical attributes). Thus, we predict that we should observe the same real- versus hypothetical-choice \times promotion interaction in Study 4a as in Study 4, but this time, the results in the real-choice condition should be more balanced between repelling consumers by idiosyncratic misfit and attracting them by the quality signal from misfit.

Our findings support this prediction. Again, we observed no effect of real versus hypothetical choice in the control groups. Excluding the control groups, we combined the remaining conditions from the two studies into one analysis, treating study (4 versus 4a) as a factor crossed with real-versus hypothetical-choice + promotion pairing. As expected, we find a significant three-way study \times real-versus hypothetical-choice \times promotion interaction ($p < .05$). The interaction is driven by promotion pairing having the same effects across studies in the hypothetical-choice condition but weaker effects in the real-choice conditions in Study 4a than in Study 4. We found a significant interaction contrast of the study \times promotion pairing in the real-choice condition. As we expected, when choices were real in Study 4a, respondents became less attracted by the promotion to experts than in Study 4. This is because uncertainty about horizontal taste attributes mattered more in Study 4a, in which the participants could not exchange the chosen drill for cash.

To provide further evidence in support of our claimed role of uncertainty about vertical quality versus the value of horizontally differentiating features, Study 5 holds uncertainty on taste attributes constant and varies the level of uncertainty on quality attributes. We also address a potential criticism that the effect found in Study 4 and Study 4a is due to the lesser fit of the Nordstrom gift card with the core product category (drill).

STUDY 5: UNCERTAINTY ABOUT VERTICAL QUALITY

Our quality-signaling account applies to markets in which consumers perceive great variation in product quality relative to variation on taste-related features. In Study 5, we manipulate the degree to which the products are believed to vary on quality. All participants make real choices.

Method

Participants. Two hundred forty-two undergraduate and graduate students participated in this study for \$3 and a 1/36 chance of getting the option they chose. The task took approximately ten minutes.

Stimuli. Participants chose between two headphone options, Sony MDR EX71SL and Etymotic R6. Both headphones are available from audio and electronics retailers for \$40 and \$135, respectively. Participants saw the pictures of

the two headphones and excerpts from actual reviews of the two models. They saw brand names, but model numbers were disguised and prices were not given.

Promotion premium. In the four promotion conditions, the headphones were accompanied by one of the two promotion premiums (a free issue of a magazine). In one pretest, we established that the two magazines, *Entertainment Weekly* and *Sound & Vision*, had high personal attraction ($M = 6.69$) and low personal attraction, respectively ($M = 3.38$; $t(156) = 6.14$; 1 = “very low personal attraction,” and 9 = “very high personal attraction”). Other pretest respondents rated magazine attractiveness to themselves versus to experts on a seven-point scale (1 = “much more appealing to me,” and 7 = “much more appealing to experts”). They rated *Entertainment Weekly* as more appealing to them than to experts ($M = 4.34$; $t(110) = 2.54$) and *Sound & Vision* as less appealing to them than to experts ($M = 2.33$; $t(110) = -13.64$). These two means differed ($t = 10.19$, $\omega^2 = .70$).

Design. We randomly assigned participants to one of six conditions in a 3 (promotion) \times 2 (quality differential: high versus low) between-subjects design. In the no-promotion control condition, participants chose between the two headphones, neither of which offered a promotion premium. In the Sony + *Entertainment Weekly* versus Etymotic + *Sound & Vision* condition, the Sony headphones offered a free issue of *Entertainment Weekly*, whereas the Etymotic headphone offered a free issue of *Sound & Vision*. The promotion premiums were swapped in the Sony + *Sound & Vision* versus Etymotic + *Entertainment Weekly* condition.

In the low-quality differential condition, participants were truthfully informed that “both headphones are rated at least 7.7 (‘good’) by CNET.com editors.” In the high-quality differential condition, participants were truthfully told that “one of the headphones received a 8.3 (‘very good’) rating and is considered Editors’ Choice by CNET.com. The other headphone receives a 7.7 (‘good’) rating. The headphones sell for \$135 and \$40.”

Procedure. Participants first rated their subjective knowledge and confidence in judging quality of MP3 players and headphones for MP3 players. Then, they rated their familiarity with eight brands of MP3 players and six brands of headphones. In the four experimental (promotion) conditions, participants were told that “the promotion premium, in the form of a free issue of a magazine, is currently given to accompany the purchase of the specific headphone model.” Then, participants read the paragraph that manipulated the high-/low-quality differential factor, as we stated in the “Design” subsection. All the participants were informed that they had a 1/36 chance of receiving the option they chose. Participants won if they rolled a pair of ones from two dice they tossed at the end of their participation.

Participants then chose one of the two headphone options. After they made their choice, they were asked to express their strength of preference (1 = “slightly prefer,” and 7 = “strongly prefer”). The two questions give us the two key dependent variables: choice (binary) and graded preference (1 = “definitely prefer Sony,” and 14 = “definitely prefer Etymotic”). After making the choice, participants in the experimental (promotion) conditions indicated their personal liking for the two magazines and how appealing each of the magazines is to consumers who are very

knowledgeable about headphones for portable music players.

Results

Manipulation check. In the pretest, respondents believed that *Sound & Vision* is relatively more appealing than *Entertainment Weekly* for more knowledgeable buyers. We found support for this belief in our main sample. Relative preferences for the two magazines correlated significantly with all three measures of participants' headphone knowledge; participants who were less knowledgeable had stronger preferences for *Entertainment Weekly* over *Sound & Vision* than did the more knowledgeable participants.

Choice of Sony versus Etymotic. We report the choice results in Figure 2 as a system of planned contrasts. In terms of just the control conditions, choices were unaffected by whether quality differential was portrayed as high (48% chose Sony) or low (55% chose Sony; $\chi^2(1) = .44, p = .50$).

We analyzed the remaining four cells in which headphones were accompanied by promotions in a 2×2 logistic regression. A significant quality differential \times promotion interaction supports our predictions ($\chi^2(1) = 14.4, p < .0001$). When consumers believe that quality differential is low relative to idiosyncratic preference, they choose bundles with promotions they like rather than ones with promotions that might appeal to experts. Thus, 71% of respondents chose Sony when it was paired with *Entertainment Weekly*, and 41% chose Sony when it was paired with *Sound & Vision* ($\chi^2(1) = 6.76, p < .01$).

However, when the respondents were told that the quality differential was high, we observed almost exactly the opposite percentage; specifically, 37% chose Sony when it was paired with *Entertainment Weekly*, and 69% chose Sony

when it was paired with *Sound & Vision* ($\chi^2(1) = 7.69, p < .01$). Participants were attracted by idiosyncratic misfit because they perceived the misfit promotion as appealing to those more able to judge quality.

Graded preferences. Using data for the four promotion (excluding control) conditions, we ran a regression analysis. We predicted participants' preferences for a bundle containing *Entertainment Weekly* (1 = "strongly prefer the bundle containing *Sound & Vision*," and 14 = "strongly prefer the bundle containing *Entertainment Weekly*") using (1) the participants' relative preferences for *Entertainment Weekly* over *Sound & Vision* (negative values indicated a preference for *Sound & Vision* over *Entertainment Weekly*), (2) the participants' beliefs of an expert's relative preference for *Entertainment Weekly* over *Sound & Vision*, (3) a dummy variable on quality differential (0 = high, 1 = low), and (4) the interactions between Points 1 and 3 and between Points 2 and 3.

We expected that both interactions would be significant; a respondent's idiosyncratic preference for *Entertainment Weekly* over *Sound & Vision* should positively affect his or her preference for the bundle that contains *Entertainment Weekly* because the promotion's direct utility increases the value of the product + promotion bundle. However, if the respondent is concerned about the quality of the different core products and is uncertain of how to determine this quality, he or she may use his or her beliefs about experts' preferences for the promotions to help select the higher-quality core product. Because experts' promotion preferences differ from the respondents' promotion preferences, we are more likely to observe a reversal in choice than in a situation in which quality is not an issue.

The results we depict in Table 4, Panel B, confirm our predictions. There was a significant quality difference \times own preference interaction ($t(156) = -2.56, p < .02$) and quality difference \times expert preference interaction ($t = 3.46, p < .001$). When the quality differential was low, participants tended to prefer the bundle with the promotion that they preferred ($b = .70, t = 5.93$), and experts' perceived promotion preferences received little weight ($b = .16, t = .67$). However, when the quality differential was high, participants gave less weight to their own preferences ($b = .28, t = 2.37$) and more weight to experts' promotion preferences ($b = 1.31, t = 5.91$).

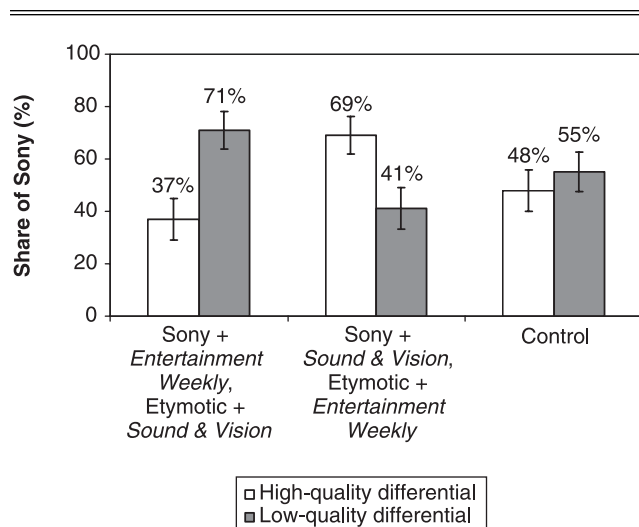
We performed the same analysis on the Study 4a data; as Table 4, Panel A, shows, the same pattern emerged. When quality was salient (i.e., when the choice was real rather than hypothetical), participants made less use of their own promotion preferences and more use of experts' perceived promotion preferences to help select the bundle.

GENERAL DISCUSSION

Prior research on fairness and envy and on idiosyncratic fit has established that a consumer's utility for an option depends not just on its absolute characteristics but also on whether the customer is getting a better or worse deal than some other group of customers (e.g., Feinberg, Krishna, and Zhang 2002; Kivetz and Simonson 2003). A large body of research shows that people are repelled when sellers offer another group a better deal. The six studies we report in this article establish the contingencies under which consumers

Figure 2

PERCENTAGE CHOOSING SONY IN STUDY 5:
IDIOSYNCRATICALLY MISFITTING PROMOTIONS ATTRACT
NONTARGETED CUSTOMERS WHEN QUALITY IS UNCERTAIN



Notes: Error bars show standard errors of proportions.

Table 4
REGRESSION RESULTS

<i>A: Study 4a: Real Choice Decreases Weight of Own Promotion Preference and Increases Weight of Fit with Expert</i>			
	<i>Intercept</i>	<i>My Promotion Preference for Gift Card over Book</i>	<i>Expert's Promotion Preference for Gift Card over Book</i>
When choice is hypothetical	8.23**	1.21**	-.18
When choice has real consequences	6.82**	.40*	.32*
<i>B: Study 5: Quality Uncertainty Decreases Weight of Own Promotion Preference and Increases Weight of Fit with Expert</i>			
	<i>Intercept</i>	<i>My Promotion Preference for Entertainment Weekly over Sound & Vision</i>	<i>Expert's Promotion Preference for Entertainment Weekly over Sound & Vision</i>
When quality differential is low	7.35***	.70***	.16
When quality differential is high	7.97***	.28*	1.31***

* $p < .02$.

** $p < .001$.

*** $p < .0001$.

Notes: In Panel A, the dependent variable is the preference for the brand + gift card bundle; 1.21 and .40 differ at $t(241) = 3.30$, $p < .01$, and $-.18$ and $.32$ differ at $t(241) = 2.30$, $p = .02$. In Panel B, the dependent variable is the preference for the brand + *Entertainment Weekly* bundle; .70 and .28 differ at $t(156) = 2.56$, $p < .01$, and .16 and 1.31 differ at $t(156) = 3.46$, $p < .001$.

can be attracted by an offer that gives them a comparative disadvantage.

Consumers might react to a seller's offer of an exclusive benefit to another group for two reasons. First, there is the utility or disutility of the deal itself. The disutility can manifest as emotional experience of "envy" or "unfairness" or as an adjusted appraisal of the "deal" in terms of cost and benefits, in which the consumer calibrates cost and benefits on the basis of the cost and benefits that other customers attained. Second, an exclusive deal can also exert an effect through inferences about the quality of the product. Consumers' inferences about core product quality can be positive or negative. The weight of this inference effect on choice is greater when consumers are uncertain about quality and when quality differences are substantial.

Conditions for Attraction by Idiosyncratic Fit Versus Idiosyncratic Misfit

In the work on reason-based choice and idiosyncratic fit, the consumer's primary concern is the fit of a product to his or her own personal tastes. However, sometimes the source of consumers' uncertainty arises predominantly from concerns about their ability to judge the quality of the core product. In such cases, they can be attracted by a promotion that appears to be targeted to dissimilar experts and to offer fewer benefits to themselves if they infer from the promotion that the quality of the core product is high.

All the studies we report in this article include conditions in which the seller offers better treatment to a group the respondents perceived as superior at discerning quality. In Study 1, we explicitly mentioned the target group. In Studies 2–5, there was no explicit mention of another segment of customers, and thus our respondents needed to conjure up some comparison group. In all of our studies, we produced results compatible with prior findings that consumers are repelled by being disadvantaged by a promotion, but the same studies established conditions in which the same promotion was used as a quality signal and thus attracted the disadvantaged group to the seller. We showed that the

favored group must be more competent in discerning quality than the respondents who get the short end of the stick (Study 1). The signal becomes stronger as the cost increases for the seller to invest in attracting the discerning customer group because this makes it difficult for a low-quality seller to mimic (Study 1). The promotion-driven inference is triggered when quality is made salient, either by an external prompt (Studies 2 and 3) or by the consumer's own motivation due to the consequential nature of the choice (Studies 4, 4a, and 5). Finally consumers' uncertainty must be predominantly about quality rather than about subjective taste attributes. The contrast between Studies 4 and 4a holds uncertainty on quality attributes constant and varies the relevance of uncertainty on taste attributes. Study 5 holds uncertainty on taste attributes constant and varies uncertainty on quality attributes.

Limitations and Further Research

Moderators of the strength of idiosyncratic fit, fairness, and quality inferences. Idiosyncratic fit, fairness, and quality inferences all rely on mistreatment of a decision maker relative to treatment of a reference group. In our work, the favored group was composed of those who could discern quality. This expert group was typically small compared with the size of the respondents' own group of novices.

It is worth considering how our results might depend on the size of the favored reference group. In Kivetz and Simonson's (2003) conception of idiosyncratic fit, decision makers compared the cost or benefit of some program to themselves with the cost to a larger group of "typical" others (but see their discussion of Simonson, Carmon, and O'Curry 1994). Similarly, increasing the size of the favored group may increase a consumer's perceptions of unfairness when he or she gets the short end of the stick. (Moreover, unfairness perceptions may be weaker when the favored group is "deserving," as may be the case when the favored buyers are experts.) Therefore, it might be reasoned that the strength of repulsion by idiosyncratic misfit and unfairness increases relative to attraction by quality inferences if the

size of the favored group of experts is larger. However, our theory also predicts that the strength of attraction by the short end of the stick increases when the favored group of experts is a large rather than a small fraction of the market (Lo 2006). This is because it becomes more costly for a low-quality seller to mimic the high-quality seller's actions because the experts will not be deceived by the low-quality seller's promotion signal. Future work is needed to understand the conditions that affect the relative strength of forces from quality inferences from promotions to another group, idiosyncratic fit, and perceptions of fairness.

Behavioral versus rational models. In this article, we propose a behavioral model that illustrates the dual effect of a promotion premium on the purchase decision through its direct effect on liking for the promotion itself and through promotion-driven inferences about core product quality. We are agnostic about whether it is "rational" to choose a product that gives the consumer the short end of the stick. We show only that such inferences have stronger effects on choice under conditions that encourage elaboration. Our experiments did not provide respondents with details sufficient to determine the credibility of the quality signal. Betting on their inferences from promotions that appealed to experts, they chose drills and headphones that were worth much less than the alternatives that were paired with promotions they liked. Other work in progress applies a game-theoretic analysis to show analytically the conditions needed for the signals used in our experiments to be credible. This would require showing that only high-quality sellers would find it profitable to provide such a promotion.

We note that the inference process in Anderson and Simester's (2001) work establishes that promotion may be a negative signal of quality. In our article, we show that promotion to experts can be a positive signal of quality. These apparently contradictory findings can be reconciled by recognizing that consumers form different beliefs. In Anderson and Simester's (2001) study, low price is associated with a supply-side factor (low cost); in our studies, a promotion that is targeted to an expert is associated with a demand-side factor (i.e., product valuation). Our work establishes that consumer beliefs vary systematically with the purchase context and are endogenous. This contrasts with economic signaling models that typically treat consumer beliefs as exogenous and independent of the purchase context.

Finally, regardless of whether consumers are rational in making quality inferences, sellers may want to use promotions similar to those we used in our studies if they believe that novices will perceive them as useful signals of quality. For example, many investors find financial offerings difficult to evaluate. Envision promotions that would appeal only to highly knowledgeable investors to signal the quality of the financial product. Similarly, sellers of difficult-to-evaluate electronics may offer lucrative trade-ins to current owners, who new customers consider informed users. In all these cases, sellers must decide between a promotion that has mass appeal and a promotion that attracts a niche segment. Our findings suggest that under certain circumstances, a niche promotion that fits targeted consumers can more effectively attract both the targeted and the nontargeted customers, contrary to the prior research consensus, which advocates equitable treatment to prevent consumer outrage. This is an area that merits further research.

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