

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

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Abstract

Several influential streams of research in marketing, psychology, and economics conclude that, holding constant the offer a seller makes to a buyer, the buyer will be repelled by learning that some other group of buyers is getting a better price for the same benefits, or receiving more benefits for the same price. Past work has attributed this repulsion to perceptions that the offer is inequitable, fits others better than oneself, or that it signals that the core product is of low value. In five experiments, we show conditions under which exactly the opposite can occur: consumers judge the same offer to be more attractive when a seller offers a better price or more benefits to another group rather than treating everyone equally.

Most firms practice target marketing, tailoring different offers to different customers depending on their purchase histories or other characteristics. This practice is often seen as beneficial to firms because it allows them to charge lower prices to acquire a specific set of consumers. However, when targets are favored, non-targeted customers “get the short end of the stick.” That is, they (a) pay more to receive the same quality or (b) they receive less utility than the favored customers despite paying the same price.

There may be a downside to this differential treatment. Accounts in the popular press show that consumers are vexed when they find out that companies have charged them a higher price than some other group for the same good. Amazon.com was attacked for experimenting with different prices for the same good¹. Victoria’s Secret was sued for sending catalogs with different prices according to gender and zip code.² If an action intended to lure a target group has the effect of repelling a (perhaps larger) set of non-targeted customers, managers may grossly over-estimate the net benefits of their promotions to the bottom line.

We will show that, consistent with much academic research, there are conditions under which managers should expect that their pursuit of a target group will repel non-targeted customers. But our key thesis is that there are cases in which non-targeted customers are attracted when they notice that they are being given the short end of the stick relative to some other customers who are better judges of quality.

In the follow sections first we review the reasons for consumers to be repelled by relative mistreatment, then provide a set of conditions where the reverse can occur, i.e., consumers are attracted to sellers who given them the get the short end of the stick. We then present the findings of five studies that provide support for this conclusion.

Repelling Consumers by Relative Mistreatment

There is considerable support in the academic literature that customers dislike receiving a worse deal than some other group. The overwhelming consensus of this literature is that, counter to standard utility theory, consumers' utility for an item is not only based on the individual's perception of the item's value and its price, but also on the relative value of the item to others and price paid by others. Consequently, consumers may downgrade their utility for a product that provides them relatively less benefit than others. Several explanations have been put forth for this phenomenon.

Fairness. One stream of research posits that a given offer to consumers is judged less attractive when another segment receives a better deal, due to perceptions of "unfairness." In Feinberg, Krishna and Zhang's (2002) experiment, respondents switched from a current provider a) when their current service provider offers a better deal to switchers ("betrayal") and b) when another service provider rewards their loyal customers but the respondent's own company does not ("jealousy"). Findings in behavioral economic on fairness show that individuals prefer equity to disadvantageous inequity (Andreoni, Brown and Vesterlund 2002; Lowenstein, Thompson and Bazerman 1989; Rabin 2001). Other work has examined moderators of unfairness reactions (Bolton, Warlop, and Alba 2003; Campbell 1999; Darke and Dahl, 2003; Falk, Fehr, and Fischbacher 2000), but the sign of the effect is never reversed.

Idiosyncratic fit. Another relevant stream shows that consumers who are uncertain of their preferences for a set of core products rely on perceptions of the *fit* of the sellers' promotional offers to them *compared to* the fit to others. Simonson, Carmon, and O'Curry (1994) gave consumers a choice between two core products (cake mixes). In some conditions, one cake mix was accompanied by a completely optional promotion (a collector's plate)

presumably valued by others but not by participants; in other conditions, no promotion was offered. The promotion actually discouraged choice of the accompanying cake mix. Simonson et al. conjecture that consumers are not altering their perception of the utility of the core brand but instead using the promotion as a reason for rejecting the promoted product.

Kivetz and Simonson (2003) re-interpret this finding under the broad rubric of an “idiosyncratic fit” heuristic that operates on the relative cost and benefit an individual stands to obtain compared to other consumers. These authors show that adding *costs* or restrictions to loyalty programs can *attract* consumers if those costs are less onerous for the individual than for another group of consumers. In one study, respondents who liked sushi were more likely to sign up for a loyalty program if one had to purchase 12 sandwich meals and 12 sushi meals to qualify than if one merely had to purchase 12 sandwich meals.

Quality inferences about the core product. In all of the above-mentioned studies, consumers are not making inferences about the core product, but instead about the promotion itself, i.e., the promotion is unfair or it doesn’t fit them well. However, another explanation has consumers using the promotional offer to infer the value of the core product. For example consumers may infer that the cost of a promotion is embedded in the list price of the core product. If individuals find this promotion unattractive to them relative to others, they might infer that the core product is of lower value (overpriced) compared to a situation where the same product is sold to everyone without the promotion (Anderson and Simester 2001; Lichtenstein, Burton, and O’Hara 1989; Raghurir, Inman, and Grande 2004; cf. Simonson et al. 1994).

We next show conditions under which consumers who are disadvantaged by the promotion make *positive* inferences about the value (quality) of the core product. Their subsequent choices show that consumers may be attracted to, rather than repelled by, a product

that offers better terms to another group. Thus, sellers may benefit by giving consumers the short end of the stick.

Conditions for Attracting Consumers by Relative Mistreatment

We study the problem of firms practicing various forms of price or promotion discrimination among their customers in markets in which consumers are convinced that there are quality differences among products, but some cannot discern quality prior to purchase. Alba et al. (1997) point out that such a setting is common, because there are many products that are “search goods” for experts but “experience goods” for novices. The quality and value of search goods can be easily assessed prior to purchase. Consumers cannot assess an experience good’s quality prior to purchase (Ford, Smith, and Swasy 1987; Nelson 1970, 1974).

We posit that when a seller provides a better deal to a set of buyers who are perceived to be experts in determining quality, a disadvantaged buyer might perceive this promotion to provide a useful basis for inferring the quality level of the core brand. This can occur even when the disadvantaged buyer does not observe the experts’ response to the promotion.

More specifically, we believe five conditions must be met before the novice group will make positive inferences about quality. First, the disadvantaged consumers must have uncertainty about quality. Second, the advantaged consumers must be able to judge quality sufficiently well prior to purchase so that they would not buy if the promoted merchandise is low in quality. Third, the disadvantaged consumers must perceive that it is costly for the seller to provide a promotion to lure the advantaged group to inspect the core product. Fourth, the uncertainty of disadvantaged consumers must be associated primarily with concerns about “more is better” attributes. All consumers desire higher levels of such attributes and differ only in their willingness to pay for these attributes. Such attributes are sometimes referred to as vertical

attributes (Tirole 1988). This vertical aspect is needed since, if the attributes are matters of idiosyncratic taste – i.e., ideal point rather than vector attributes -- novice consumers would perceive their inferences about discerning customers' quality assessments to be irrelevant to their own choices. Finally, quality uncertainty must be salient, and an inference rule to infer quality must be accessible and seem diagnostic to the novices (Dick, Chakravarti, and Biehal 1990; Ross and Creyer 1992; Simmons and Lynch 1991).

We note that one might make an economic signaling argument for why making these quality inferences is “rational” if only high quality sellers find it profitable to pursue the advantaged group. However, it is not our purpose to advance a model of rational seller behavior, but instead to study the psychology of consumers' inferences from receiving the short end of the stick and when such inferences dominate decisions. Extant behavioral work shows that inferences will play a small part in decisions if consumers have other diagnostic bases for judging quality, but can dominate decisions if uncertainty is high (Alba and Cooke 2004, Dick, Chakravarti, and Biehal 1990; Johar and Simmons, 2000; Kardes 1988; Kardes and Stayman 1992; Kivetz and Simonson 2000; Ross and Creyer 1992; Simmons and Lynch 1991). Moreover, even when consumers do make inferences, which rules are used depends on their perceived diagnosticity (Broniarczyk and Alba 1994) and the effort they require. In our case, the inference processes necessary to infer high quality are sophisticated and elaborative rather than effort-saving heuristics.

We believe these quality signal inferences that attract consumers will operate in parallel to mechanisms of idiosyncratic fit and fairness that repel consumers. Moreover, the strength of the effect of the quality signal on choice will depend on certain variables: consumers' uncertainty about quality, external and internal determinants of the salience of that uncertainty, and factors

affecting the perceived diagnosticity of an inference rule linking core product quality to the seller's better treatment of another group of consumers. We test these economic and psychological moderators in the following five experiments.

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

In Study 1, our respondents are ineligible for a promotion that is offered by a store to subsidize another group's travel costs to visit the store. We vary whether the subsidized group is (a) especially able to discern quality from inspection or (b) has no special expertise. The store's expenditure is independent of whether or not the subsidized group actually buys merchandise they came to inspect. Our respondents have high uncertainty about the quality of the promoting store's merchandise, and consequently might try to infer quality in order to decide whether to incur a search cost to travel to the store.

Specifically, respondents might reason that the discerning buyers would not buy anything after they arrived if the store carried low quality merchandise. Consequently, a low quality seller would not provide such a promotion. On the other hand, a high quality seller might benefit from such a subsidy because discerning buyers might purchase after they inspect the merchandise but prefer some less risky store without the subsidy. Thus this promotion could be perceived to be a credible signal of quality; our disadvantaged respondents can infer high quality prior to visiting the store and without observing the purchase behavior of the quality-discerning customers.

However, this signal would lose credibility if the advantaged group had no special ability to determine quality by inspection after they arrived at the store. Thus, we hypothesize that this promotion would attract excluded customers – our respondents -- if the beneficiaries were

perceived to be better able to discern quality but would repel excluded consumers if the target group had no special expertise. This latter result would be consistent with prior findings on fairness and idiosyncratic fit.

We also manipulate the cost of the free ride given to the target group. A more costly free ride implies the seller incurs a larger sunk cost. Our uncertain respondents might reason that this cost would thwart the low quality seller's attempt to mimic if the beneficiaries are experts. The greater expense thus enhances the credibility and diagnosticity of the quality signal, consequently making the store *more attractive* to our (novice) respondents (cf. Kirmani and Wright 1989). However, we predict that giving the more costly, extravagant free ride to a *non-expert* group will magnify the relative disadvantage and will further *reduce* the attraction of the store to novices, consistent with fairness and idiosyncratic fit. Together, our deductions imply an interaction of expertise of the advantaged customers with the magnitude of the subsidy they receive. In contrast, extant fairness and idiosyncratic fit theories would predict that increasing benefits to another group should always repel excluded consumers.

Method

Overview and Design. Two hundred and 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 *certain* level of quality, and the other seller, store (U) offered the crystal product for the same price with an *uncertain* level of quality. The quality sold at the latter 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; the free ride did not require any purchase once one arrived at the store. We manipulated

whether any group benefited from a free ride, the expertise of this group, and luxuriousness of the free ride. Participants were not told whether the group receiving the promotion did or did not purchase at Store U.

We told respondents that travel to the non-promoting store C would cost \$20 for a 20-minute ferry ride (no air-conditioning) to the other store. The key dependent variable was how much the respondents would pay for the 30-minute ferry ride (no air-conditioning) to store U that offers free transportation to the other group of customers; responses above \$20 imply preference for store U. Prior to that 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 two stores.

Respondents were randomly assigned to five conditions of a 2 (expert vs. non-expert target group benefits from promotion) x 2 (luxury vs. standard ride for the promotion recipients) completely between-participants design, augmented 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 superior treatment offered to another group. For the four treatment groups, participants assigned to the 'experts get free ride' condition read that, 'The promotion is given to 100 attendees to a conference on gemstone and geology held in the hotel.' Participants assigned to the 'non-experts get free ride' condition read that, '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.'

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 have 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 ($M = 8.96$, $SD = 1.60$) on a scale anchored by 1 = “They should be much worse than me” and 11 = “They should be much better than me.” They judged harbor view room occupants to be roughly as informed as themselves ($M = 6.25$, $SD = 1.12$). The two averages differed significantly, $F(1, 169) = 162.71$, $p < 0.0001$, $\omega^2 = 0.48$. There were no other treatment effects (all F 's < 1).

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 (WTP) to shop at store U, the store with uncertain quality. Figure 1 shows that the WTP means under the 5 conditions were consistent with our predictions. Collapsing across standard and luxury conditions, promoting to a non-expert group reduced willingness to pay to travel to Store U in comparison with the control condition, $F(1, 210) = 4.33$, $p = 0.04$. However, promoting to an expert group increased willingness to pay, $F(1, 210) = 15.98$, $p < 0.0001$.

Ignoring the control group and analyzing the remaining cells as a 2 x 2, there is a significant interaction effect between the identity of the advantaged group and the cost of the promotion, $F(1, 167) = 11.22$, $p = 0.001$. Luxury treatment for the advantaged group made the disadvantaged respondents more willing to pay if the promotion provides more benefits to the experts, $F(1, 167) = 11.16$, $p = 0.001$ but directionally less willing to pay if the promotion provides more benefits to the non-experts, $F(1, 167) = 1.97$, $p = 0.16$.

Insert Figure 1 about here

Discussion of Study 1

The central finding in Study 1 is that there are conditions where respondents were willing to pay more to visit a store of uncertain quality when another group received a free ride for which participants were ineligible. This occurred when members of the group being targeted were perceived to be better judges of quality than the participants themselves. Our result is opposite to what would have been predicted by inequity aversion, fairness, and the idiosyncratic fit heuristic and is consistent with our premise that consumers use the promotion to make positive inference about quality.

Further supporting the quality signaling explanation, the more luxurious the treatment to the other expert group, the more respondents were willing to pay to travel to shop at the store that discriminated against them. Adding preferential treatment (air conditioning, drinks, and snacks) beyond merely giving the favored other group a free ride presumably should exacerbate envy and unfairness. But heaping favor on the other group actually *increased* respondents' willingness to pay because the more costly form of favoritism strengthens the quality signal.

In contrast, if the non-expert target group received more luxurious special treatment, participants were directionally *less* interested in buying from the same seller than if the non-expert target group received non-luxury treatment. The latter result is consistent with several extant theories concerning the respondents' perceptions of the promotion such as jealousy or envy (Feinberg et al., 2002), unfairness perception (Campbell, 1999; Corfman and Lehmann, 1993; Loewenstein et al., 1989; Novemsky and Schweitzer, 2004), and a heuristic of misfit (Kivetz and Simonson 2003). Alternatively, respondents may have inferred a decrease in the

utility of the core product if they felt the seller might have raised the price of the core product to cover the benefits given the target group (e.g., Lichtenstein et al., 1989).

Our interest is not in distinguishing between these various alternative explanations of why consumers were put off by better treatment of another group. It is clear, however, that the higher WTP in the Experts-Luxury condition compared to the Experts-Standard or Control conditions are incompatible with any of these accounts.

Our results also qualify the premise that promotions in general will lead to a *negative* quality inference (cf. Chernev and Carpenter, 2001; Lichtenstein et al. 1989; Raghurir et al., 2004). As we expected, ratings of quality perceptions were higher in the expert conditions (M=7.34, SD=1.28) than in the control condition (M=5.75, SD=1.94), $F(1, 210)=23.64$, $p<0.0001$. However, the quality perceptions of the two non-expert conditions (M=5.79, SD=1.80) do not differ from the control, $F < 1$, suggesting that our respondents did not treat promotions to non-experts as a negative signal of core product quality. Instead, jealousy or idiosyncratic misfit may have reduced their interest in buying from the seller, without changing beliefs about quality.

STUDY 2: PROMOTION PREMIUM AS MISFIT VS. QUALITY CUE

In Study 1, we specified the identity of the advantaged group and manipulated the credibility of the quality signal. Participants got the short end of the stick because they paid more to get the same benefit as another group. In the remaining experiments, we did not specify the identity of the advantaged group. Nor do our respondents have to pay more for the core product and promotion bundle. Instead, our respondents get the short end of the stick because they pay the same price as another group but receive lower utility for the bundle due to the fact

that the promotion benefits an unspecified-but-imagined others more than themselves. Simonson et al. (1994) argue that such a promotion gives the consumer a reason to reject the core product. Kivetz and Simonson (2003) argue that since *fit* is a major driver of consumer choice, consumers will avoid a product that provides a benefit that other customers enjoy more or costs other customers less.

In Studies 2 and 3 we examine a situation similar to the collector's plate experiment of Simonson et al. (1994). As in their studies, a core product is bundled with a promotional offer and there is uncertainty concerning the core product's utility. However, our situation differs from theirs in that we focus on conditions where uncertainty about objective quality of the core brand is likely to dominate respondents' concerns about the fit of the promotion to their personal tastes. Consequently, our respondents may benefit more from making an effortful quality inference if quality is salient.

This leads to the following prediction. When quality is highly uncertain and consumers are concerned with determining this quality level, they will prefer a product associated with a promotion that is an idiosyncratic *misfit* for themselves but a fit for another group of customers perceived to have superior ability to judge the quality of the core product.

However, if consumers believe that the product options are comparable in quality or they do not entertain the possibility that promotions might be a cue to core product quality, we expect that their choices of a product + premium bundle will be primarily driven by the relative fit of the promotion premium to their own tastes. We know from the literature that customers are not always overly concerned about quality and thus will not always think spontaneously about the implications of a promotion for core product quality. There is abundant evidence that consumers make certain kinds of inferences when explicitly prompted that they do not make in the absence

of a prompt (Dick, Chakravarti and Biehal 1990; Feldman and Lynch 1988; Huber and McCann 1982; Simmons and Lynch 1991).

In Study 2, we asked respondents to choose between two somewhat similar camcorders that varied on both comparable and non-comparable attributes. In a control condition, neither camcorder was associated with any promotion. In experimental conditions, one product was associated with a promotion that was in general more attractive to (novice) respondents; the other product was associated with a promotion that would be relatively more attractive to more knowledgeable camcorder buyers. We varied both which camcorder was associated with which promotion and the salience of core product quality at the time of choice between camcorders. We manipulated salience by whether choice of the bundle preceded or followed having the participants make an explicit judgment of the relative quality of the two core products. This manipulation mirrors similar prompted v. unprompted inference manipulations in prior research (e.g., Dick et al. 1990; Huber and McCann 1982). In Studies 4 and 5, we examine more subtle manipulations that affect consumers' propensity to make spontaneous quality inferences.

We claim that inferences about core product quality will operate in parallel to effects of the fairness or fit of the promotion premium. Thus, if the quality of the two core products is *salient* to the decision, individuals will use inferences based on the promotion premiums to help them decide which core product has higher quality. The high quality implication of the unattractive premium would outweigh its low direct benefit. However, if quality is not salient, we would expect promotions that have a high personal fit to respondents' tastes to be more motivating than those that fit another (unmentioned) group of experts better.

Method

Overview, stimuli and design. One hundred and forty-six undergraduates were paid \$1 to

respond to a scenario in which they were to choose between two hypothetical camcorders (brand names Simmons and Supersonic), calibrated to be roughly similar in attractiveness. Participants were randomly assigned to one of four conditions that permitted a set of planned contrasts. In the control group, we presented these camcorders alone, with no accompanying promotion. In three experimental conditions, each camcorder came with one of two associated promotions. Soon-to-be-reported pretests and manipulation checks established that one promotion premium was preferred by most respondents but perceived to have little association with high camcorder quality (a \$30 Wal-Mart certificate). The other promotion premium was not preferred by respondents but had positive quality implications. We used a \$30 coupon for a rebate on a Seagate 160G external hard disk as the high quality, low fit premium.³ Table 1 presents the design for Study 2 as well as results that we discuss below.

Insert Table 1 about here

In the Control_{qs} condition, Supersonic and Simmons had no associated promotion. Quality was made salient (thus the qs subscript) by asking respondents to rate relative camcorder quality (1 = definitely prefer Supersonic, 8 = definitely prefer Simmons) before choosing between them.

In the Supersonic +Seagate_{qs} condition, quality was made salient as above, and Supersonic was bundled with the high quality cue, low fit premium (Seagate rebate), while Simmons was bundled with the low quality cue, high fit premium (Wal-Mart certificate). In the Simmons +Seagate_{qs} condition we swapped the premiums for the two core products so the Wal-Mart gift certificate was now associated with the Supersonic rather than Simmons camcorder. As before, quality was made salient. The Simmons + Seagate_{non qs} condition was identical to

Simmons +Seagate_{qs} except that quality was not made salient; participants reported their bundle preferences before rather than after we asked them to judge the quality of the core products.

Finally, participants rated their relative preference for the two promotions (1 = definitely Wal-Mart certificate, 8 = Definitely Seagate rebate). In the control condition, promotions were not associated with any camcorder. In the other three conditions, participants rated the relative attractiveness of promotions that had been associated with the two camcorders.

Results

Pretest and manipulation checks on promotion premium. First, we establish that (a) respondents personally prefer the Wal-Mart gift certificate to the coupon for a Seagate hard drive and (b) respondents believe that the Seagate hard drive would be more appealing to discerning customers but the Wal-Mart gift certificate would be more appealing to less quality-sensitive customers.

Supporting point (a), participants in all conditions of Study 2 reported favoring the Wal-Mart certificate ($M = 2.89$, $SD = 2.06$). This response differed significantly from the 4.5 midpoint of the (1 to 8) scale that would reflect indifference between the two promotions, $t(145)=9.45$, $p=0.0001$. Responses did not differ across the four experimental conditions, $F(3,142)=1.38$, $p=0.25$.

Supporting point (b), we ran a pretest using a separate set of participants drawn from the same population, randomly assigning them to one of two groups. They were asked to assume the role of a product manager and to pick one of the two promotions used in Study 2 to go with a low quality, low priced camcorder (group 1) or a high quality, high priced camcorder (group 2). The dependent variable was an 11-point scale where 11= “definitely should use Seagate Hard Drive Rebate” and 1 =“definitely should use Wal-Mart Gift Certificate.” The means for high and

low quality camcorders differed significantly from each other, $F(1,45) = 33.10$, $p = 0.0001$, $\omega^2 = 0.41$. Participants strongly felt the Wal-Mart gift certificate was an appropriate promotion for a low priced, low quality camcorder ($M = 2.41$) and the Seagate hard drive was an appropriate promotion for a high priced, high quality camcorder ($M = 7.52$). Both means significantly differed from the scale midpoint.

Bundle preferences. The key analyses from Study 2 come from a system of planned 1 df contrasts between conditions, comparing the four rows in Table 1. We can assess the effect of varying promotion when quality is salient (row 1 v. 2 and 1 v. 3). We can assess the effect of salience, holding constant the pairing of camcorders with promotions (row 3 v. 4).

Mean preference of the control group is 4.65, very close to the 4.5 midpoint of the scale. Apparently, we succeeded in making core product quality difficult to discriminate, at least in aggregate.

Whenever quality was made salient prior to choice, as in Simmons + Seagate_{qs} and Supersonic + Seagate_{qs} conditions, participants preferred the bundle with the promotion that was less attractive to them personally, $M = 5.92$ (prefer Simmons + Seagate rebate) and 3.65 (prefer Supersonic + Seagate rebate), respectively. 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 are the opposite of what one would predict by idiosyncratic fit, but support our premise that consumers may infer a signal of core product quality from a promotion that is a misfit to their personal tastes but fits the tastes of more knowledgeable consumers.

Also agreeing with our prediction, we did not observe this signaling result in the Simmons + Seagate_{non qs} condition when quality was not made salient prior to choice between bundles. Here, participants preferred the Supersonic camcorder bundled with the personally

preferred Wal-Mart gift certificate ($M = 3.85$), significantly different from their preference for the Simmons + Seagate rebate bundle when the same options were offered with quality made salient ($M = 5.92$), $F(1,142)=20.05$, $p<0.0001$.

Impact of quality and promotion on choice. We interpret the results above to show that participants used the promotion as a *signal* when determining quality when quality was made salient and a *reason* for rejecting a bundle when quality was not made salient by prior questioning. As a further test of this interpretation, we excluded the control condition and regressed bundle preferences on (a) the participant's quality rating and (b) preference for the specific promotion that was bundled with the target brand as independent variables, as well as salience (0 = non-salient, 1 = salient) and the interactions of quality rating * salience and promotion preference * salience.

Both interactions were highly significant: quality rating *salience $F(1, 106)=9.28$, $p<0.005$); promotion preference * salience $F(1, 106)=29.07$, $p<0.0001$. When quality was not salient, the person's assessment of the promotion had a significant and positive effect on bundle preference, $b= 0.67(0.12)$, $t(106)=5.64$, $p<0.0001$. However, the promotion effect was statistically insignificant when quality was salient, $b=-0.07(0.07)$, $t=-1.06$, $p=0.3$. In contrast, we find participants' quality ratings to be highly associated with bundle preference when quality is salient, $b=0.89(0.10)$, $t=8.55$, $p<0.0001$, but much less so when quality is not salient, $b=0.23(0.14)$, $t=1.63$, $p=0.11$.

Discussion of Study 2

Our results are compatible with our conjecture that an idiosyncratically misfitting promotion can act as a signal of quality. When core quality was made 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 accompanied by the personally attractive Wal-Mart gift certificate. We would like to be able to assert that consumers were attracted by the short end of the stick. That is, they preferred the seller who offered a promotion attractive to quality-discerning experts but not to them (Seagate rebate), behavior contrary to idiosyncratic fit.

However, our results are also consistent with a “compensatory inference” account (cf. Chernev and Carpenter, 2001), whereby 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 must offer to compensate. We pitted a camcorder with the attractive Wal-Mart gift certificate against one with a less attractive Seagate hard drive and people preferred the latter bundle. It may not be that the Seagate hard drive is a positive signal of quality; perhaps it is simply a less negative signal than the Wal-Mart gift certificate. We addressed this alternative explanation in Study 3.

STUDY 3: TEST OF A “COMPENSATORY INFERENCE” ALTERNATIVE EXPLANATION

We test our theoretical perspective against the alternative explanation that individuals infer product quality to be 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 due to idiosyncratic misfit (Simonson et al. 1994). In contrast, we predict a positive quality

inference and choice for the product bundled with the Seagate rebate compared to no rebate when quality is salient; if quality is non-salient individuals should be repelled by the idiosyncratically misfitting promotion.

Method

Eighty-three undergraduates were paid \$1 for participation. They compared two camcorder offers identical to those used in Study 2 with one exception: The Supersonic camcorder always appeared with no associated rebate. For forty participants, the Simmons camcorder was paired with the high quality, low fit Seagate rebate; for the remaining 43, the Simmons alternative had no associated promotion. This Promotion factor was crossed with a 2-level quality salience manipulation. As in Study 2, respondents in the quality salient condition rated camcorder quality before being asked to choose between the two camcorders (or one camcorder and a camcorder + promotion bundle). In the quality non-salient condition, respondents chose before rating camcorder quality. Respondents were randomly assigned to the four cells of this 2x2, Promotion x Quality Salience design. We used the same scales as in Study 2 to measure respondents' assessment of quality and preference for the promotion.

Results

Table 2 presents the conditions and relevant results from Study 3. The ANOVA results supported the quality inference hypothesis. We find a significant promotion \times quality salience interaction, $F(1, 79)=7.58, p<0.01, \omega^2 = 0.15$. When quality was not made salient, the addition of the Seagate rebate promotion led to directionally lower preference for Simmons ($M_{\text{rebate, non qs}} = 3.81$ v. $M_{\text{control, non qs}} = 4.68$), $F(1, 79) = 2.61, p=0.11$. When quality was made salient, however, the addition of the same promotion significantly increased relative preference for Simmons ($M_{\text{rebate, qs}} = 5.84$) in comparison with the control ($M_{\text{control, qs}} = 4.57$), $F(1, 79)=5.14, p=0.03$.

Insert Table 2 about here

Discussion of Study 3

The above results from Study 3 support our quality signaling account and rule out the interpretation that our results from Study 2 were driven by “compensatory inferences”—i.e., more valuable promotions imply lower core product quality. Compensatory inferences would lead people to have a lower preference for Simmons when it was promoted than when it was not, especially if quality is made salient. We find the opposite.

The design of Study 3 conceptually replicates Simonson et al. (1994). Like them, we contrast choice of two products when neither is promoted with the case when one adds a misfitting promotion. They showed that adding an optional promotion that does not fit the consumer’s personal taste can discourage the consumer from buying the associated core product. In contrast, we showed in Study 3 that adding such a promotion can attract customers when quality of the core brand is salient and the promotion is one that would appeal to other consumers who are perceived to be better judges of core product quality. However, as in Study 2, when quality is not made salient, we observe a result that is consistent with Simonson et al.

We intend our manipulation of whether inferences were prompted prior to choice to represent a general class of events in the real world that cause people to reflect on core 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?”

But an alternative interpretation is that our findings are a laboratory artifact. In studies 2 and 3, we observed that people were attracted by the short end of the stick only when asked to make an explicit quality judgment prior to choosing between options and not otherwise. Since

people rarely choose between products only after some external prompt to infer quality, the results of Studies 2 and 3 leave open the question of whether real-world consumers will make the effort to infer high product quality from receiving the short end of the stick.

In Study 4, we test the conjecture that consumers will infer quality spontaneously (i.e., without prompting) when choices have real consequences. We noted before that people do not make inferences unless it is instrumental to do so (Dick, Chakravarti and Biehal 1990; Feldman and Lynch 1988; Ross and Creyer 1992; Simmons and Lynch 1991; Wong and Weiner 1981). If one views the consumer as a “motivated tactician” -- ‘a fully engaged thinker who has multiple cognitive strategies available and chooses among them based on goals, motives, and needs’ (Fiske and Taylor 1991, p. 13) – then people should be more to be attracted by the short end of the stick if the stakes are high. The question then becomes, “Do real and material consequences motivate quality inference in the natural process of choice?”

STUDY 4: HYPOTHETICAL VERSUS REAL CHOICES

Participants in Study 4 chose without being prompted for explicit quality inferences. We contrast the effect of promotion premiums when the choice is hypothetical versus when the same choice has real consequences. Our key prediction is that participants in the real choice condition will choose the product bundle accompanied by a promotion premium that implies a high quality core product even when that promotion premium has very little appeal to them. This would show that consumers make spontaneous quality inferences, leading them to be attracted by promotions with low idiosyncratic fit to their own tastes.

In Study 4, the core products are two cordless drills each priced near \$100. In the control condition, there is no mention of accompanying promotions. In four experimental conditions,

one drill is paired with a \$15 department store gift card promotion and the other is paired with a niche book targeted to builders. We expect that the vast majority of the participants would prefer the department store gift card to the book and thus pick the drill bundled with the gift card in the hypothetical choice condition. In contrast, we expect that if participants have the chance to win the drill they choose (and its accompanying promotion), they will look for cues to determine which drill is higher quality. Thus, they will favor the drill that is bundled with the book targeted to builders, a promotion premium that does not appeal to their personal tastes.

Method

Participants. Three hundred and 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 supported by that MBA program.

Stimuli. The stimuli were pairs of drills or drill--promotion pairs. All participants chose between two drill options: option A, a Skil 18 Volt 3/8" Drill (Model 2887-06) and option B, a Ridgid 14.4 Volt 3/8" Drill (Model R83001). The photos and descriptions of the drills were taken from a hardware store's web site, although we deleted the price information for the specific Skil model (\$99) and the Ridgid model (\$149).

In the four promotion conditions, each drill was paired with one of two promotions said to be 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 6 conditions in a 3 (promotions) x 2 (real vs. hypothetical choice) between participants 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 (no promotion condition). 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 shown in Table 3a.

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.)⁴ Participants in the hypothetical choice conditions saw no such paragraph.

Insert Table 3 about here

Procedure. We first measured participants’ knowledge of nine brand names of drills. On the following page of the booklet, participants read instructions that explained that two cordless drills were available from a hardware store website, along with their accompanying promotion, if relevant. They were told that they would be asked to choose 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, 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 preference

(1=slightly prefer, 7=strongly prefer). On the final page, participants expressed their preference for the two promotion premiums (1=definitely prefer book, 8=definitely prefer gift card) and estimated the prices of the two drills on an 11-point scale (1=\$50-\$70, 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, the book and gift card promotions were evaluated alone rather than being bundled with a drill. We found no difference between the two control groups in terms of choice (share of Ridgid: 45%_{real} v. 42%_{hypothetical}, $\chi^2(1, n=102) = 0.01$). Similarly, the control groups did not differ in rated preferences for the drills (1=prefer Skil, 14=prefer Ridgid): $M_{\text{real}}=6.81$ v. $M_{\text{hypothetical}}=7.02$, $F(1, 303) = 0.06$. The grand mean of the two control conditions ($M=6.91$, $SD=4.31$) did not differ from the 7.5 midpoint of the scale, $t(97) = 1.35$, $p=0.18$. See Tables 3b and 3c.

We also used the control groups to verify that participants preferred the \$15 Nordstrom gift card over the book on frame construction. The grand mean of the two control conditions (6.68 and 7.14) differed significantly from the 4.5 midpoint of the scale (1=prefer book, 8=prefer gift card), $t(102) = 13.9$, $p < 0.01$. The two control means did not differ, $F(1, 104) = 1.41$, $p = 0.2$.

Effects of promotions on choice. Our key hypothesis states that when the choice is hypothetical, the promotions will cause respondents to favor bundles with the personally-favored Nordstrom gift card promotion; however, when the choice has real consequences, people will

choose bundles with the less valued book promotion, believing that this latter promotion appeals to more knowledgeable consumers and thus signals high quality.

We tested this hypothesis by focused comparisons among the four cells in which promotions accompanied the drills. First we used a binary logit analysis where the dependent variable is choice of drill and the independent variables are type of promotion (gift card vs. book), real vs. hypothetical choice, and the interaction between these two binary variables. As predicted, we find a significant interaction, $\chi^2(1, n=211) = 27.48, p < 0.01$. In the hypothetical choice condition, the drill paired with the preferred promotion (gift card) was chosen over the drill paired with the less preferred promotion (book), and this difference was significant, $\chi^2(1, n=107) = 7.24, p < 0.01$. However, in the real choice condition, the promotions had exactly the opposite influence, $\chi^2(1, n=104) = 23.93, p < 0.0001$. That is, the drill that was paired with the *less* preferred promotion (the book) was chosen over the drill paired with the more preferred promotion (the gift card).

We repeated the same analysis on the 14-point graded preference measures (1 = strongly prefer Skil, 14 = strongly prefer Ridgid). A 2 x 2, between participants ANOVA revealed the predicted interaction of Real v. Hypothetical Choice x Promotion Pairing, $F(1,207) = 40.11, p < 0.0001$.

Effects of promotions on estimated price of core products. Participants also estimated the prices of the two drills, affording an indirect measure of the quality inferences that participants drew from the promotions. In the real choice conditions, because people are motivated to make spontaneous quality inferences, we predicted a higher estimated price for the drill paired with the book compared to the drill paired with the gift card. This prediction was supported. Both Skil and Ridgid were estimated to be higher in price when they were paired with the *less preferred*

promotion (the book) ($M_{\text{Skil}}=\$136.8$, $M_{\text{Ridgid}}=\$129.2$) compared to when the same drills were paired with the gift card ($M_{\text{Skil}}=\$108.2$, $M_{\text{Ridgid}}=\$109.6$), $F(1, 102)=90.70$, $p<0.01$. This effect was equally strong for the two brands, $F(1, 102)=1.44$, $p=0.2$.

When the choice was hypothetical, our predictions are less clear. Analogous to the result under real choice, the estimated price for the drill paired with the construction book ($M_{\text{Skil}}=\$120$, $M_{\text{Ridgid}}=\$115.4$) was higher than the drill paired with the gift card ($M_{\text{Skil}}=\$109.6$, $M_{\text{Ridgid}}=\$113.8$), $F(1, 105)=9.42$, $p=0.03$, even though majority of the participants in these conditions picked the drill + gift card bundle. Combining real and hypothetical results, an interaction contrast revealed that the tendency to infer high price from the book rather than the gift card promotion was significantly weaker in the hypothetical than in the real choice condition, $F(1, 209)=32.18$, $p<0.01$.

Discussion of Study 4

Study 4 extended the findings in Studies 2 and 3 by showing further boundary conditions on when one should expect buyers to be attracted by getting the short end of the stick. In studies 2 and 3, only participants for whom quality was made salient were attracted by idiosyncratically misfitting promotions. In Study 4, participants were never asked to compare the quality of the drills prior to choice. It appears that when their choices had real consequences, consumers were motivated to use the promotions to make spontaneous quality inferences. When choices were hypothetical, we observed choices 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.

Parenthetically, participants in the hypothetical choice condition exhibited a weak tendency to infer higher quality (i.e., higher prices) for the drill accompanied by the book

promotion that they disliked, but that appealed to experts. However, other analyses that we omit due to space constraints show that price estimates were unrelated to hypothetical choices, but significantly predicted real choices made earlier in the experiment. This implies that participants in the hypothetical choice condition did not draw these inferences spontaneously in the process of choice. In contrast, participants did draw spontaneous inferences as a basis for real choice.

We intentionally allowed the winning participant to exchange his chosen drill for cash. This instruction was meant to motivate respondents to attend to quality at the expense of aspects of the drills where different people would have different preferences. One might question the consequences of this decision for the external validity of our findings.⁵ We are not making the “naïve” external validity claim that people choosing drills in the real world will choose according to our quality signaling account, or that our results imply that idiosyncratic fit applies only to hypothetical choices. We claim external validity in the sense of identifying conceptual background factors that moderate a (promotion) treatment effect (Lynch 1982, 1999). The conceptual point of Studies 2, 3, and 4 is that any internal or external factor that highlights consumers’ uncertainty about vertical dimensions of quality creates the possibility for consumers to be attracted by getting the short end of the stick. Real consequences for consumers cause them to infer core product quality spontaneously.

The above discussion pertains to situations in which consumers expect others to share a common definition of quality. Still, one might wonder whether the Study 4 results would generalize if respondents could not exchange their choice for cash. One might also question whether the effect in Study 4 has to do with the lesser *fit* of the Nordstrom gift card with the core product category (drill). Finally, one may wish for evidence supporting our claimed role of

uncertainty about vertical quality vs. the value of horizontally differentiating features. Study 5 addressed these concerns.

STUDY 5: UNCERTAINTY ABOUT VERTICAL QUALITY IN REAL CHOICES

Our quality-signaling account applies to markets where consumers perceive there is great variation in vertical product quality. Conversely, we expect idiosyncratic fit effects to dominate in markets where products differ less on quality dimensions, so that the primary uncertainty is one's own preferences for horizontal features that appeal to the idiosyncratic tastes of consumers. In Study 5 we manipulate the degree to which the products are believed to vary on quality. All participants made real choices.

Method

Participants. Two hundred and 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 about 10 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 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 and low personal attraction, respectively.⁶ In another pretest, we established that Sound&Vision was perceived as appropriate for a promotion for high end headphones and

Entertainment Weekly was perceived as an appropriate promotion for middle of the line headphones.⁷

Design. The design had certain similarities to Study 4, but all participants made real choices, and we varied uncertainty about vertical quality attributes of the headphones rather than the hypothetical versus real nature of choices. We randomly assigned participants to one of the 6 conditions in a 3 (promotion) x 2 (quality differential: high vs. low) between participants design. In the no-promotion control condition, participants chose between the two headphones when neither of them gave a promotion premium. In the ‘Sony+ Entertainment Weekly vs. Etymotic+ Sound&Vision’ condition, the Sony headphone offered a free issue of Entertainment Weekly, whereas the Etymotic headphone offered an issue of Sound&Vision. The promotion premiums were swapped in the ‘Sony+ Sound&Vision vs. 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 instead read ‘One of the headphones received a 8.3 (Very Good) rating and is considered an Editors’ Choice by CNET.com. The other headphone receives a 7.7 (Good) rating. The headphones sell for \$135 and \$40.’

The key dependent variables are the option chosen and graded preference for the two options (1=definitely prefer Sony, 14=definitely prefer Etymotic).

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 manipulating the high/low quality differential factor, as stated in the *Design* section above.

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. Following their choice, they were asked to express their strength of preference (1=slightly prefer the one I chose, 7=definitely prefer the one I chose). The two questions give us the two key dependent variables: choice (binary) and graded preference (1=definitely prefer Sony, 14=definitely prefer Etymotic).

After the choice, participants in the experimental (promotion) conditions also expressed their personal liking for the two magazines (1=very low personal attraction, 9=very high personal attraction) and how appealing each of the magazines is to consumers who are very knowledgeable about headphones for portable music players (1=very unlikely, 7=very likely).

Results

Manipulation check. We claim that respondents will infer that Sound&Vision is relatively more appealing than Entertainment Weekly for more knowledgeable buyers. Promotion preferences correlated significantly with all three measures of headphone knowledge. Participants who were less knowledgeable had stronger relative preference for Entertainment Weekly over Sound&Vision.

Choice of Sony v. Etymotic. We report the choice results in Figure 2 as a system of planned contrasts. First, considering just the control conditions, choices were unaffected by whether the vertical quality differential was portrayed as high (48% choosing Sony) or low (55% choosing Sony).

Insert Figure 2 about here

Next, we analyzed the remaining four cells where headphones were accompanied by promotions in 2 x 2 logistic regression. A significant interaction of quality differential and promotion pairing supports our predictions, $\chi^2(1, n=158) = 14.4, p < 0.0001$. As predicted, 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. The percent choosing Sony was 71% when it was paired with Entertainment Weekly and 41% when it was paired with Sound&Vision, $\chi^2(1, n=79) = 6.76, p < 0.01$.

However, when the respondents were told that the quality differential was high, we found exactly the opposite pattern. The percent choosing Sony was 37% when it was paired with Entertainment Weekly and 69% when it was paired with Sound&Vision, $\chi^2(1, n=79) = 7.69, p < 0.01$. People were attracted by idiosyncratic misfit because the misfitting promotion was appealing to those more able to judge quality.

Graded preferences. We repeated the same analysis on the 14-point graded preference measures (1=strongly prefer Sony, 14 = strongly prefer Etymotic) and the same pattern emerged. Moreover, similar to our Study 2 analyses of effects of core product quality perceptions and promotion preference on choice, we find that when quality differential was high, graded preferences were driven by perceptions of the differential appeal of the two promotion magazines to knowledgeable headphone users and not by personal preferences. The opposite was true when the quality differential was low.⁸

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 on whether the customer is getting a better or worse deal than some other group of customers (e.g., Feinberg et al., 2002; Kivetz and Simonson, 2003). A large body of research has shown that people are repelled when sellers offer another group a better deal. The five studies reported in this article establish the contingencies under which consumers can be attracted by an offer that gives them a comparative disadvantage.

We noted above that consumers might react to a seller's offer of an exclusive benefit to another group for two reasons. First there is the effect of the utility of the deal itself or its unavailability. The envy and idiosyncratic fit accounts predict that consumers experience disutility from a benefit that another group gets but they do not or from costs they incur that are less for others. Second, an exclusive deal can also have an effect by signaling the quality of the core product. Consumers' inferences about core product quality can be positive or negative, depending on the circumstances. The magnitude of this inference effect will be greater when consumers are uncertain about quality and quality differences are important.

Boundary Conditions for Attraction by Idiosyncratic Fit vs. Idiosyncratic Misfit

In the work on reason-based choice and idiosyncratic fit, the consumer's primary concern is about the fit of a product to his or her own personal tastes. However, sometimes the source of a consumer's uncertainty arises predominantly from concern about his or her ability to judge core product quality by direct inspection. Here, a promotion that that appears to be targeted to dissimilar but expert others would lead the uncertain consumer to infer that the core product being promoted should also be good for this consumer. Consumers are attracted by a

promotion that offers less benefit to themselves than to the targeted experts, contrary to what idiosyncratic fit would have predicted. Consumers unable to discern quality by inspection need not observe the purchase or non-purchase of the more expert group for this result to follow. Under certain boundary conditions that we have explored in this research, the mere offer by the seller to the expert group is perceived by novice buyers as a signal of product quality.

All the studies reported herein include conditions in which the seller offers better treatment to a group perceived to be superior to respondents at discerning quality. In Study 1, we explicitly mentioned the target group and respondents registered cues about that group's relative ability to discern quality. In Studies 2-5, there was no explicit mention of another segment of customers and thus our respondents needed to imagine some comparison group. In all of our studies, we were able to produce results that were compatible with prior findings that consumers are repelled by being disadvantaged by a promotion. However, all of our studies also demonstrate conditions where the promotion was perceived to be a useful signal of quality; here the disadvantaged group was attracted to the seller who was targeting another group of buyers. Specifically, these misfitting promotions seem to be particularly useful when there was a high degree of uncertainty on the quality level of the product (Studies 1 and 5), when the seller targeted the promotion to discerning buyers (Study 1 and by inference Studies 2-5), when the seller incurred a great cost if the product was not attractive to the discerning buyers (Study 1) and when product quality is made salient either by external factors (Studies 2-3) or by the internal motivation associated with making a real choice (Studies 4-5).

Behavioral versus Rational Models

In this article, we have relied on behavioral rather than analytic models to argue that consumers may sometimes be attracted by offering them a worse deal than another group. We

have not taken a position on whether choosing a product that gives the consumer the short end of the stick is “rational” buyer behavior or some simplifying heuristic. We have shown only that such inferences have stronger effects on choice under conditions that encourage elaboration.

Future work might attempt a game-theoretic analysis that shows 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. Thus, novice consumers would be making a rational inference when they choose a product even though they are getting the short end of the stick.

Finally, we note that regardless of whether or not consumers are “rational” in making quality inferences, sellers may want to use promotions similar to those used in our studies if they believe novices will perceive them to be useful signals of quality. For instance, many investors find financial offerings hard to evaluate. One could envision providing promotions that would only appeal to very knowledgeable investors in order to signal the quality of the financial product. Other situations that come to mind are the promotion of hard to evaluate electronics and software upgrades where current owners would take the role of experts. For those promotions to be perceived as credible quality signals, the seller would need to ascertain that the novice buyers viewed the promotions to be too costly (unprofitable) for low quality sellers to offer them.

TABLE 1
CONDITIONS AND RESULTS FOR STUDY 2

Condition	Quality Made Salient?	Option A	Option B	Bundle Preference (1=Supersonic 8=Simmons)	Quality Comparison (1=Supersonic 8=Simmons)
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

Within each of the two rightmost columns, conditions with different letter superscripts differed significantly at $p < 0.05$. Standard deviations in parentheses.

TABLE 2
DESIGN AND RESULTS FOR STUDY 3

Condition	Quality Saliency	Option A	Option B	Bundle Preference (1=Supersonic, 8=Simmons)
Control _{qs}	Yes	Supersonic	Simmons	4.57 (1.43) ^b
Simmons + rebate _{qs}	Yes	Supersonic	Simmons + Seagate rebate	5.84 (1.84) ^a
Control _{non qs}	No	Supersonic	Simmons	4.68 (1.21) ^b
Simmons + rebate _{non qs}	No	Supersonic	Simmons + Seagate rebate	3.81 (2.40) ^b

Within the rightmost columns, conditions with different letter superscripts differed significantly at $p < 0.05$. Standard deviations in parentheses.

TABLE 3A

STUDY 4: CHOICE PAIRS IN 3 x 2 BETWEEN PARTICIPANTS DESIGN

	Promotion Condition					
	No Promotion		Skil + Gift Card		Skil + Construction Book	
	Option A	Option B	Option A	Option B	Option A	Option B
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

TABLE 3B

STUDY 4 RESULTS: PERCENT CHOOSING RIDGID (OPTION B)*

	No Promotion	Skil + Gift Card (Ridgid + Book)	Skil + Construction Book (Ridgid + Gift Card)
Hypothetical Choice	42% ^{bc}	29% ^{ab}	55% ^c
Real Choice	45% ^b	76% ^c	28% ^a

* Cells in same row or column with different subscripts differed significantly at $p < .05$ **TABLE 3C**

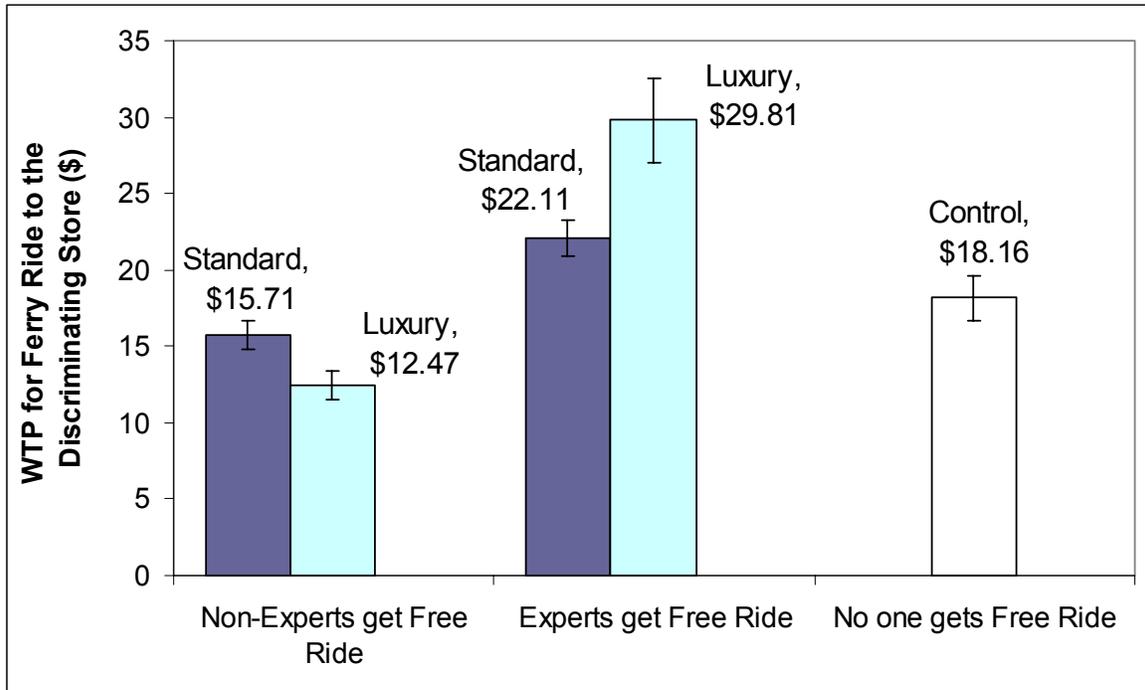
STUDY 4 RESULTS: BUNDLE PREFERENCE (1=SKIL 14=RIDGID)*

	No Promotion	Skil + Gift Card (Ridgid + Book)	Skil + Construction Book (Ridgid + Gift Card)
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

* Cells in same row or column with different subscripts differed significantly at $p < .05$. Standard deviations in parentheses.

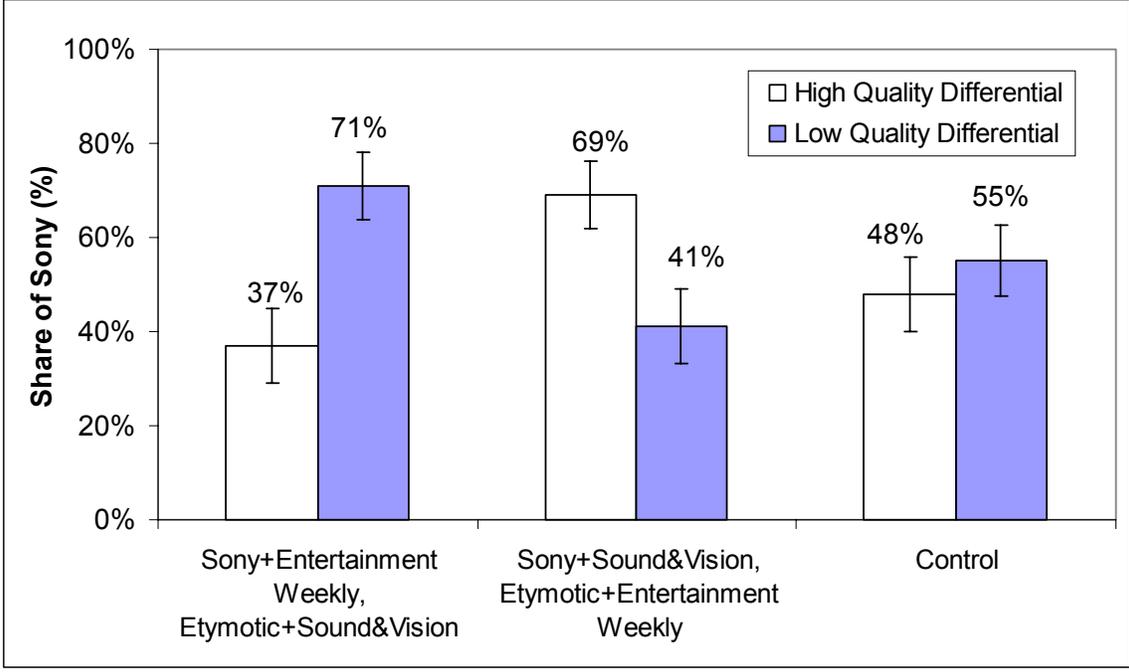
FIGURE 1

WILLINGNESS TO PAY FOR FERRY RIDE TO THE DISCRIMINATING STORE



Error bars show standard errors of the means

FIGURE 2
PERCENTAGE CHOOSING SONY IN STUDY 5



Error bars show standard errors of proportions

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¹ “Amazon.com Varies Prices of Identical Items for Test” *The Wall Street Journal*. September 7, 2000. Cnet News.com. “Customer Outrage Prompts Amazon to Change Price-Testing Policy” September 13, 2000. ComputerWorld. “Amazon Apologizes for Random DVD Price Test” September 28, 2000. CNN.com

² Katzman v. Victoria’s Secret Catalogue. 1996, 167 F.R.D. 649, United States District Court, New York, June 25.

³ The premium was correctly described to subjects as having been rated 4.5/5 in PC World and as featuring USB2.0 and Firewire interfaces, 72000 rpm and an 8MB buffer. At the time we ran Study 2, it was the most popular hard drive among digital photo studio users.

⁴ The text in parentheses was omitted for subjects in the two control conditions in which the drills were not bundled with promotion premiums.

⁵ Thanks to Nathan Novemsky and On Amir for suggesting this point.

⁶ Entertainment Weekly: $M = 6.69$ ($SD=1.70$), $t(12)=3.58$, $p<0.005$ (1: very low personal attraction to 9: very high personal attraction) Sound&Vision: $M=3.38$ ($SD=1.89$), $t(12)=3.09$, $p<0.01$ (same scale).

⁷ Compared to the 4.0 scale midpoint in (1=Sound&Vision is more appealing to the target segment, 7= Entertainment Weekly is more appealing to the target segment), Entertainment Weekly was rated as more appealing to middle-of-the line buyers, $M=5.79$ ($SD=1.09$), $t(57)=12.5$, $p<0.0001$. Sound&Vision was more appealing for high end headset buyers, $M=2.39$ ($SD=1.45$), $t(53)=8.08$, $p<0.0001$. Responses differed for high and middle-of- the line headsets, $t(110)=13.6$, $\omega^2 = 0.63$.

⁸ Details available from the authors.