

How Appealing is “Free”?

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Abstract

Many marketing strategies seem based on the notion that consumers respond more strongly to products that are being offered for free than a rational calculation would predict. Such a preference would be consistent with some existing research on ways that marketing takes advantage of irrational behavior, and research findings in mental accounting and budgeting might bear on the apparent irrational appeal of free. A series of experiments on people's preferences produced mixed results. One experiment suggested that a cheaper, but inferior, movie, was preferred over a more expensive better one when that movie was free, but not when it was similarly discounted but not free. However, other experiments did not reveal any consumer preference for free items in a variety of hypothetical choices, from buy-one-get-one-free offers to free gifts with magazine subscriptions. Overall, the results do not support a view that free items have a markedly powerful effect on choices, at least relative to equivalent discounts.

In 2006, Verdens Gang reported the following: “Christoffer Stenvik (20) has been sitting in his car for 10 hours. He is waiting to fill his tank with 60 liters of free gas. To mark the opening of a new gas station, Shell Express in Sandvika is giving away free gas for one hour. Over 100 thirsty cars are waiting in line for a full tank” (Fosse, 2006). It seems remarkable that this offer would invoke such behavior. It is the case that gas is expensive in Scandinavian countries, at about 12 Norwegian Krone (NOK) per liter. With Christoffer and one friend spending ten hours in their car to get NOK 720 worth of gas, the actual value is NOK 36 per hour, for each person, about one-third an average starting wage. From an economic standpoint, their decision to wait in line for ten hours does not seem rational. Would one expect to see people sit in line half the amount of time, five hours, if they were offering gas at half price, or is there something about free that is especially appealing? Similarly, the Economist, when offering a subscription that costs roughly NOK 5000, offers a free pen at the value of NOK 800 to new subscribers, when someone who can afford a NOK 5000 magazine clearly can afford a pen in that price class. Every fall people line up on campus to get a free pen or newspaper, even though they usually end up saddled with some subscription they do not really want or need. Does free exploit some irrationalities in human behavior?

Free is a pervasive marketing tool, and it has become almost obligatory to offer a free gift to new book club members in Norway. In the US, over 60% of department store make-up sales and 40% of prominent fragrances sale are associated with such offers (Sexton, 1987). Hardly a single cell phone plan in Norway offers a deal that does not include the word free somewhere in its policy. In fact, entire subscriptions are now being offered for free (Brenna, 2007). Even Apple’s education store is offering free iPods with the purchase of a computer (<http://www.apple.com/promo/past.html>). Given the pervasiveness of free in commercial offers, it seems reasonable to ask whether there is something special to gain by using free in the framing of the offer, rather than offering a price reduction of similar worth. That is, is there something special about the offer that cannot be accounted for in mere economic benefits. Framing effects in general are common in price promotions (Grewal, Marmorstein, & Sharma, 1996; Johnson, Herman, & Bauer 1999; Sinha & Smith, 2000), and have been shown to affect deal evaluations and purchase intentions (Krishna, Briesch, Lehmann, & Yuan, 2002), and so it is reasonable to examine whether one involving free offers are effective.

There are many examples of consumer behavior not following the rules traditional economic theory would predict (Kahneman & Tversky, 1979, 1984; Simon 1955; Tversky &

Kahneman, 1974, 1981, 1986). Monetary savings are not the only things customers respond to, and marketers take advantage of this. For example, the way that consumers decide which brand to buy at which price does not always involve active cognitive evaluation of the deal at hand (Inman, McAlister, & Hoyer, 1990). In the peripheral route to persuasion, simple cues are weighed more heavily than are other financial considerations about the offer. Such a consumer may consider only the promotion signal, though a rational evaluation would lead consumers to not have any preference for the item when there is no price reduction. Marketers can, and do, take advantage of this irrationality by presenting a sign indicating that there is a sale, even though the price has not actually been reduced, resulting in increased sales of that product (Hoch, Dreze, & Purk, 1994; Inman et al., 1990).

Similarly, consumers systematically underweight the cost of future effort, relative to future savings (Soman, 1998). With the use of an on-site coupon, for instance, consumers will switch brands, but then underestimate the cost of having to cash it in (Bawa & Shoemaker; 1987, Dhar & Hoch, 1996; Soman, 1998). The mere novelty of coupons, relative to price reduction, is thought to explain why 35% more will choose an on-shelf coupon than a temporary price reduction of the exact same economic value (Dhar & Hoch, 1996; Schindler, 1992). Marketers take advantage of this by offering coupons, knowing well that most people will not redeem them.

The way an offer is framed also results in some economically suboptimal behavior. In one study, participants were much more willing to drive 20 min to another store for a joint purchase of a \$15 jacket and \$125 calculator if the jacket was reduced \$5 than if the calculator was reduced by \$5, even though the absolute savings are identical (Kahneman & Tversky, 1984). This suggests that participants are swayed by percentage discounts, rather than absolute savings. However, this bias may be limited to relative small amounts of money. Darke and Freedman (1993) found that with large value savings, percentage off played no role. Together, this can be taken advantage of by marketers. When having sales involving a high percentage of savings, but little in terms of the absolute money saved, they can advertise in terms of percentage off. When having high amount, but low percentage sales, they can advertise the absolute money off.

More broadly, Chandon, Wansink, and Laurent (2000) try to explain the pattern described above by looking at non-monetary benefits of a sales promotion. Through a series of studies, they find that monetary savings, as opposed to non-monetary savings like a free gift, are more effective for utilitarian products than for hedonic products. They develop a benefit congruency framework, which argues that a sales promotions' effectiveness is

determined by the utilitarian or hedonic nature of the benefits it delivers and the congruence these benefits have with the promoted product. In other words, if one is buying a dish washer, a discount in the form of a certain percent off – a utilitarian benefit – would be the more effective, whereas if one is buying cake frosting, free sprinkles – a hedonic benefit – would be more effective.

Given that consumers' behavior is not always perfectly logical, as the above examples show, it is worth investigating whether there are some underlying consumer "mistakes" that would give free a disproportionately large appeal. In the following section, we want to explore a framework of irrational behaviors of the sort that marketers might take advantage of in using "free" offers.

Irrational behaviors and how they might make free special

Framing. Prospect theory helps to explain how people evaluate financial decisions involving risk. There are three central principles to it. First, it holds that decisions are framed with respect to a reference point. It is the change of wealth relative to that reference point that is evaluated, rather than an absolute change of wealth. Second, both the gain and loss functions display diminishing sensitivity. The more money you gain, the less sensitive you are to each marginal gain and the more money you lose, the less sensitive you are to each marginal loss. Thus, the value of gain and loss is thought to be described by an s-shaped value gains function. Third is the concept of loss aversion. Losing \$100 hurts more than gaining \$100 pleases. Changing the reference point, or frame, can explain some of the irregularities seen in decision making. In implementing this theory in consumer choice, Kahneman and Tversky (1984) identified three levels in which financial transactions can be framed: minimal, topical and comprehensive. The difference between levels lies in the degree to which the transaction is framed with respect to direct consequences, as opposed to more inclusive features of the decision context. In a minimal account, only the absolute money gained or lost is looked at, because this is the most direct consequence of financial transactions. In a topical account, slightly more things are included, including evaluations of the decision at hand. And in a comprehensive account, everything is considered, including factors that are not directly related to the transaction itself. Here for instance one might consider the price of an item relative to one's weekly budget.

The effect of using different types of frames to evaluate the outcomes can explain the findings in the Tversky and Kahneman study described above (1981) The same amount of money, \$5, is saved regardless of whether it is the expensive jacket or cheap calculator that is

reduced. If people had been using the minimal accounting frame, they would just value the absolute difference, and decide whether it is worth driving 20 minutes to save \$5, and one would not find a difference between the two conditions. However, in this case it is clear that people are using a topical accounting frame, where the reference level is the price of the item that is reduced. From this perspective, it explains why they are more willing to drive 20 minutes; because they value a 33% saving over a 4% one. The notion that people care about the magnitude of a reduction not in absolute terms, but in relative terms, suggests one way that free might have special appeal. Reducing the price of an expensive item by a relatively small percent will not enhance its appeal much. If that same savings is presented as a separate gift, which is free, or reduced in price 100%, it may be disproportionately alluring. That is, a \$10 rebate, presented as 10% off the \$100 item may not seem like much, but presented as 100% off a \$10 item bonus gift may convince people.

Thaler (1999) further categorizes mental accounting approaches in a comprehensive theory called hedonic framing, which describes how people want to evaluate losses and gains to get the most amount of pleasure from economic decisions. He suggests that the value of two items, x and y , may be different if regarded as $v(x + y)$ in contrast to $v(x) + v(y)$, with the values given by the gains function. One of the principles, to integrate losses, results from the value gain function being steeper closer to the origin. Thus the cost, for instance, of three small losses is greater than if one would have combined them into one larger one. So buying a public transportation day pass for NOK 60 hurts less than buying three individual trips for NOK 20 each. Another principle is to segregate small gains from larger losses. Since the gain function is steepest at the origin, the pleasure of a small gain can exceed the pleasure of slightly reducing a large loss. For instance, a certain Norwegian clothing store rewards heavy shoppers by giving the customer one of the cheaper items that the customer was going to purchase. So if one is buying clothes for NOK 4000, the store might tell you that they are not going to charge you for the earrings. They could just as well have offered a percentage off the whole purchase, and the cash spent would have been identical. However, by giving the small thing away instead, they add more pleasure, since the gain function is steeper at the origin, than the small discount would account for.

These principles suggest ways that one could describe the advantages and disadvantages of a particular product in a way that will maximize its perceived attractiveness to consumers. When offering a gift for free, one is adding a small gain, and this effect would be greater than if one were to reduce the total price of whatever one was trying to sell by the same amount. Freeness can also take advantage of people's desire to integrate losses. Take,

for example, a cell phone plan advertisement that says you get 2000 SMS free for NOK 200. Clearly, the SMS are not really free. The perceived value of paying NOK 200 is better than saying you get 1 SMS for 10 cents, The added pain of paying 10 cents 20 times is a lot more than the pain of having to pay NOK 200 once, because the gain curve is steeper closer to the origin.

Transaction utility and acquisition utility. Thaler (1999) proposes that one gets two kinds of utility from a purchase: acquisition utility and transaction utility. Acquisition utility is the value of the good obtained relative to the price that was paid for it. Transaction utility, on the other hand, is the difference between what one paid for the good, and what its “reference” price is. This can be the retail price, or what customers expect to pay for it. In other words, transaction utility is a measure of how good a deal was. In one experiment Thaler (1985) demonstrates the difference between the two utilities. Subjects are asked to imagine they are lying on the beach on a hot day, and are getting really thirsty. A friend is going to either the store, in one case, or to a fancy hotel, in the other. Subjects are asked how much they would be willing to pay for the beer. In the hotel condition, the median price they were willing to pay was \$2.65, while in the store condition it was \$1.50. Thus, people are willing to pay more for the drink from the resort because the reference price in this context is higher. The consumption experience, and thus the acquisition utility, is the same in both cases.

While acquisition utility suggests that discounting an item slightly, and adding a small free gift should be equally appealing, transaction utility can suggest otherwise. Sales approaches that make people think they have gotten an unusually good deal should be tempting, and the sense of getting something free could exploit this.

Regret avoidance. The concept of transaction utility shows that we respond to how good the deal is. Closely tied in with this, though from another perspective, is the concept of regret avoidance. The notion of regret avoidance suggests that we act so as to avoid experiencing emotional discord at imagining how we would have been better off by having acted otherwise. Thinking how we could have done better, upward counterfactual thinking, is especially unpleasant because it shows how a negative outcome could have been avoided, and therefore is more likely to be associated with negative emotions, self-recrimination, and the experience of regret (for review, see Tykocinski and Pittman, 1998).

According to Kahneman and Tversky (1982), one is more likely to experience regret over a negative outcome if one believes that this unfortunate outcome could have been easily avoided. If one is easily able to think of alternative scenarios in which this negative outcome is avoided, the outcome appears more avoidable and thus a greater source of regret. As a result, we would regret missing a sale that had ended just 5 min before we entered the store more than missing a sale that ended last week. It is much easier to imagine how we easily could have made it to the store 5 minutes faster, rather than trying to think of a scenario that would have had to span across an entire week.

As in the case of people lining for the gas station, even if it means waiting for ten hours, could be that this is tied in with desire to avoid regret. It simply is not possible to get a better deal than free, and as such the imperative to avoid losing out on the offer, and avoid negative emotions over the loss, is disproportionately large.

Payment Decoupling. Another way by which free can have appeal is through the process of payment decoupling. This involves separating the cost of whatever good you are getting for “free,” from some other thing that you willingly pay money for. Thaler (1999) highlights the use of payment decoupling with credit cards as an exceptionally effective way of making customers buy more. One of the factors that make it work is that it postpones the payment by a few weeks. This delay results in that the payment is later than the purchase and secondly the payment is separated from the purchase. This simple separation of purchase and payment appears to make the payment less salient. As he says, “Payment by credit card thus reduces the salience and vividness of the outflows, making them harder to recall than payments by cash or check which leave a stronger memory trace.”

Certain forms of free offers appear to take advantage of payment decoupling. For example, book club offers, with a free item now, and no payments until later can seem better deals than ones that simply reduce the immediate payment by an equivalent amount.

Budgets for luxurious gifts. People often divide their money or expenses into separate real or mental accounts. For instance, a person who likes expensive shoes might set a maximum budget of NOK 2000 per pair. Because Manolo Blaniks, at NOK 3500 per pair are ruled too tempting, having this limit might help them control spending. All the same, that person would greatly enjoy receiving an expensive pair of shoes as gift, even though, if given NOK 3500 they would not be permitted to spend it in that way. In such cases, luxurious gifts are a way around the problem. This line of reasoning suggests that in some instance a free gift

thus could be quite effective. People might view the expensive pen that comes free with the subscription as something tempting, which they would like to have, but may be seen as too luxurious or frivolous to warrant the expense. However, one might still have an open budget for magazines, and so the overall deal is appealing because they can give themselves something they really want, while thinking that they are not really paying for it. This view does suggest some limits on what the free gift can be in order to be effective. It should be something the person wants, but would not be willing to spend money on. In other words, a free gift that would come from some more fungible account, like cleaning supplies, might be less tempting than something of identical value drawn from a limited luxury account, like a day at a spa.

The Value of Money vs. Time. Another time when free might seem especially appealing is when evaluating the actual cost of what it takes to get the free thing is difficult. That is, deals including free items might be effective when one does not really know how to evaluate the costs, or one does not know what they will be.

Often people invest time, as with the waiting in line all day for gas, to get the free thing. Time can be considered a resource one has in the same way one has money. Becker (1965) equates the value of time to its opportunity cost, which is typically assumed to be wage rate. According to this model, the value of time is a linear function of the duration. With such a model, attending a one-hour meeting in order to get a couple of free waffles would not be rational. The value of that hour would be over NOK 100, which would lead one to conclude that one would be better off just buying the waffles.

However, there is evidence to suggest people do not view their time in this rational, economic way. Soman (1991) suggests that the sunk-cost effect is markedly less pronounced when what people have invested time rather than money. In one experiment, subjects were asked to imagine that they are to submit an entry to a 'new invention' competition. They had spent 30 hours preparing a design for a rocket engine and were told it would take an extra 10 hours to finish it. Then they realized that the winner from last year had also designed a rocket engine. They had also thought about working on an equally good design for a solar-powered pump that would take 10 hours to complete. Which project would they work on? Only 20% chose the rocket engine, while 80% chose the solar-powered pump. In the sunk money version of the problem, subjects read the same basic scenario. Instead of time, however, subjects were told about monetary investments they had made or would need to make to finish. They were told they had spent \$90 on the rocket design, and both the rocket design and

the solar powered pump would cost \$30. In this case, 55% chose the rocket engine, while 45% chose the solar-powered pump. Thus, there was little sunk-cost effect in the domain of temporal investments, though we can see that there was a sizeable effect in the monetary example.

When people have separate accounts for time and for money, they may be willing to trade them off in a non-normative manner, whether it be filling out a long questionnaire for a free candy bar, waiting in line for free gas, or traveling across town to collect a prize. If they converted their time to money, they might prefer simply to buy the item, or skip it altogether.

Certainty Effect. Kahneman and Tversky (1979) showed that people give too much weight to outcomes that are considered certain, relative to ones which seem merely probable, a phenomenon which they labeled the certainty effect. Moving away from a certain thing is more costly than a similar reduction in probability from an already uncertain outcome. Zeckhauser (Kahneman and Tversky, 1979) provides a compelling example of the certainty effect. In a hypothetical game of Russian roulette, people are generally willing to pay more to reduce the number of chambers that contain a bullet from 1 to 0 than to reduce it from 4 to 3. Both reduce the odds of being shot by the same amount, and so the former removal should not normatively be worth more. There is something about the certainty that appeals to people.

There is a parallel between such certainty effects and the appeal of free items. Perhaps in the same way that there is a discontinuity in value when one goes from likely to certain, there is a discontinuity when one goes from deeply discounted to free.

The evidence reviewed suggests that it is possible that free would have some special appeal, but the theories and data do not bear directly on the issue. The question we want to address is whether the appeal of free in fact exists. To investigate this, we should look further at research that has been conducted that related directly to free.

Summary of research on free. Past studies have looked at what consumers would be willing to pay for items that have been offered for free when those items were offered as a separate purchase. It was shown that the free gift promotions were viewed as a source of information about the underlying value of the product offered as a free gift (Raghubir, 2004). When a free gift is offered with an expensive bottle of whiskey, as opposed to a cheap one, people are willing to buy the pen for a higher price. The perceived value of the free gift is influenced by the value of the item it is offered with, and this finding is named the value discounting hypothesis. According to this, consumers will discount the value of a free gift because they

think that offering a promotion implies that the profit margins are large enough that the manufacturer will not suffer a loss. The inference that the product being offered for free is inexpensive should then reduce the price they are willing to pay for the product being offered for free if they were to purchase it as a stand-alone product.

Raghubir further concludes that the price one is willing to pay for an item that has been offered for free is also smaller than when it has been offered as part of an economically identical offer. She does suggest, though, that this effect is mitigated when the normal retail price of the free gift is presented as part of the offer (Raghubir, 2005). The data from her studies, however, do not support these claims. In the first study, she looks at the price people are willing to pay for a pair of earrings, after having viewed one of three ads: necklace for \$66 and free earrings; earrings for \$66 and free necklace; and necklace and earrings for \$66. She finds that the average price people are willing to pay for the earrings was lower in the frame where earrings were free with the purchase of the necklace, and was higher when the necklace was free with the purchase of the earrings. In other words, when people are told that the earrings cost \$66, they are willing to pay more for them as opposed to when they are offered as a free gift without any indication of what they are worth. This difference was significant, though largely meaningless. The two conditions are not comparable. In one instance, you have the price of the earrings, whereas in the other you do not. All this suggests is that people are willing to pay more for earrings if they know what their value is, as opposed to when they do not.

The price people would be willing to pay for the earrings in the bundled price condition was in the middle of these two estimates, which was significantly different from the price people were willing to pay for the earrings when the necklace was being given for free but not significant from the price willing to pay for the earrings when the earrings were offered for free. The critical test, whether there is a difference between the price people are willing to pay in the bundled price condition, as opposed to when it was offered for free, was not significant. Yet, she concludes: “to summarize, we find evidence for the value of the discounting effect: people were willing to pay less for the earrings when these were offered as a “free gift” with the necklace, as compared to when the necklace was offered as the free gift with the purchase of the earrings.”

Then, in the second study, she tests the theory that the price discounting of the free gift will be moderated when the normal price of the free gift is listed. Customers are hypothesized to be less prone to discount the value of the free gift if there is a price present to anchor the value of the free gift. Here again, however, the conclusion from her findings

seems contrary to what the data suggest. She uses an ad for a fragrance and manipulates both whether a body mist is offered as a free gift or not with the fragrance, and the whether the value of the mist is present or absent. Again, the dependent measure is the price people are willing to pay for the body mist. When no value information was provided, people were willing to pay more for the mist when it was offered as a free gift, as opposed to when it was not, though this difference was not significant. But when body mist was advertised as normally costing \$30, people were willing to pay more for it when it had been offered as a free gift, as opposed to when it had not. This difference was significant. Thus, it does suggest that if people know how much something costs, they will be willing to buy it at a greater price if it has been offered as a free gift. But she concludes that “when a product is given away for “free,” then consumers are willing to pay less for it as a stand-alone product, especially when the originally promotion offer does not include the price of the free gift.” This rather mischaracterizes the interaction present in the data. When people do not know the price, then having the item offered for free did not impact its perceived value, and when the list price was included, offering it for free actually increased its value. Whether or not her specific conclusions are justified, her experiment does suggest that bundling free items with sales offers can alter the way people regard the offer.

In general, while a great deal of work has been done on irrationalities in consumer behavior, and many advertisements and sales include free offers, little is actually known about how such deals influence people’s choices. The goal of the present work is to explore different situations where free may have a special effect, and determine when such offers are effective, and what their effect is.

General Method

Overview

To determine whether using “free” in the framing of an offer makes that offer more appealing, nine experiments were conducted. Subject groups were recruited on three different occasions at the University of Oslo. Each pool was presented with a different set of experiments. For sake of parsimony, the subjects will be described once in the beginning, rather than for each individual experiment. A general overview of how the studies were grouped together during the collection process will also be given in the beginning.

Participants

The first group of study participants was one hundred and ninety seven students (128 women and 41 men) in an introductory psychology class with a mean age of 22.5 (SD = 5.77), who participated in the study voluntarily during a class break. This pool was used for Experiment 1, 2, and 5, and for a series of questions with an open-ended answer format about whether participants had had experiences in which they had been especially swayed by free offers. Two thirds of the subjects saw Experiment 1, the other one third saw Experiment 5, and all of them saw one of two versions of Experiment 2. The number of research participants, for Experiment 1 and 5 was 109 and 62, respectively. For Experiment 2, 51 people participated in the first version, and 58 in the second. For the series of open-ended questions, 144 subjects were used. Some subjects failed to answer one of their questions, and some provided answers that could not be usefully coded.

The second group of study participants comprised eighty-seven students (43 women and 44 men) with a mean age of 25.21 (SD = 6.85). They were approached on campus and asked if they would answer a few questions about consumer behavior as a part of ongoing research at the department of psychology, in exchange for a lottery ticket. This pool was used for experiment 4, 6, and 7, and number of research participants providing useful data was, respectively, 58, 49, and 48. Four students who were approached declined to participate.

The third group of study participants was fifty students (19 men and 31 women) with a mean age of 25.16 (SD=6.46). They were also approached on campus, and asked if they would answer a few questions about consumer behavior, as part of ongoing research at the department of psychology, in exchange for a piece of candy. This pool was used for experiment 3, 8, and 9. All 50 students provided useful data for all three experiments, and all who were approached for recruitment agreed to participate.

All surveys were in Norwegian. They are presented here in translation, and appear in their original form in the appendices.

Counterbalancing

All participants in the first pool were first given either an experiment that dealt with gas pricing or an experiment that dealt with film choices. The gas pricing experiment had four levels, and the film choice experiment two. All participants then were given the experiment about buying a pen. Half of the participants got a willingness-to-travel version of a pen purchasing experiment, and the other half got a price estimation version of this experiment. The willingness-to-travel version had two levels, and the price estimation version had three. The conditions were arranged so that nobody saw two free offers. Thus, for example, if they

were in the condition that saw an offer for free gas in the first part, they could not be in the condition that considered a free pen in the second. The questions with open-ended answers about engagement in free-related behavior were displayed on a different page, and participants were told not to go on to this section until they had completed the first one.

For the second subject pool, all participants first saw a real estate agent choice experiment, then a lamp choice experiment, and lastly a gift card preference experiment. All the experiments had two levels. The conditions were arranged so that free appeared either in the first or second question. For the third question, all subjects saw a free alternative of some sort.

For the third subject pool, all participants saw a film choice experiment, an advertisement experiment, and a lamp purchasing experiment, in that order. All the experiments had two levels. The conditions were arranged so that half of the participants saw a free offer first and last, and the other half was arranged so that they saw a free offer in the middle. Thus no subject saw consecutive free offers.

Questions on the appeal of free

To get a general overview over whether people themselves thought that they had ever been swayed by the power of free, participants were presented with the following question: “It happens that people sometimes join a book club to get a free gift or go to a meeting for free food. Do you recall ever having done something just to get something for free? Please explain below.” Further, they were asked whether they thought their acts had been rational: “If you answered yes to the above question, do you think, in retrospect, your behavior was rational?” Out of 144 respondents, 68.8% said that they had taken advantage of a free offer, and 32.2% said that they had not. Of the positive respondents, 25% reported that they had either joined a book club for a free gift or gone to a meeting for free food. The remaining 75% reported other scenarios, or did not elaborate. Of the participants who reported having engaged in a behavior to get something for free, 45% said that they did not perceive their behavior as rational in retrospect. The results suggest that free offers, and people taking advantage of them, are fairly common, and that, furthermore, people even recognize not infrequently, that such offers can be more tempting than they should, rationally, be.

Experiment 1

This experiment was designed to explore the strength of “free” in enticing consumers to take advantage of an offer. Participants are presented with the option of getting in line to

buy gas at a reduced price. The question is whether the decision to stay in line to buy gas is influenced when the gas is free, rather than merely cheap. If there is no special appeal of free, then one would expect to see the number of people who decide to get in line increase linearly as the price reduction increases, and not see anything special happen at free. Such a pattern is what one would expect if people are acting from a purely economic standpoint, where the time they wait would be in direct proportion to the amount of money they are saving. However, if free does have a special appeal, then we should see a jump in the number of people who are willing to get in line when it is not merely cheaper, but free.

Method

Design and procedure. Each participant was given one of four versions of a paragraph describing a hypothetical situation in which they are driving in a car and come across a gas sale at a gas station, and are then asked if they would stop to take advantage of the offer. The price of gas was manipulated, between subjects, and was 9 NOK/l, 6 NOK/l, 3 NOK/l, or free. The free-condition hypothetical read as follows:

Imagine that you are out driving a car, either your own, or one you are borrowing for a couple of weeks. You drive to a gas station where a long line has formed, and you notice that it is because they are having a sale on gas. Instead of the regular price of about NOK 11 per liter, it is free. The gas tank is currently 1/3 full. You estimate that you will have to wait for about 45 minutes to get gas. Would you have gotten in line?

Yes_____

No_____

The dependent variable measured was the participants' report of whether they would have decided to get in line or not.

Results and Discussion. As gas gets cheaper people are more willing to wait for it, as indicated in Table 1. The critical idea that the step to free is special, however, was not supported. Multiple linear regression analysis was used to develop a model for predicting whether participants got in line based on the gas price, and whether or not the gas was free, which was coded as a dummy variable. If the linear model was significant, and the contribution of free or not was significant, this would indicate that people did not flock to free. The results of the analysis showed that the model was able to explain

17% of the predicted decision, $F(2, 106) = 10.92, p < .001$. Price of gas was a significant predictor of whether or not people got in line to buy gas, $B = 0.064, p = 0.002$. The contribution of free did not turn out to be a significant factor in the model, $B = 0.059, p = 0.071$. As expected, when the gas is cheaper, people are more likely to be willing to wait.

Table 1. Number of participants who wait in line for gas-sale depending on price

Gas price NOK	Willing to wait?		Percent who wait
	Yes	No	
9	6	25	19 %
6	6	14	30 %
3	15	11	58 %
Free	22	10	69 %

Contrary to what we predicted, participants do not appear to make any different judgments when deciding whether to wait in line or not in the free condition. They are sensitive to price, as one would expect, though there is nothing special about their willingness to wait when gas is free.

Experiment 2

This study was designed to test whether the framing of two identical offers—where one frame includes the mention of free, and the other does not—would affect the appeal of a pen sale. In one case, the framing of the offer is worded as “you get two for the price of one,” whereas in the other case it is worded as “if you buy one you get one free.” Inman et al. (1990) demonstrated that the mere presence of a “sale” sign, absent an actual reduction in price, lead to an increase in sales. The “sale” sign was thought to signal the presence of a good deal, leading some people to use a cognitive short-cut when evaluating whether it was a good deal, and thus circumventing the fact that it was not. The presence of “free” might act as a similar sort of cue.

If people act rationally, then we would expect to see that the deal is equally appealing when framed as “buy-one-get-one-free” (BOGOF) as when it is framed as “two-for-the-price-

of-one” (2 for 1). However, if free gains its appeal through a signaling effect, people should show a preference for the BOGOF offer, when the word “free” is present, despite the offers being economically identical.

we were also interested in investigating whether framing the deal as a BOGOF or 2 for 1 offer would affect people’s perception of the objective value of the pen, replicating the value perception aspect of the Raghurir study (2005). If it turns out that people find the BOGOF offer more appealing in this experiment, it would be interesting to see how this related to people’s perception of the objective value of the pen, or whether we also find, as did Raghurir, that framing the offer as a bundled offer versus BOGOF did not affect that perception of price.

Method

Design and Procedure. Subjects were given a description of a hypothetical situation in which they are to imagine that they are about to buy a pen that costs NOK 90, and are then offered the possibility of getting an additional pen if they walk 15 min to another store. The between-subjects factor was the framing of the offer for the second pen. In one condition, they were told that the offer was a “two-for-one” special, and in the other condition, they were told it was a “buy-one-get-one-free” special. Thus, in both conditions the offer includes paying NOK 90, and getting two pens rather than one. The difference lies in the wording of the offers. The dependent variable was how likely the participants would be to go to the other store, ranked on a 4-point scale, with 1 being very unlikely, and 4 highly likely. The 2 for 1 condition hypothetical read as follows:

Imagine that you are at a bookstore and have decided to buy this quality pen for the price of NOK 90.



When you go to pay, the person at the register says that the same pen is on sale at one of their other stores, and that there you get two for the price of one. How likely is it that you would go to the other store? Circle your answer below.

Very unlikely Unlikely Likely Very Likely

The second aspect of the study related to evaluating if participants perceive the objective value of the pen differently depending upon the frame. A different set of participants were shown a picture of the same pen, which they were told was being sold at a local bookstore, and then asked what they thought the pen was being sold for. The between-subject factor was the framing of the offer (BOGOF; 2 for 1; or none). The BOGOF offer was framed as follows:



This quality pen is now on sale at a local bookstore, and if you buy one you get one free. How much do you think it is being sold for?

I think it costs NOK_____

Results and discussion

People were slightly more likely to go to the other store when the framing of the offer did not include free ($M = 3.00$, $SD = 0.52$), than when it did ($M = 2.85$, $SD = 0.67$). This difference was not significant, $t(49) = 0.90$, $p = 0.37$ (two-tailed), $d = 0.30$.

People did, however, supply a higher estimated sales price of the pen when the framing did include free, as opposed to when it did not, as shown in Table 2. A t-test between BOGOF and 2 for 1 did not reveal a significant difference, $t(56) = 1.81$, $p = 0.071$, $d = 0.48$, though this was very close. When comparing the estimated sales price for BOGOF, 2 for 1, and no special framing at all, there was also no statistically significant difference between the groups, $F(2, 88) = 2.83$, $p = 0.10$.

The mere presence of the word free in the framing of the deal did not result in more people going to the other store. There is instead a tendency, albeit weak and non-significant, in the opposite direction: people were more likely to go to the other store when free was not included in the offer. We also found hints that framing did affect the estimated sales price, though here the pen that was being offered for free is thought to have the highest value. This difference, again, was not significant.

Table 2: Likelihood to travel and perception of item value based on framing of offer

Framing	Likelihood to travel 1=unlikely, 4=likely	Estimated Sales Price NOK
2 for 1	3.0	85
BOGOF	2.8	121
Control		100

It is possible to imagine that the 2 for 1 deal might make the pens seem less valuable, if the presence of the deal suggests that the pens need to be discounted. Giving them as a free gift may not give the same signal. This would be consistent with previous findings that framing the deal as BOGOF or as a “mixed” promotion such as buy two, get 50% off, appears to differentially affect consumer perceptions of value (Sinha and Smith, 2000). However, why this should be manifest in the perceived value, and not at all in the desirability of the deal is unclear. One might expect a deal that included a more valuable pen to be more appealing. Of course, the small and non-significant size of the various effects suggests that much speculation about the underlying mechanisms is premature.

It is possible that there were no significant effects of the framing manipulation because people may just transform one offer into the other in the way they think of it. That is, when they see the 2 for 1 offer, it could be converted into BOGOF, or vice versa.

Experiment 3

This design was similar to the pen purchase experiment in that it tests whether the framing of two financially identical offers makes one deal more appealing than the other. In this scenario, the question is whether a bundled price of NOK 130 for a magazines and a “free” gift is preferred over a joint offer for the magazines at NOK 75 and the gift for NOK 55. In order to make the two conditions parallel, a suggested retail price of over NOK 200 for each gift was added under the ad so that both getting the gift for free and having to buy it for NOK 55 would seem a good deal.

If free is not special, we would expect people not to show a preference for the deal where a free gift is offered with the magazines, as opposed to when the two are offered as a

joint bundle, given that the offers are economically identical. If free does have a special appeal, they should be more eager to take advantage of the offer when they get a free gift.

Method

Procedure and design. Participants were asked to imagine that they were on a website for a magazine that they liked and bought on occasion. They then stumble upon an ad with an offer for three magazines and a gift. The ad was a picture of a fictional magazine, and two gifts that they could choose from: a Marc Jacobs perfume or a Bialetti espresso maker. The between-subjects factor that was the framing of the offer. In one condition, the offer was framed as a package where they get three magazines and a gift for NOK 130. In the other condition, it was framed as a joint offer, where one could buy the magazines for NOK 75, and the gift for NOK 55. A text was added under the picture, indicating that if one did not subscribe to the magazine, one could still buy the gifts for NOK 55, and the retail value for the perfume and espresso maker was NOK 219 and NOK 235, respectively. The free gift condition read as follows:

Imagine that there is a monthly magazine that you like to read, and that you buy every now and then, for NOK 45 per issue at the newsstand. You go to their webpage for the first time, to check if they have any interesting articles or links online. An introductory offer for new subscribers catches your attention. It looks like this:

YES! I would like **3 issues of Fascinating Magazine + a free gift—Marc Jacobs eau de Perfume or Bialetti Brikka espresso maker—for only NOK 130**



The gifts can be purchased separately for NOK 55 each without the subscription (MSV: Perfume, NOK 219; espresso maker, NOK 235.)

Imagine that one of these products is an item that you have wanted, but have not yet bought, and the offer looks tempting to you. Do you think you would have taken advantage of the offer?

Very Unlikely

Very likely

1

2

3

4

Results and discussion

People indicated a stronger likelihood of buying the magazine and the gift when it was framed as a joint offer rather than as a purchase with a free gift. In the joint offer the mean preference was 2.8 (SD =1.04), as compared to the free condition where it was 2.32 (SD =1.07). This difference, however, was not significant $t(24) = 1.61, p = 0.14, d = 0.65$.

The findings from this experiment do not support the idea that free offers make a deal more appealing. Instead, it hints at the opposite, since there was a rather stronger preference for the joint offer, though this preference was short of being significant. The offer was

modeled very closely on an actual magazine offer, with free gifts, and shows no benefit of such packaging. Of course, people may be more eager to get the magazine with the free gift than without anything at all, for the same price, and so, if the gift costs the magazine publisher little, it may still make economic sense to offer the deal to entice customers.

Experiment 4

The goal of this study was to investigate if free can entice people to take advantage of an offer if that allows them to get something that they want, but would otherwise not spend money on. This was tested by investigating if participants' willingness to spend hours answering a survey was influenced depending upon whether the reward was a luxury item or something more mundane. If a free gift that is luxurious has no special appeal, then, given gift certificates of the same value, people should be equally likely to participate when they can spend money at the liquor store as when they can spend money at a grocery store. However, if a free luxury gift is special, and a way for people to get things they would otherwise not buy, then one would expect more people to participate when the free gift is luxurious.

To ensure that the decision to participate was not simply based on one of the rewards always being more desirable, but because it allowed them to get a gift they would otherwise not spend money on, we added a control condition. Participants were told to imagine that they already had participated in the four-hour survey, and were asked, within-subjects, to select between the luxury and non-luxury rewards.

Method

Design and procedure. Subject were given description of a hypothetical situation in which they are to imagine that they have been asked by a public-opinion research center to participate in a comprehensive study on consumer behavior. The between-subjects factor was the reward for participating in the study. In both cases the reward was a gift card, but in one condition the card could be used at a grocery store, and in the other at a liquor store. The dependent variable was whether or not they chose to participate in the survey. For the luxury condition, the participants read the following:

Imagine that you are called up by a Gallup organization and asked to participate in a comprehensive study on consumer behavior. It is estimated that it will take you four hours to answer all the questions. You will be sent a questionnaire that has to be filled

out and returned within 3 weeks. As a reward you will receive a gift card from a liquor store worth NOK 500. Would you have been willing to participate?

I would have participated _____ I would not have participated _____

For the control condition, participants were to imagine that they had already participated in the experiment, and asked, within-subjects, if they would have chosen the gift card from the liquor store or the grocery store as a reward. The question read as follows:

Imagine that you have participated in a comprehensive study on consumer behavior conducted by a Gallup organization to earn a little extra. It took you four hours to complete all the questions. As a reward you did not receive money, but a gift card with a value of NOK 500, which could be from a grocery store or a liquor store. Which gift card would you have chosen?

Gift card from the liquor store _____ Gift card from the grocery store _____

Results and discussion. Results from the control condition confirmed that there was no preference for either the luxury or non-luxury reward ($n=14$ and $n=15$, respectively), $\chi^2(1, N=29) = 0.02$, $p = 0.90$. The two rewards had equal psychological, as well as monetary value, and thus we can test whether luxury then works as a greater inducement.

People did not show any increased willingness to participate in the study when the reward was luxurious, as shown in Table 3. A chi-square goodness-of-fit test indicated that there was no significant difference between people who were willing to volunteer in the luxury condition as compared with the amount that volunteered in the non-luxury condition, $\chi^2(1, N=58) = 0.28$, $p = 0.59$.

Table 3: Willingness to participate in study depending on reward

Reward	Willing to participate?	
	Yes	No
Luxury	14	15
Non-luxury	16	13

These findings do not support the idea that free has a special appeal because it allows us to acquire gifts that we want, but would not have been willing to spend that much money on. However, it is possible that the alcohol was not a sufficiently luxurious item. Alcohol consumption has gone up rather steeply in Norway, so it may not be that unusual for people to spend NOK 500, especially considering the alcohol prices in Norway (0.70 l of vodka costs just below NOK 300). It is presumably more unusual for students to spend NOK 500 on alcohol than food, though the construct may not have been special enough to result in a different selection pattern. The aim was to have a luxury item that one would be delighted to get a gift, but would hesitate to purchase, and the alcohol may have been too mundane to fit ideally in that category. However, the findings still seem to support a lesser claim, that when the free gift is something special, if not directly luxurious, people are not affected by this in their decision of whether or not to participate.

Experiment 5

This experiment takes a slightly different approach to testing the power “free” has to attract customers. The question here is whether the choice between two possibilities, with one cheaper but also slightly inferior, is systematically influenced when one alternative is not just cheaper, but free. If free has no special appeal, then, giving that the saving of choosing the worse alternative is always the same, people should be equally likely to select it when it is free and when it is similarly cheaper than the other, but not free. That would be the economically rational outcome – with people simply deciding if the cost saving is worth the decrement in quality, and that not varying with the overall price. On the other hand, if free is especially attractive, then people should flock to the cheaper option not when it is simply cheaper, but when it is free.

Method

Design and procedure. Subjects were given a description of a hypothetical situation in which they are to imagine that they are going to the movie theatre, and asked which of two movies they would pick. One of the movies was described as somewhat preferable to the other, having received one more star in a newspaper review. The better film was always more expensive by a fixed amount, NOK 40. The between-subjects factor was the price of the two tickets. In the first condition the better film cost NOK 80 and the inferior one cost NOK 40, whereas in the second condition the better film cost NOK 40 and the inferior film was free. The free hypothetical condition read as follows:

Imagine that a new movie theatre is opening in Oslo. As an opening-night special, some of the tickets are offered at a reduced price. You decide to go, though once you arrive you discover that there are only tickets left for two films. One of the films seems good, costs NOK 40 and got 5 out of 6 stars in a national newspaper review. The other one looks pretty good too, got 4 out of 6 stars in the same paper, and is free. Which film would you have chosen to watch?

The one that cost NOK 40 _____ The one that is free _____

Results and discussion. When both movies cost something, people were about evenly split between wanting to see the better, but more expensive one and the inferior, though cheaper one. However, when the cheaper one, although still representing a saving of NOK 40, was also free, people overwhelmingly selected it, as shown in Table 4. The shift in preference was significant, $\chi^2(1, N=62) = 5.34, p = 0.02$.

Table 4: Number of participants who choose movie based on price

Price in NOK	Movie choice	
	5 star	4 star
80 vs. 40	14	18
40 vs. free	5	25

In this scenario, free did have special powers. From a rational economic perspective, the same amount of people would prefer the cheap condition, regardless for whether it was free or not, but they widely preferred the cheaper option when it was free.

Experiment 6

In this study we wish to garner further evidence examining the notion that the presence of a free alternative changes people's decision patterns. The basic question addressed here is identical to that in the movie choice experiment: whether the choice between two alternatives, with one cheaper but also slightly inferior, is systematically influenced when one alternative is not just cheaper, but free. In the scenario used for this experiment, however, the participants are to imagine that they are selling their home and have to select between two real estate agents. This changes the experiment in some central ways. First, the price difference between the two alternatives is larger. Secondly, the opportunity cost is much greater. A better real estate agent could potentially sell the house for thousands of dollars more. If you pick the wrong movie, on the other hand, you have only wasted a couple of hours and can still choose to see the other one the next day. While the price of seeing a bad movie is easily born, and one is willing to risk it when the movie is free, this might not be case when the cost is higher.

As with movie choice experiment, a rational decision would be one where free does not affect their decision pattern, but if free has a special appeal, then we expect that it would.

Method

Design and procedure. Participants are presented with a description of a hypothetical situation in which they are asked to imagine that they are selling their apartment, and have to

select one out of two real estate agents. Agent-A is a little better than Agent-B, having received an award for best agent in his office. The advertisement package that Agent-B offers is always NOK 7 500 cheaper than the one offered by Agent-A, as the former agent has recently opened a new office location and is offering a special deal. The between-subjects factor was the price of the two advertisement packages. In the first condition, the advertisement package with the better real estate agent cost NOK 15 000 and the inferior one cost NOK 7 500, and in the other condition the prices were NOK 7 500 and free. The non-free hypothetical condition read as follows:

Imagine that you are selling your apartment and have to select a real estate agent. After some searching, your choice stands between Agent-A and Agent-B. They each offer you a package solution that is almost identical: Both want a provision of 2.7% of the selling price, and they both set the value of the apartment at 1.5 million. The advertisement package that comes with it is also similar in terms of where they will advertise, and how many viewers it will reach. However, with Agent-A the advertisement deal costs NOK 15 000, whereas with Agent-B who has just opened up an office at a new location, is offering a special for NOK 7 500. Agent-A was recently voted best real estate agent in his firm, whereas the other agent had performed almost as well. Which agent do you think you would have chosen?

I would choose A-agent _____

I would choose B-Agent _____

Results and discussion. The real estate agent with the cheaper advertisement package, regardless of whether it was free or not, was overwhelmingly preferred, as shown in Table 5. There was no significant shift in preference, $\chi^2(1, N=58) = 0.48, p = 0.48$.

Table 5: Number of participants who choose real estate agent based on price

Price of Advertisement NOK	Real estate agent	
	Better	Inferior
15 K vs. 7.5 K	4	25
7.5 k vs. free	6	23

Given that people were willing to use the inferior real estate agent to save NOK 7 500, this experiment did not provide much opportunity to test the specialness of free. While there was some room for the preference for the cheaper one to be even stronger in the free condition, power to detect such an effect was drastically limited by the overall inclination that way even when it was not free.

The strong preference for the inferior real estate agent regardless of condition suggests that there was not a big enough difference between them. The scenario was designed so that the saving would not quite be worth the decrement in quality. It is possible that the student population was not ideal for such a scenario, as they may have paid more attention simply to one agent being cheaper, without an appreciation for how much money a good agent might be worth.

Experiment 7

In this study, participants, as in the earlier movie experiment, have to choose between two alternatives, where one is cheaper than the other, and in one instance free, though here the choice is between lamps. The less preferred lamp is discounted as a part of a special package when you buy a bedside table. This sets it apart from the movie choice experiment in that the price one pays for selecting a bad movie is short-lived, whereas a bedside lamp one sees every day until one gets rid of it.

As with the movie choice experiment, if people are rational, one would expect preferences for the two lamps to remain unchanged regardless of whether the cheaper white lamp was free or not. If the allure of free is strong, however, they would be more inclined to buy it when it was free.

Method

Design and procedure. Participants were given a description of a hypothetical situation in which they are to imagine that they are shopping for a lamp, and asked which of two they would pick. One of the lamps was described as somewhat preferable to the other, being red rather than white. The more appealing lamp was always more expensive by a fixed amount, NOK 100. The cheaper lamp was sold at a reduced price as a special with a bedside table they were also buying. The between-subjects factor was the price of the two lamps. In the first condition, the preferred lamp cost NOK 200, and the other one cost NOK 100, whereas in the second condition the preferred lamp cost NOK 100 and the other lamp was free. The free hypothetical condition read as follows:

Imagine that you are at the store to get a bedside table. It turns out the furniture store is having a sale to celebrate 5 years since opening. You find a bedside stand that you like, and decide to buy a lamp for it also. You see a red lamp that you like that costs NOK 200, but then you also find a similar lamp that is white and costs NOK 100 when it is purchased with the bedside table. You prefer the red one, but think that the white one also would look good. Which lamp do you think you would have chosen? Mark an X by the answer you choose.

The red lamp _____

The white lamp _____

Results and discussion. Most people chose the lamp they liked the most, and forwent the savings of NOK 100 for the inferior lamp. The degree to which they did this did not depend upon whether the cheaper lamp was merely cheaper, or cheaper and free, as shown in Table 6. A chi-square goodness-of-fit test for showed that there was no significant difference, $\chi^2(1, N=58) = 0.10, p = 0.75$.

Table 6: Number of participants who choose lamp based on price

Lamp prices NOK	Lamp preference	
	Preferred	Acceptable
200 vs. 100	22	7
100 vs. free	23	6

This experiment does not lend any support to the specialness of free. People's behavior was consistent with a rational account, and they mostly chose the lamp that they preferred, paying extra for it, without being effected by freeness.

Experiment 8

In this study we investigate whether the special appeal of free found in the movie choice experiment will remain if that scenario is altered slightly. The question addressed is whether the free movie is appealing only when there are no other costs associated with the choice, and the free choice stands on its own. We use the same approach as before, where participants have to choose between two films, but in this experiment the movie is just a part of the larger cost of having a night on the town. So even when the movie is free, participants still have to take into account the cost of dinner and transportation. If participants only find free appealing in the movie scenario because there is no cost other than the movie, then we would expect the preference for the free movie to disappear in this experiment. Since they are already spending money on a nice dinner, they may as well pay more to get the nice movie too. On the other hand, if free is special even when there are other costs, then the effect would remain.

Method

Procedure and design. Subjects were given description of a hypothetical situation in which they imagine that they are going for a night on the town, and are presented with the cost of transportation, dinner, and a movie. The goal of the list of costs is to make the participants try to create a mental spending account for the night on the town, rather than just the movie. The question is, as with Experiment 5, which of two movies they would pick. One

of the movies was described as somewhat preferable to the other, having received one more star in a newspaper review. The better film was always more expensive by a fixed amount, NOK 40. The between-subjects factor was the price of the two tickets. In the first condition the better film cost NOK 80 and the inferior one cost NOK 40, whereas in the second condition the better film cost NOK 40 and the inferior film was free. The non-free hypothetical condition read as follows:

Imagine that you want to have an evening on the town, taking the subway into the city and going out for dinner and a movie. Transportation will cost NOK 44, and dinner a total of NOK 170. A new movie theatre has just opened, and as an opening-night special, some of the tickets are offered at a reduced price. However, there are only tickets available for two of the films that are shown there. One of the films costs NOK 80 and got a 5 out of 6 stars in VG. The other one looks pretty good too, and got 4 out of 6 stars in the same paper, and costs NOK 40. Which film would you choose to watch? Put a cross next to the option you choose.

5 star film option

4 star film option

Transportation 44 NOK

Transportation 44 NOK

Dinner 170 NOK

Dinner 170 NOK

Movie that costs 80 NOK _____

Movie that costs 40 NOK _____

Results and discussion. When the cost of seeing a movie was an incidental cost of a night on the town, there was a preference towards seeing see the inferior, but cheaper one over the better, though more expensive one, as shown in Table 7. This pattern was not changed when the cheaper film was free, $\chi^2(1, N=50) = 0.21, p = 0.64$.

While people act as if there is basically nothing to lose in choosing the free option if they have not invested anything other than a couple of hours, when you have invested over NOK 200, people are not swayed by the appeal of free.

This supports the notion that people create a mental account for the evening, where they frame the cheap alternative as a savings of NOK 40, out of a total of NOK 254, regardless of whether the cheaper option was free or not. When there are no other costs associated, the frame seems to shift from spending NOK 40 or spending no money at all.

Table 7: Number of participants who choose movie based on prices after first having spent money on dinner and transportation

Prices NOK	Movie choice	
	5 star	4 star
80 vs. 40	11	14
40 vs. free	9	15

Experiment 9

The final study involves a variation of the lamp choice experiment. Here we investigate whether free will become special when people are buying only the lamp, and not also a bedside table. The question addressed is the same as that detailed in the film choice experiment, whether the free item is appealing only when there are no incidental costs associated with it, and free can be considered free in all of senses of the word. Even though the cost of the bedside table was not made explicit in the first lamp choice experiment, people might still have framed the cost of the lamp as marginal, which may have eliminated the appeal of free. If people do not care about free, removing the cost of the bedside table should not affect whether people prefer the cheaper lamp when it is just cheap, or cheap and free. But if free is appealing when there are no other costs, then we would expect the preference for the free lamp to appear when there is not the associated cost of the bedside table.

Method

Procedure and design. Participants were given a description of a hypothetical situation in which they are to imagine that they are out walking, come upon a flea market, and find two lamps they like. They are asked which of two they would pick. One of the lamps was described as somewhat preferable to the other, being cream colored rather than white. The more-liked lamp was always more expensive by a fixed amount, NOK 100. The cheaper lamp is sold at a reduced price because the seller is closing the stand. The between-subjects factor was the price of the two lamps. In the first condition, the preferred lamp cost NOK 200, and the other one cost NOK 100, whereas in the second condition the preferred lamp cost NOK 100 and the other lamp was free. The free hypothetical condition read as follows:

Imagine that you are out taking a stroll in the neighborhood, and happen to come upon a flea market at a local school. You look around a bit, and notice a cream colored lamp that you like that costs NOK 100. But when you continue to look around, you notice a very similar lamp in white that is free because the seller is packing his stuff and about to leave. You have a slight preference for the cream-colored lamp, but think the white one would look really good too. Which lamp do you think you would have chosen? Mark an X next to your answer.

The cream colored one that cost 100 NOK ____ The white one that was free ____

Results and discussion. More people chose the inferior, and cheaper lamp than the preferred, and more expensive lamp, when both of the lamps cost something, as shown in Table 8. Somewhat fewer chose the inferior lamp when it was not just cheaper, but free, though this shift was not significant, $\chi^2(1, N=50) = 0.74, p = 0.39$.

Table 8: Number of participants who choose lamp based on price

Price NOK	Lamp choice	
	Preferred	Acceptable
200 vs. 100	9	16
100 vs. free	12	13

The results do not support the idea that free is special when there are no other costs associated with the purchase. People were just as likely to choose the inferior lamp when it was merely cheap, but not free. This finding was not parallel to what we found in the movie choice experiments, There, free was special when there were no associated costs, and not special when there were associated costs. With the lamp choice, free was never special.

General Discussion

Out of a wide array of settings and scenarios examined, only one experiment suggested that free makes a deal more appealing, when compared to economically equivalent

offers. When deciding whether to get in line to buy gas, whether to walk 15 min for a better deal on a pen, when picking a lamp, and when choosing whether to subscribe to a magazine, free did not have any special appeal. There was if anything a weak tendency in the opposite direction. People were less likely to expend extra effort to buy a pen when the offer included “free” than when it did not, and they were less likely to buy a magazine subscription when that offers included a free gift, as opposed to when the price of the gift was bundled. Free was only special in the movie choice experiment, and only when the scenario did not detail all the other associated costs of the event.

It is worth considering what made free special only in the movie-choice experiment. The lamp choice appears to have been very similar to the movie choice, but in it there was no sign of the free lamp being appealing. One possible explanation is that once one buys a lamp, one is likely not to replace it for a while, even if it has been free. With the movie, there is no issue of being stuck with the inferior one forever. That is, with the movie there is no real opportunity cost – one can simply see the superior movie the next day. With the lamp, although one could discard the free one and replace it, one may recognize that one is unlikely to do so. One fears being stuck with the inferior, less-desired item, and so paying a price for it.

If the permanency of the purchase were the only factor that counted, one might have expected the free gas also to have had an effect, like the free movie. It may be that these results are in line with the benefit congruency framework, which holds that a price reduction in form of a free gift, as opposed to a discount, would be more effective when the item is high on hedonic value (Chandon et al., 2000). The movie was highest on hedonic value, and free was effective there, whereas gas is a utilitarian purchase, and so the monetary discount should be effective, and free should not be special. Of course, as with the example discussed at the start of this paper, it does seem that sometimes people are willing to behave quite irrationally for free gas, utilitarian though such a purchase may be.

How might one expect to see the results of the present findings transfer to the sorts of decisions people make in the world? It would seem that one could expect free to be special in cases where the purchase does not involve much other than pleasure, such as, perhaps, going to an amusement park or buying themselves snacks. This may occur, however, only when people are not paying for a whole group of other things. If there are other costs involved, then it might require that this one be framed as being a separate cost. If the item seems to cost nothing, including having no opportunity costs, such as being saddled with a less-than-ideal item, and it is for fun, then free may disproportionately sway decisions. Choices that are more

serious, or decisions about things that are more mundane, such as when buying supplies that are important for house, may not be ones where we would expect to see any special effect of free.

There are some marketing implications of these findings. They suggests that a company may not gain anything by offering an item worth NOK 200 for free with a purchase, than by reducing the price of the main purchase by NOK 200, with the exception of the cases outlined above. The free deal will not make customers flock to the offer. This study does not, however, say anything about offering a little cheap item with an offer as opposed to not offering anything at all. This free gift may make people more eager to get the magazine, for the same price, and so, if the gift costs the magazine publisher little, it may still make economic sense to offer the deal to entice customers. However, there are reasons one might still want to be careful with giving things away for free. Offering customers the mere possibility to buy a baking pan at a reduced price with a box of brownie mix can actually reduce the likelihood that that brand of brownie mix will be purchased, as opposed to a brand that does not have the joint offer (Simonson, 1994). It is thought that the lack of desire for the baking pan gives customers enough of a reason to eliminate that brand from the selection process, and choose something else instead. Furthermore, if one cares about the perceived value of the gift one is giving away for free, one should be careful in pairing it with a cheap item: People seem to infer the value of what is being given away for free based on the price of the thing it is offered with (Raghubir, 2004.) So when Apple offers an iPod for free with a MacBook, there is a danger that people resolve the incongruence of manufacturers giving away things by devaluing the iPod, since they assume manufacturers would not be taking a financial loss on the deal. There may be exceptions to when customers draw such an inference. People think that the manufacturers would be willing to give things away without a profit, when the free gift is a part of a promotional deal to introduce the free item into the market (see Kirmani and Rao, 2000, for review).

The generalizability of the findings is worth considering. First there is the issue that the subject pool was all fairly young students. This group falls into a relatively low income bracket, and as such one might expect them to be extra sensitive to the appeal of free. Not even this group showed a particular sensitivity to free though, but it is possible that if the subject pool had included an older group that was more consumer savvy, one might see an even greater case against free. Of the students who had reported being swayed by the appeal of free, 45%, in retrospect, thought that their behavior had not been rational, which suggests that they could be learning from their mistakes. If you have joined a book club once because

of the free gift, you would learn what a hassle it turned out to be to cancel all the books you did not want and all the money you spent on the books you forgot to cancel. It seems likely that someone who has learned about the hidden cost of free would be a lot less likely to find free appealing, and one might instead find the opposite effect. Feick and Price (1987) propose the idea of a “market maverick”, who is a super shopper, and whom friends turn to in order to get advice on where to shop for the best prices. Once someone has realized that free offers seem better than they really are, the maverick would be likely to warn their friends to stay away from them. As an example, during the data collection, a woman in her 40s commented on how she would never pick the free option in the experiment, because she was skeptical of anything that was free. Free in fact seemed to act as a signal to discount that offer before even giving it much thought. On the flipside, young people who are less experienced, might be more likely to find free appealing, as they have yet learned about the potential pitfalls.

Future studies on the impact of free items on people’s choices ought to look into what would happen in a setting where people make real choices. In the experiments carried out here, all the choices were hypothetical, with people given scenarios and asked to imagine how they would behave, and what choices they would make, It is possible that one would find a stronger effect with genuine choices. It may be that when people imagine how they behave, they evaluate the choice in a cooler, more rational manner, and so are less susceptible to biases and distortions. With actual choices, their emotions may play a larger role, and it could be harder to resist various temptations. It is trivial for an alcoholic, on a questionnaire, to suggest he will forego a beer, but rather harder when it is in front of him. Similarly, the thought of having something, right away, for free, may sway decisions in a way the scenarios studied did not tap. It would also be interesting to explore other trivial decisions, like going to a theme park, or other things that were of more hedonic value to further investigate when free might have special appeal. If the movie finding is to generalize, it may apply to choices where people view there being no cost to accepting a risky free item. Spending Saturday at a less appealing, but free, theme park may still allow one to go to the better one Sunday, and so be tempting. Further experiments could explore whether people’s willingness to “replace” the free item, by seeing another movie, buying another lamp, and the like, is predictive of their initial attraction to the free thing.

It would be worthwhile to consider whether there are certain sorts of people for whom free is especially effective. The results from Chandon, Wansink, and Laurent (2000) suggest that people with a low need for cognition were more likely to buy more of the product that was supposedly on sale, even though the price was not reduced. It might be, similarly, that

free is especially effective on this sub group. Such a result would be of value to marketers, because it would enable them to better target their audience. Evidence from marketing suggests that perhaps they are already doing this. A book club in Norway now does not just offer the free gift option to new subscribers, but recently came out with a new offer, giving them a NOK 1000 gift card to spend as they pleased. Perhaps they are tapping into the customer who finds the free gift a good indication of a good deal, and customers who find a more direct financial reward more appealing.

Free, in spite of its common use in promotions, and the special regard in which it seems to be held, is not as powerful a force in decision making as one might expect.

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Appendixes

Appendix A

Consent form

BEDØMMINGSOPPGAVER

På den andre siden av dette arket finner du en samling ulike oppgaver om forbrukeradferd. Alle inngår i et masterprosjekt som pågår ved Psykologisk institutt, ved Karina Corbett under ledelse av Karl Halvor Teigen.

Din besvarelse vil være anonym. Vi ønsker likevel at du besvarer spørsmålene om bakgrunn (kjønn, alder og studium) nedenfor.

Bakgrunnsopplysninger:

Kjønn (sett ring rundt): K M Alder: år

Studium/yrke:

Appendix B

Questionnaire Experiment 1 and 2

1. Forestill deg at du er ute og kjører bil, enten din egen eller en du skal låne i et par uker. Du kommer til en bensinstasjon der det har dannet seg en lang kø, og oppdager at de har tilbud på bensin. I stedet for ca. 12 kr per liter som det vanligvis koster, er det gratis. Tanken er ca. 1/3 full. Du anslår at du må vente i ca. 45 min for å få bensin. Ville du ha stilt deg i kø? Sett en sirkel rundt det svaret du velger.

Ja

Nei

2.



Denne pennen selges nå i en lokal bokhandel. Hva tror du salgsprisen er? Fyll in et beløp nedenfor.

Jeg gjetter at den koster _____ kr.

Appendix C

Questionnaire for Experiment 8, 4, and 9

1. Forestill deg at du vil kose deg med en kveld på byen, og tar kollektiv transport inn til byen for å spise middag og se en film. Reisen med kollektiv transport vil koste deg 44 kr, og middagen koster 170 kr. En ny kinosal har akkurat åpnet i Oslo, og som et åpningstilbud er noen av billettprisene satt ned. Det er kun ledige plasser på to av filmene som vises der. Den ene filmen koster 80 [40] kr _____ kr, fikk terningkast 5 i VG, og virker veldig bra. Den andre ser også ut til å være god, fikk terningkast 4 i VG, og koster 40 kr [er gratis]. Hvilken film ville du ha valgt å se? Sett et kryss ved det alternativet du velger.

Filmen med 5 i VG

Transport	44 kr
Middag	170 kr
Film	80 [40] kr _____

Filmen med 4 i VG

Transport	44 kr
Middag	170 kr
Film	40 [Gratis] kr _____

2. Forestill deg at det er et blad som blir utgitt en gang i måneden som du liker å lese, og som du kjøper av og til i butikken for 45 kr. Du går til hjemmesiden deres for første gang, for å sjekke om du finner noen interessante artikler eller lenker. Et introduksjonstilbud vekker oppmerksomheten din. Det ser slik ut:

JA TAKK! Jeg vil ha **3 nummer av Fascinerende Blad + gratis gave—Marc Jacobs eau de Parfum eller Bialetti Brikka mokkakanne—for kun kr 130**



Gavene kan kjøpes separat for kr 55 per stk uten abonnement (Verdi Parfyme, kr 219. Verdi kanne, kr 235.)

En av disse gavene har du allerede tenkt deg at du kunne ha lyst til å kjøpe, du bare har ikke gjort det enda. Tror du at du ville ha benyttet deg av tilbudet?

Veldig usannsynlig 1 2 3 4 Veldig sannsynlig

3. Forestill deg at du er ute og går en tur i nabolaget da du spaserer forbi en skole og oppdager at det er loppemarket der. Du bestemmer deg for å ta en liten titt, og ser en sandfarget lampe som du liker. Denne koster 200 kr. Etter å ha kikket litt videre oppdager du en veldig lignende hvit lampe som koster 100 kr, fordi selgeren skal pakke sammen tingene og stenge boden. Du foretrekker den sandfargede, men tror at den hvite også ville ha passet fint. Hvilken lampe tror du at du ville ha valgt?

Den sandfargede, som koster 200 kr _____ Den hvite, som koster 100 kr _____

Appendix D

Questionnaire for Experiment 6, 7, and 3

1. Forestill deg at du skal selge leiligheten din og må velge en eiendomsmegler. Det står til slutt mellom to meglere fra forskjellige byråer, A-megler og B-megler. De kommer med hvert sitt pakke tilbud som er nærmest identiske: Begge vil ha en provisjon på 2.7 prosent av salgssummen og salgsprisen blir satt til 1.5 millioner. Annonsepakkene som tilbys er veldig like i forhold til hvor de annonserer og hvor bra annonseplassen er. Den eneste forskjellen er at hos A-megler må du betale 15 000 [7500] kr for annonsepakken, mens B-megler nettopp har skiftet lokaler og gir åpningstilbud på 7 500 kr [gratis]. Megleren fra A-megler ble kåret til beste i sitt selskap i fjor, mens den andre megleren gjorde det nesten like bra. Hvilken megler tror du at du ville valgt? Sett et kryss ved det svaret du velger.

A-megler med annonsepakke til 15 000 [7 500] kr _____

B-megler med annonsepakke til 7 500 [som er gratis] kr _____

2. Forestill deg at er på butikken for å skaffe deg ett nattbord. Denne dagen har butikken salg for å feire at det er 5 år siden åpning. Du finner et nattbord som du liker godt, og bestemmer deg for å kjøpe en lampe å ha på den også. Du ser en rød lampe som du liker til 100 [200] kr, men så finner du ut at en tilsvarende i hvit er gratis [koster 100 kr] når du også kjøper det nattbordet du skal ha. Du foretrekker for røde, men tror at den hvite også ville ha passet fint. Hvilken lampe tror du at du ville ha valgt? Sett et kryss ved det svaret du velger.

Den røde lampen _____

Den hvite lampen _____

3. Forestill deg at du blir ringt opp hjemme av Norsk Gallup og spurt om å delta i en omfattende undersøkelse om forbrukervaner. Det blir anslått at det vil ta deg fire timer å svare på all spørsmålene. Du vil bli tilsendt et spørreskjema som må fylles ut og sendes tilbake innen 3 uker. Som belønning vil du motta et gavekort fra en dagligvare forretning [Vinmonopolet] tilsvarende et beløp på 500 kr. Ville du ha sagt deg villig til å delta? Sett et kryss ved det svaret du velger.

Jeg ville ha takket ja _____

Jeg ville ha takket nei _____