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To cite this article: John L. Crompton (2016) Implications of Prospect Theory for the Pricing of Leisure Services, *Leisure Sciences*, 38:4, 315-337, DOI: [10.1080/01490400.2015.1107516](https://doi.org/10.1080/01490400.2015.1107516)

To link to this article: <https://doi.org/10.1080/01490400.2015.1107516>



Published online: 04 May 2016.



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Implications of Prospect Theory for the Pricing of Leisure Services

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ABSTRACT

Prospect theory evolved in psychology 35 years ago. It transitioned into economics, where it became one of the founding pillars of behavioral economics. This article uses prospect theory to inform explanations of the workings of eight heuristics used in pricing decisions: enterprise fund effect, semantic framing of discounts and premiums, promotional price, bundling and unbundling of services, hyperbolic discounting, endowment effect, sunk cost effect, and odd number pricing. Research is reviewed from the marketing, psychology, economics, and leisure literatures; examples are provided across a wide spectrum of leisure settings; and implications for leisure managers are suggested.

ARTICLE HISTORY

Received 26 March 2015

Accepted 22 September 2015



KEYWORDS

heuristics; leisure services;
pricing; prospect theory

Price increases made by leisure agencies often are arbitrary, relying on intuition and “experience.” When science is considered in these decisions, it usually is limited to invoking some variation of the neoclassical economic concepts of utility, supply, and demand. These concepts assume when people evaluate a leisure service price that their thinking is logical and rational; they invariably seek to maximize utility; and they act independently on the basis of full and relevant information. Over the past 25 years, an overwhelming body of empirical research in the psychology, economics, marketing, and political science literatures has demonstrated this traditional characterization is incomplete. As a result of this work, the focus has shifted from acting on assumptions based on how people *ought* to behave to how they *actually* behave. The revised focus is generally known as “behavioral economics.” The word *behavior* emphasizes how real world people act rather than prescribing how they ought to act.

Prospect theory has emerged as one of the pillars of behavioral economics. It incorporates a cognitive processing approach that is used in this article to explain the working of eight pricing heuristics: enterprise fund effect, semantic framing of discounts and premiums, promotional price, bundling and unbundling services, hyperbolic discounting, endowment effect, sunk cost effect, and odd number pricing.

Heuristics are simple cues or “rules of thumb” that facilitate efficient interpretation of information. They offer short-cuts that simplify cognitive decision making so people can better cope with their limited processing capacity. They appear to be universal; that is, they are

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ubiquitous and seem to be shared by a large proportion of people. The mechanics underlying heuristics are essentially automatic. Individuals do not consciously seek to control them because they are usually unaware they are operating, and much of the time they work satisfactorily. However, they are imperfect in that they are prone to error bias that is often systematic and predictable.

The political environment within which managers and elected officials make pricing decisions is often contentious, with users vociferously protesting any proposed price increases. This gave birth to the famous dictum of a “perfect” price that was suggested over 40 years ago:

The perfect price is not one where the payer gets to benefit, or where service levels are determined, or where there are no income redistribution effects. For the local official, the perfect user charge may have these features but of overriding importance to him or her is whether the public will resist paying for the service. (Meltser, 1971, p. 271)

Knowledge of these eight heuristics and their role in decision making suggests strategies that managers and elected officials can embrace to alleviate user resistance to price increases.

This article reviews research from the marketing, psychology, economics, political science, and leisure literatures relating to the formation and roles of each of the eight heuristics; provides examples of their operation across a range of leisure settings; and suggests their implications for leisure managers. The role of prospect theory in informing each of the eight heuristics varies. Hence, complementary or alternate explanations which contribute to the explanations have been incorporated into the discussion.

Prospect theory

Prospect theory, a conceptual foundation that informs explanations of multiple pricing heuristics, was first articulated by Kahneman and Tversky (1979). Heuristics are “rules of thumb” which users adopt in order to cope with their limited processing capacity. They simplify the process of decision making.

The goal of prospect theory was “to document and explain systematic violations of the axioms of rationality in choices” (Kahneman, 2011, p. 271). The theory has three central tenets. First, it recognizes that price is *reference dependent*. Like adaptation-level (Helson, 1964) and assimilation–contrast (Sherif & Hovland, 1961) theories, which provide the conceptual rationale for reference price (Crompton, 2011), prospect theory recognizes perceptions and judgments are relative; evaluations of the acceptability of a new price are made by comparing it to a reference price; and the changes from the reference price, rather than the actual price *per se*, are what matter. However, it extends these theories by recognizing that prices lower than the reference price are perceived to be gains, while those higher are perceived to be losses.

A second tenet of the theory is a *diminishing sensitivity* to changes in price, so the value function is concave for gains and convex for losses (Figure 1). This has two relevant dimensions for leisure managers. First, each additional amount of gain or loss has a smaller impact than the equal amount preceding it. Consequently, gaining \$100 is not 10 times as pleasurable as gaining \$10, and losing \$100 is not 10 times as painful as losing \$10. This is illustrated by the following analogy:

If you add one pound to an empty backpack, it feels like a substantial increase in weight. But adding a pound to a backpack that’s already laden with a laptop and some books does not feel like a big difference. This diminishing sensitivity to the pain of paying means that the first dollar

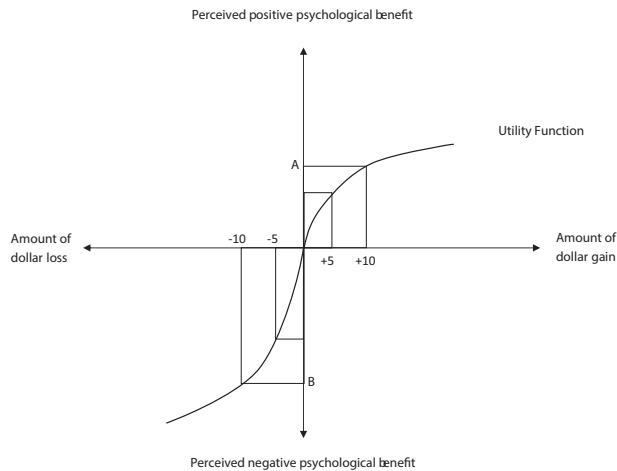


Figure 1. The principles of prospect theory. *Source:* Kahneman & Tversky (1979).

we pay will cause us the highest pain, the second dollar will cause us less, and so on, until we feel just a tiny twinge for, say, the forty-seventh dollar. (Ariely, 2009, p. 249)

The second dimension of diminishing sensitivity is that it is proportionality rather than absolute value, which is key to the acceptance of new prices. That is, the difference between a price increase from \$70 to \$78 is perceived to be much smaller than an increase from \$10 to \$18. It was recognized almost 300 years ago that “the psychological response to a change in wealth is inversely proportional to the initial amount of wealth” (Kahneman, 2011, p. 273). However, on its own this insight was incomplete because it ignored the influences of a reference point and of gains and losses, both of which are integrated into prospect theory.

The third tenet of prospect theory is that people are strongly influenced by *loss aversion*, so the degree of pain associated with losing money through a price increase is much greater than the joy obtained from gaining the same amount of money from a price decrease. There is asymmetry between the power of negative and positive expectations. Thus, an increase in the price of entry to a swimming pool from \$5 to \$8 is likely to meet substantial user resistance, while a decrease from \$5 to \$2 would probably create a much weaker sense of gain. Research during the 35 years since prospect theory was first published has consistently reaffirmed the asymmetric effects of gains and losses, and the robustness of loss aversion. Indeed, it has been claimed: “The concept of loss aversion is certainly the most significant contribution of psychology to behavioral economics” (Kahneman, 2011, p. 300). The following scenario illustrates both the role of reference price and the powers of loss aversion:

Bill and Jill have equal family incomes and both recently moved into the community. They each purchase an annual family membership costing \$500 at the community recreation center. At similar facilities, in his previous community Bill paid \$800 for a membership, while in her town Jill paid \$200. Orthodox utility theory suggests they should be equally happy with the purchase because they got equal benefits from their \$500 investment. However, in reality, their reactions are likely to be very different because their evaluations are based on a different reference price. It is likely that Bill will be happy, whereas Jill will be unhappy.

Prospect theory is graphically illustrated in Figure 1 (Kahneman & Tversky, 1979). The horizontal axis represents the dollar value gain or loss incurred in a given price change, while

the vertical axis represents the perceived value of that gain or loss to an individual. The utility function plots the way losses and gains are perceived. The \$10 loss or gain is of equal magnitude on the horizontal axis. However, in terms of perceived value on the vertical axis, point A is closer to the origin than point B. Thus, the utility function shows that a gain which is of equal magnitude to a loss has a smaller weight in decision making. The graph's salient feature is its S-shape which indicates diminishing sensitivity as both gains and losses mount, but the two curves of the S are not symmetrical. The response to losses is stronger than the response to corresponding gains, reflecting the greater power of loss aversion compared to benefit gains.

Enterprise fund effect

An enterprise fund provides a “closed-loop” mechanism, whereby those paying for a service can see the direct benefits that arise from their payments. This is consistent with prospect theory since fees that are directed to a jurisdiction's general fund are likely to be perceived by users as a total loss because there is no direct nexus between their payments and provision of the service. In contrast, if their resources are directed to an enterprise-type fund, then they are likely to perceive a direct gain from their payments.

In leisure contexts it has been consistently demonstrated that “consumers are more likely to support user fees when such fees are used to maintain and improve the resource at which they are collected” (McCarville & Crompton, 1987, p. 288). For example, a sample of 188 hikers were asked: “Assuming you were asked to pay a daily hiking fee, how much would you be willing to pay if the money was credited to: (a) the federal government's general treasury; (b) the federal agency that collected the fee; and (c) the local park or forest unit where the fee was collected?” The authors reported the average amount these hikers were willing to pay for the three scenarios was four times greater when this revenue was reinvested in improving the facility where fees were collected than when it went to the general treasury (Fedler & Miles, 1988). This early evidence demonstrating the influence of enterprise funds on ameliorating adverse perceptions of price increases has been empirically confirmed in multiple subsequent studies of leisure users (Leuschner, Cook, Roggenbuck, & Oderwald, 1987; McCarville, Reiling, & White, 1996; Ostergren, Solop, & Hagen, 2005; Reiling, McCarville, & White, 1998; Steele, 1989).

The following anecdotes illustrate the support for large price increases that often is forthcoming when they are perceived to be an investment that yields direct benefits to users by facilitating improved resources:

Existing prices were \$109 for the slow pitch fields and \$229 for the Little League fields. The city announced increases to \$2,178 and \$2,853, respectively. The leader of the slow pitch association said: “I have no problem paying the extra money, as long as it goes into servicing those diamonds ... I don't mind paying top price as long as we get the service for it.” The leagues had complained the city had poor field maintenance compared with other municipalities in the area, and the city's parks and recreation director admitted they were not maintained as frequently as those in other municipalities. (Kitchener, 1993)

After it lost general fund support for lifeguards and maintenance of its beaches, a city metered all car parking in the area which previously had been free. They publicized extensively that all the revenue from this source would be used to staff and maintain the beach. There was no opposition to the new fees.¹

¹ The bullet point examples in the paper which are not referenced were provided by participants in workshops conducted by the author in the past three decades. The individuals who offered them were not identified.

Implications for leisure managers

The enterprise fund approach provides an economic incentive for those staffing a facility or program to be diligent about collecting fees. If those revenues go into a general fund or elsewhere, then field staff at a park, for example, may elect not to man entrance stations to collect the fees. This would be a logical decision from their myopic perspective because while the staffing cost would be funded from the park's general fund, the park would not receive any of the revenue. Consider the following case:

Many of the federal National Wildlife Refuges had established special recreation fee accounts which enabled them to retain revenues collected from such activities as wildlife tours conducted by staff, hunting blind rentals, camps along trails, and primitive cabins. When Congress ruled those fees could no longer stay in the refuges and had to be conveyed to the Land and Water Conservation Fund for support of all activities authorized by that fund, two changes occurred. First, in the first year the change was implemented, one-third of those refuges quit collecting fees since they lacked the economic incentive to do so. Second, many of the services were contracted out to local nonprofit "friends of refuge" groups, who were able to retain the funds and reinvest them in the refuges. (Baldacchino, 1984)

Financing "small-scale" facility renovations is a challenge for many leisure agencies. In the case of athletic fields, for example, this may include lighting, irrigation, shade structures, backstops, bleachers, windscreens, goals, bases, and drinking fountains. The effective life span of such items is likely to be much shorter than 20 or 25 years, so it is inappropriate to fund them with long-term bonds since future taxpayers would be paying for assets that no longer existed. At the same time, their cumulative cost is likely to be too great for them to be consistently financed out of regular operational budgets. This has led some agencies to impose a surcharge on all teams using athletic fields to pay for both the replacement of items that have deteriorated as a result of their use, and for any improvements in the existing standard of facilities the participants would like to have.

To establish the appropriate fee, agencies typically prepare a 10-year schedule which projects the annual renovations and improvements required at each athletic field complex. The costs of implementing the 10-year program are calculated with allowances made for likely future cost increases and divided into equal annual amounts. This is a rolling schedule that is updated annually. The surcharge is fixed at a level that is sufficient to pay user groups' pro-rated share of the fields' annual renovations and improvements. The revenues are retained in a separate fund for each athletic field complex, and are used exclusively for renovating or improving that complex.

Representatives from the athletic groups should be involved in both setting the fee and in authorizing disbursements from the fund. If the fee is set too low and there are insufficient funds to pay for the renovations, then the athletic groups have to accept responsibility for the deteriorated facilities since they failed to make adequate provision to retain the desired standard.

A city council levied a 10% surcharge fee for golf on all annual passes and daily green fee charges. This revenue was conveyed to the Golf Surcharge Reserve Fund. The primary use of those surcharge funds was for course renovation and equipment replacement. Similarly, the city's 36 tennis courts needed resurfacing every five years at a cost of approximately \$5,000 per court, giving a total cost of \$180,000. This was done on a rotation basis, so \$36,000 per year was needed to renovate the courts. A renovation surcharge was specified in the published tennis pricing schedules, and each year the courts benefiting from this designated fund were widely publicized so players were aware the surcharge money was being spent as promised.

Frequently, agencies report users are prepared to pay such surcharges when they are assured those funds are exclusively directed to upgrading or maintaining the facility they use.

Semantic framing of discounts and premiums

People's reactions to information are strongly influenced by how it is presented to them. Consider the following examples:

The short-term outcome of a surgery may be framed as: the one month survival rate is 90%, or there is 10% mortality in the first month.

Similarly, cold cuts may be described as: 90% fat free, or 10% fat.

In both examples the outcome is logically the same (Kahneman, 2011). However, in both cases the second frame is much more effective than the first format. The negative connotations of mortality and fat evoke much stronger feelings than the positive connotations of survival rate and fat free. This general principle has been termed the reflection effect (Wu, Zhang, & Gonzales, 2014) and recognizes that preferences tend to reverse when the sign or direction of the outcomes is reversed.

This role of semantic framing is of central importance when differential prices are charged for leisure services.² In some situations agencies charge a premium so as to capture more of the consumers' surplus. The premium terminology is conceptually correct because it distinguishes its Benefit Principle pedigree from the term "discount" which, in the context of differential pricing, stems from the Ability to Pay Principle.³ However, its connotations of "surcharge" and "paying more than others" mean it is inflicting additional costs on those users and, consequently, it is likely they will respond negatively.

Discounts and surcharges "may be economically equivalent, but they are not emotionally equivalent" (Kahneman, 2011, p. 364). Surcharges make people mad; discounts make them happy! This was verified when the framing effects were empirically analyzed in the context of golf. Golfers were presented with differential prices in the forms of a discount and a premium. Using a five point scale, the authors reported, "when the price was presented as a discount, customers viewed it as significantly more acceptable (mean = 2.96) than when it was presented as a premium (mean = 3.92)" (Kimes & Wirtz, 2003, p. 340).

Implications for leisure managers

Consider the following situations:

- A state park agency charges residents \$12 and nonresidents \$15 a night for camping.
- A city charges its residents \$20 to play golf and nonresidents \$25.
- A golf course charges \$40 a round on Saturdays but \$50 for rounds started before 10 am.
- Registration is \$30, but if you register late the fee goes up to \$40.

In all of these cases, the regular price is established and then a surcharge is added for those who pay the premium price. Prospect theory suggests there is likely to be resentment to this

² This strategy of charging different users a different price for the same service, even though there are no proportional differences in the cost of providing the service, is termed price segmentation in the marketing field and price discrimination in economics. However, both of these terms have exclusionary connotations that are contrary to the inclusiveness which is sought in the delivery of public leisure services. Accordingly, in this context the term differential pricing has been adopted (Howard & Crompton, 1980).

³ A central challenge in public sector pricing is to reconcile the Benefit Principle which directs that costs of a service should be borne by those who benefit from it, with the Ability to Pay Principle which directs that no residents should be excluded because they lack the funds to do so.

because paying the premium represents a loss to those users. This resentment is likely to be removed if the premium price is framed as the regular price so it serves as the point of reference, so discounting from it becomes a gain to others. Thus, in the above examples, the price information would be presented differently:

- The state park agency price for camping is \$15. Residents receive a \$3 discount to \$12.
- It is \$25 to play golf. Residents receive a \$5 discount to \$20.
- The Saturday price for golf is \$50. A \$10 discount is given to those who start after 10 am.
- Registration is \$40. A \$10 discount is given to those who register early.

Promotional price

Prospect theory helps explain the effectiveness of promotional prices. Reductions in the price are invariably viewed as a gain to users compared with a regular price because benefits remain the same while the cost of purchase is lowered. Indeed, benefits may even increase because the discount itself may be perceived as a benefit, since brain recordings indicate that buying at low prices is a pleasurable event per se (Wu et al., 2014).

A decision to participate in a program is usually the culmination of a process that may have started long before the actual participation takes place. Users pass through a series of stages from first becoming aware of a service to finally using it on a regular basis. These stages are widely known as the purchase adoption process (Rogers, 1962). The five stages are *awareness*, in which a person becomes aware a particular service exists; *interest*, which is characterized by some effort to find out more detailed information about it; *evaluation/trial*, in which the individual mentally evaluates or actually samples it; the *decision* is a commitment to use the service regularly; and *confirmation* is reassurance that regular use is a wise investment.

Typically, a promotional price is offered for only a short time period because it is intended to incentivize those who are interested to take imminent action and try it. If an agency is willing to price a service at 30% less during a limited time period that ends on, say, Sunday, why wouldn't they sell it at 30% off on Monday? The answer is loss aversion. If people are on the fence about trying the service, they are most likely to go purchase it while it is on sale. Once Monday comes they have lost the opportunity. If the agency does not stop the sale on Monday, they don't have the extra incentive to buy on Sunday. Loss aversion drives the success of promotion prices.

Further, the current price users expect to pay is most strongly informed by the last price to which they were exposed (Mazumdar, Raj, & Sinha, 2005). Hence, there is a danger that a promotional price could become the reference price if it was offered for a long duration or if it was offered frequently (Diamond & Campbell, 1989). Price promotions are effective when they are considered exceptional opportunities. If they are short, temporary, and infrequent, they are likely to stay in short-term memory and not influence reference price, rather than be stored in long-term memory (Smith, 2012). The perception of them as rare, one-off opportunities can be enhanced by linking them with a special event. For example, a major sporting occasion or festival in the city; a national day/week of celebration; or a city's founders day.

When the goal of a promotional price is to attract new users, a zero price promotion may be appropriate and effective. This will guard against a discount lowering the reference price. Some potential users may be unsure of the benefits offered by a service, but after two or three trials may be convinced of them. Their reluctance to pay \$80 for a month's membership, for example, may disappear after they have experienced the service or facility. A zero price promotion has a distinctive emotional dimension because getting something free invariably feels very good:

Zero is a source of irrational excitement. Would you buy something if it were discounted from 50 cents to 20 cents? Maybe. Would you buy it if it were discounted from 50 cents to 2 cents? Maybe. Would you grab it if it were discounted from 50 cents to zero? You bet! (Ariely, 2009, p. 49) ... The difference between two cents and one cent is small. But the difference between one cent and zero is huge. (Ariely, p. 62)

Some may be apprehensive of providing contact or credit card information, which often is a condition that accompanies free trials. However, among those for whom this is not a concern, the possibility of monetary loss is removed, so there appears no reason not to try the service even if people are skeptical of its potential for delivering the benefits they seek.

Implications for leisure managers

A challenging task for leisure managers is to move prospective users from the interest to the evaluation/trial stage of the purchase adoption process. There are likely to be many prospective participants who are aware of, and interested in, an activity, but who have never taken the next step and tried it. Alternatively, they may have formerly participated in an activity but discarded it when other priorities on their time arose, and may be receptive to re-engaging in it. Thus, a primary goal of a promotional price discount is to move people from the interest to the trial stage by offering a reduced price for a short period of time. A promotional price has to be restricted to new users, or those who have not participated in the program for two years, for instance. If this is not done, then many regular participants may take advantage of it resulting in an overall reduction in revenue.

In this case, the regular price is positioned as the reference price criterion against which the magnitude of a discount is measured. For the discount to be effective in inducing trial behavior, it must be perceived as being sufficiently deep that it will generate awareness and stimulate action among people who might not otherwise have considered participating. Research in the marketing field suggests that to be perceived as offering a meaningful gain promotional discounts should be in the 30–50% range (Cram, 2006; Kalyanaram & Little, 1994).

The effectiveness of a promotional price is influenced by how it is semantically framed, as well as by the actual amount of the discount. Consider the following alternatives for presenting the same promotional price:

- Regularly \$20; for one week \$15
- 25% off for one week
- Save \$5 this week
- Special: \$15 for one week.

All four formats have both discount information and limited-time availability information (Howard & Kerin, 2006). However, all else equal, the first of them is likely to be most effective, because it highlights the regular price and uses it as the external reference point (Mayhew & Winer, 1992). This anchor resolves users' uncertainty about the depth of the discount and cues them to the magnitude of savings they will accrue. When this reference point is not provided, then the regular price may be seriously underestimated so users conclude the posted discount is smaller than it actually is.

This was illustrated by respondents at a swimming pool that offered estimates of prices they last paid. Only 19% reported they were reasonably certain the price they cited was accurate. The authors suggested this meant many "may be unsure of the value being enjoyed as a result of any discount program. Consequently, discount programs should make 'regular' price levels clear" (McCarville et al., 1996, p. 62).

Dollar-off and percent-off framing affect users' perceptions differently. Both discount formulas involve arithmetic calculations to determine the final service price, but most users adopt simplifying heuristics to form an overall judgment (Weisstein, Monroe, & Kukar-Kinney, 2013). A price discount for higher priced services is most effective when it is presented in dollar rather than percentage terms, while the effect is reversed for lower priced services (Gendall, Hoek, Pope, & Young, 2006; Krishna, Briesch, Lehmann & Hong, 2002). A \$2 swimming pool discount moving the price from \$4 to \$2 is small, but it is a 50% discount. The 50% figure is likely to attract more attention than a \$2 saving, so in this case the proportionality discount should be promoted. A class discounted from \$30 to \$15 represents a relatively large monetary amount, so the \$15 monetary savings rather than the proportionality should be stressed.

People are more likely to respond to discounts for higher priced services because the amount of money saved, and hence their gain, is relatively high. However, perceptions of "higher priced" will vary across target markets. A discounted swim admission from \$4 to \$2 may be of no interest to higher income groups because of their perception that a \$2 savings is insignificant. In contrast, it may have a galvanizing effect on low income groups who recognize that a family group of four people can save \$8 on the admission price.

Bundling and unbundling services

The prospect theory tenet of diminishing effect as gains and losses grow larger has implications for bundling and unbundling services and prices. Four pricing tactics emanate from this principle: unbundle (segregate) gains, bundle (integrate) losses, bundle (integrate) smaller losses with larger gains, and unbundle (segregate) smaller gains from larger losses (Thaler, 1985).

Unbundling gains occurs when a discount of, for example, 25% (\$40→\$30) is offered as a promotional price for admission to an ice rink and a skating class, but it is presented as two 25% reductions for the entrance fee (\$10→\$7.50) and the class fee (\$30→\$22.50) rather than as a single larger amount. The aggregate amount of the discount is the same. However, when it is disaggregated into multiple parts, the discount is likely to be perceived as superior because the principle of diminishing sensitivity to larger gains suggests the two smaller gains will be perceived as being greater in aggregate than the single large gain.

The concavity of the loss function in Figure 1 suggests users perceive they are less negatively affected if *multiple losses are bundled together* because of diminishing sensitivity to incrementally greater losses. For example, if a facility is rented to a private group for \$800, it is easier to induce the group to purchase additional complementary services for \$100 each (e.g., party coordinator, disc jockey, post-event clean up) at the time of the rental, than to make the same sale separately. The psychological difference between \$800 and \$900 does not seem great. However, should the \$100 item be purchased at a later date, the reference point would be \$0 and the jump to \$100 would likely seem much more daunting.

Some agencies organize vacation trips for their senior groups. If a fixed price for a package deal is adopted which includes meals, lodging, and recreation, then the extra costs of including the meals and recreation would look relatively small compared with the core transportation and accommodation costs. If the unbundled alternative is adopted, each of the small expenditures looks large by itself and is likely to be resented. Further, the piece-rate approach means the group's members will be constantly conscious of paying for items throughout the trip, "watching the meter running" (Liu & Soman, 2008).

Integrating smaller losses with larger gains recognizes those who perceive a cost as simply reducing a large gain that has already been subject to diminishing returns, find it less painful than if they see the cost as a loss that stands alone. Substantial efficiency improvements and cost savings in irrigation and ball-field lighting systems often are possible with investments in technology. Frequently, the challenge for managers in public agencies is to persuade elected officials to invest in the upfront cost for the technology. An alternative approach is to contract with equipment suppliers who will estimate the likely cost savings over a five-year period, for example, and charge a percentage of these savings spread over the time period to pay for the equipment. Paying for the equipment by reducing a large gain, invariably is more palatable than incurring the upfront cost which represents an initial large loss.

Unbundling smaller gains from large losses is illustrated by the role of awards, trophies and other tangible recognitions. The cost of a youth sports program, for example, could be reduced if the cost of providing these recognition elements were removed. However, they are a meaningful, psychologically valued gain for many participants. The awards are not an intrinsically necessary element of participation in an activity. They remain part of the large loss but are presented as a separate unbundled small gain. Many participants derive more pleasure from receiving this small gain as a separate “payment” than the sense of reduced loss they would experience from a concomitant reduction in the program’s cost. This pricing strategy sometimes is called the silver lining principle (Thaler, 1985). Since separate gains are valued more highly than reduced losses, the gains become a silver lining which reduces the pain associated with a larger expenditure.

Hyperbolic discounting

It is standard practice among economists to discount future benefits and costs by some constant interest or discount rate. They assume there is timing consistency, meaning that if it is beneficial or painful to purchase a service now, then it will be equally beneficial or painful to purchase it in the future. For example, if a discount rate of 6% is used, then \$100 today would be worth \$106 in a year and \$112.36 in two years.

This means that if offered \$100 today or \$150 in one year’s time, people should invariably select the \$150. Surprisingly, there is substantial evidence to indicate most people do not do this; rather, they select the \$100 option (Ainslie, 2001). However, if the \$100 and \$150 amounts were offered in five and six years’ time, respectively, then most people would select the \$150 option.

There may be a rational explanation for these apparently contradictory decisions (Dudensing, 2015) The now rather than in one year decision may reflect:

- A distrust concern: Are you going to be here next year?
- A hassle concern: Will it be more difficult for me to get the money next year? Do I have to use extra resources to get it?
- A pocket-change perspective: The amounts are too small to be worth bothering about. I will take the \$100 now and be done with it.
- Immediate need: The money may be needed now for rent or food.

The reversal of their preference decision when the time period is extended to five and six years may be explained: The distrust and hassle concerns apparent in the short term are not differentiable in the longer-term decision; the insignificance of the amount and longer time period make the larger amount the logical decision; and the money is no longer relevant for addressing immediate needs.

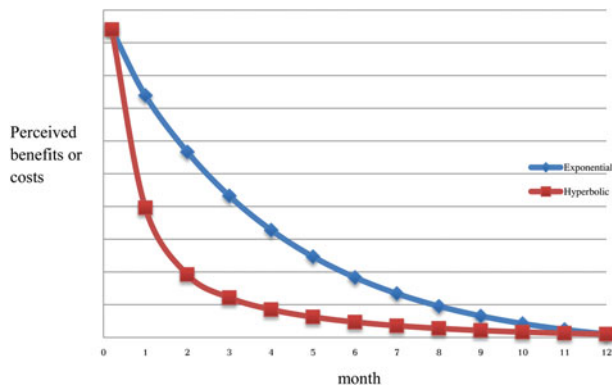


Figure 2. Comparison of exponential and hyperbolic decay curves.

However, there are likely to be many who make these time inconsistent decisions who do not have any of the rational concerns listed above: “There is substantial evidence that both people and lower animals spontaneously value future events in inverse proportion to their expected delays” (Ainslie, 2001, p. 47). The way time is perceived is not rational. As points in time are pushed into the future, they are viewed simply as faraway points on a fuzzy horizon. The most important feature of hyperbolic discounting is that it causes individuals to rank near-term and long-term events very differently. Hence, the further into the future that price payment is deferred, the lower weighting they are given in a purchase decision. In prospect theory terms, delays in benefits are viewed as losses, while delays in costs are viewed as gains.

Figure 2 illustrates the hyperbolic discounting phenomenon. At the time a leisure service is purchased, the perceived benefit (or cost) is very high. The traditional exponential curve shows the rate of decay over a 12-month period to be constant. In contrast, the hyperbolic curve shows the perceived benefit (or cost) decays substantially in the first three months and remains more or less constant after that period.

When people pursue a long-term goal, similar hyperbolic discounting takes place. Assume in Figure 3 that this goal is a desired state of physical fitness. The exponential line shows a consistent rate of progress to accomplish it. The hyperbolic discount curve represents the natural tendency to give less weight to future actions or consequences, means that the focus on the long-term goal is not strong at the outset. Only as the goal becomes imminent does

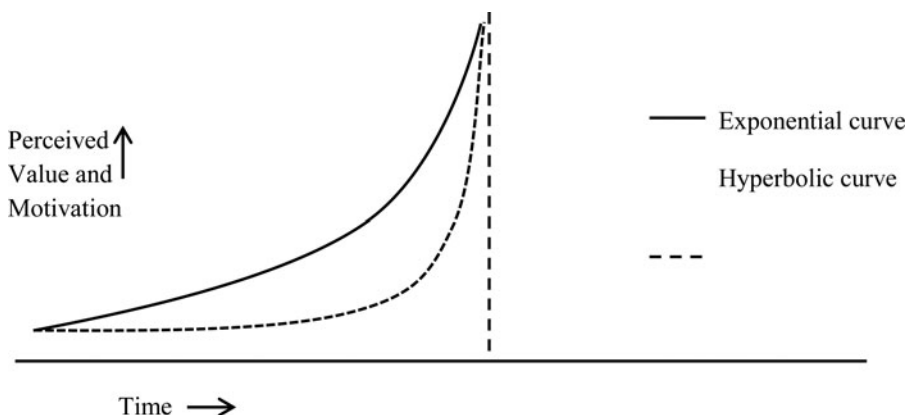


Figure 3. Comparison of exponential and hyperbolic discount curves. *Source:* Ainslie (2001).

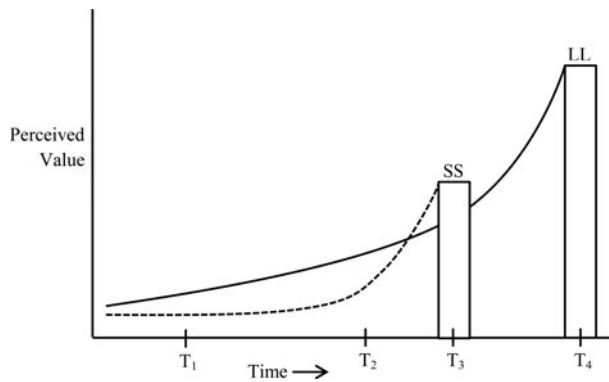


Figure 4. Influence of temporary short-term attractions on long-term goals. *Source:* Ainslie (2001).

the curve accelerate sharply upwards, reflecting a substantial increase in perceived value and motivation.

Figure 4 shows how individuals typically respond when they are exposed to interim temptations before the long-term goal is reached. Imagine there is a smaller-sooner reward from an attraction at time T_3 , and a larger-later benefit from a long-term goal at a time T_4 . At a very distant, early time T_1 , the solid line is preferred (The larger-later reward), because they are both far enough away that the time delay seems insignificant. But as the time gets closer (T_2), the choice flips and the smaller reward is more attractive. Intended regular visits to the gym are skipped in favor of watching television or whatever. This results in a short-term hyperbolic detour, reflecting a willingness to enjoy the immediate benefit and to discount the larger long-term benefit.

Explanations for hyperbolic discounting

The timing inconsistency of hyperbolic discounting is explained by three phenomena: Immediate gratification, procrastination, and delusional optimism.

Immediate gratification recognizes people have an inherent immediacy bias which is manifested by them wanting the gratification of *benefits now* and willingly deferring and discounting costs associated with these benefits to a future time period. This tendency for individuals to attach too much weight to salient or vivid events and too little weight to nonsalient events has been termed, “a central principle of modern cognitive psychology” (Akerlof, 1991, p. 2).

Procrastination is the complement of immediate gratification. Whereas the latter chooses immediate short-term benefits over a long-term goal, procrastination occurs when present costs are given undue saliency in comparison with future costs (Akerlof, 1991). There is a gap between intention and action. People know what they ought to do, but are unable to bring themselves to do it (Ainslie, 2001). Thus, an unpleasant task, such as paying a large price, is deferred even though the delay results in a greater long-term cost being incurred.

Delusional optimism is the systematic tendency to make decisions based on overconfidence or a virtuous conscience, rather than on a rational weighting of gains, losses and probabilities. It has been observed that most people view “the goals we adopt as more achievable than they are likely to be” (Kahneman, 2011, p. 255). For example, at the beginning of each year many people vow to exercise more. With laudable intention they invest in a fitness club membership or program. However, after a few weeks they skip workouts rationalizing

they are too tired, or the workouts are pre-empted by more appealing uses of their time. The time, physical effort, and opportunity costs of exercise are immediate and vivid in the mind, while the benefits are distant, vague, and abstract. Thus, enthusiasm and commitment wane and no progress is made. Once the money is spent, it becomes a sunk cost for the individual and missing sessions becomes easier as the time period increases from when the payment was made.

This scenario explains the general systematic tendency illustrated in Figure 4, for people to switch from “virtues” which are seen as valuable in the long-term towards pleasurable “vices” in the short-term. Delusional optimism explains why some people persist in investing in virtues, when they have a clear track record of selecting vices. The psychology underlying this can be explained by thinking about individuals as containing two semiautonomous selves who coexist, which may be termed a *want* and a *should* self (Bazerman, Tenbrunsel, & Wade-Benzoni, 1998). They are susceptible to conflicting preferences. The *want* self is driven by the desires people affectively feel in the moment when a decision will take effect, whereas the *should* self is guided by more deliberative feelings about what ought to be done to accomplish a person’s long-term goals. Thaler (1981) conceptualized these two selves as a far-sighted “planner” and a myopic “doer”:

The individual can be modeled as an organization with a *planner* and a series of *doers*, one for every time period. Conflict arises because the current doer’s preferences are always myopic relative to the planner’s ... Since the planner’s preferences are consistent over time; it makes sense for him to adopt rules to govern the doer’s behavior. (p. 396)

Implications for leisure managers

The act of parting with money is painful and aversive (Prelec & Lowenstein, 1998). Handing over cash and receiving change makes a user aware of the price (Gourville & Soman, 2002). In contrast, a credit or debit card payment involves just a quick signature or tap of a PIN. Using credit cards has been shown to alleviate the pain of parting with money (Prelec & Simester, 2001) and to facilitate spending (Feinberg, 1986; Monger & Feinberg, 1997). Transactions with a card are not as “real” or as immediately painful as those made with cash. Thus, whenever leisure agencies facilitate the use of credit cards or of automatic monthly payments with a bank draft, there is less likely to be price resistance. The perceived loss is reduced by perceptually distancing and decoupling costs from benefits, and by moving costs into the future and so discounting them, while a service’s benefits can be enjoyed immediately. Thus, the innate human preference for rapid reward and immediate gratification prevails.

Hyperbolic discounting explains the popularity of pledging in capital campaigns. If donations are needed to build a new facility, it is much easier for people to commit to contributing at some future date than to pay for it now. The satisfaction associated with altruism is enjoyed immediately, while the loss incurred by paying the donations is spread over a future time period.

All three explanations of hyperbolic discounting (immediate gratification, procrastination, and delusional optimism) reflect a failure of self-regulation. The internal conflict within individuals between the planner self-concerned with long-term benefit and the want self who is selfishly interested in the present is a test of will—will being defined as “the faculty by which we impose some over-riding value of ours on the array of pressures and temptations that seem extrinsic” (Ainslie, 2001, p. 3). Given the fallibility of will, without a mechanism which serves as an “external voice” to regulate and exercise authority over the want self, the

desired planning outcome cannot be attained (Thaler, 1981). Thus, it is rational for people to impose adaptive controls to regulate their behavior. Recognition of this problem has led to the creation of two mechanisms, based on the prospect theory tenet of loss aversion, that are designed to sustain commitment to a long-term goal and counter the failures of self-regulation.

First, penalty payments may be imposed and be perceived as motivational fees which assist in sustaining focus on the long-term benefit because of the loss aversion phenomenon. For example, the GymPact app, launched to counter decay in sustaining commitment to a fitness régime (Bernard, 2012; Thaler & Sunstein, 2008), rewards people for going to the gym but penalizes them if they do not go. Users of the app decide how many days they want to go to the gym, along with the penalty they will pay if they fail in that commitment. The minimum commitment is one day a week for a least 30 minutes. Users can set the penalty between \$5 and \$50 for each missed visit, with \$5 being the minimum and the default position. GymPact has more than 40,000 gyms in its database and users can easily add others. Every time users arrive at the gym, they hit the check-in button on the app to confirm the location. At the end of each week, the credit card kept on file is charged \$5 for every missed visit (or more, if users raise the stakes above the minimum). For example, if someone committed to four days a week but only went twice, then \$10 would be charged to the credit card. If the commitment is fulfilled, then users are rewarded with cash which is drawn from the penalty payments of those who did not meet their commitments.

An alternative approach recognizes that individuals have a strong tendency to procrastinate and remain at the *status quo* (Samuelson & Zerkhauser, 1988). The *status quo* is encouraged by individuals' aversion to loss, since staying with an existing option is less risky than switching to an alternative service whose benefits are unknown. This reticence can be used to the advantage of both clients and an agency if leisure managers structure enrolment in their services to be governed by an opt-out rather than an opt-in default position. When an opt-out system is used, if people take no affirmative action then they remain in the program. This meets their needs, if it reflects the option that would lead to what they would consider to be their best long-term outcome. Opt-out default rules work not only because of procrastination, but also because they create a different reference point as the anchor for making judgments. The judgment now is whether or not to opt-out of seeking long-term benefits. The loss may loom large. In contrast, opt-in default requires people to seek a benefit, which is a much less powerful motivator (Sunstein, 2013).

Leisure agencies frequently offer classes every quarter. After the class ends, if people want to participate in the following quarter they have to re-register; this is a lost opportunity. Instead of requiring them to re-register, the default position should be opt out so they are enrolled automatically for the next quarter unless they act to the contrary. The combination of delusional optimism, loss aversion, procrastination and status quo bias indicates this default designation is likely to result in increased participation.

The endowment effect

The endowment effect describes the tendency for people to demand much more to give up a service or product than they are willing to pay to acquire it (Thaler, 1980). They ascribe more value to it merely because they own it (i.e., they have paid for it). Prospect theory suggests owners of a good/service regard its potential loss as more significant than nonowners regard its potential acquisition. Thus, for example, the price for which an individual would be

prepared to sell a ticket to a popular sport event or a permit for a hunting opportunity is generally much higher than the price he/she would be willing to pay for it:

The effect was convincingly illustrated in an experiment with hunting permits. The state of Wisconsin allocated early season, day goose hunting permits by drawing names at random from the pool of applicants. Nearly 14,000 such permits were issued and each entitled a hunter to take at most one goose. In an experiment, when the state mailed permits to 237 of those whose names were drawn, the researchers enclosed a check for from \$1 to \$200. The person was asked to return either the permit or the check. The average break-off point was \$63. Those who received over \$63 tended to keep the check, while those who received less tended to keep the permit. The researchers then approached a different group of 353 people who had received permits, and made offers to buy back those permits. The average price for purchasing those permits was \$101. Finally, 300 applicants who did not receive permits were asked how much they would pay to buy a permit. The average price offer was \$21 (Bishop & Heberlein, 1979).

These results illustrate the power of the endowment effect. While those who possessed the permit on average would sell it for \$101, those who did not “own” a permit would pay only \$21 to acquire one. The \$67 cut-off among those who were given possession of both the check and the permit was approximately mid-way between the other two values.

Similar results have been consistently reported. In a review of 59 studies, the authors concluded that selling prices typically were approximately three times higher than buying prices (Horowitz & McConnell, 2002). Among those studies, waterfowl hunters were willing to spend only \$247 to continue hunting, but required \$1,044 to sell their hunting rights (Hammack & Brown, 1974). Among elk hunters the respective values were \$15 and \$69 (Brookshire, Randall, & Stoll, 1980); for deer hunting permits they were \$31 and \$153 (Bishop, Heberlein, McCollum, & Welsh, 1988); and for bison hunting permits they were \$215 and \$12,333 (Boyce & McCollum, 1993).

Implications for leisure managers

Ownership creates inertia and the endowment effect recognizes the reluctance of people to give up assets that have become part of their “endowment.” This provides a rationale for the common marketing practice of many health clubs, fitness centers, and weight loss clinics offering an initial trial membership either free or at a nominal rate. People who are not familiar or confident with a program’s benefits might be tempted to try it since if it is not worth the purchase price they have lost nothing. At the end of the trial period, the hope is that trialists integrate the new service and benefits into their lifestyle routine so it becomes part of their endowment. This means its value to them will increase, making it difficult to reject appeals to continue with the program at regular rates (Monroe, 2003).

The endowment effect also explains why service users are more likely to show up and be more aggressive in protesting price increases, or proposals to reduce or terminate a service. Non-users would likely gain, because such actions would reduce a service’s tax subsidy. However, prospect theory suggests those who stand to lose and feel a sense of ownership will fight harder than those who stand to gain.

Sunk cost effect

Sunk cost is the term used to describe irrecoverable costs. They are expenditures that cannot be reclaimed once they have been incurred. Traditionally, economists have argued that to allow historical costs to influence future decisions is not rational. Individuals may regret an

investment, but that money has gone. They should get over it and move forward and not allow attempts to justify it to influence future decisions. A rational decision maker is interested only in the future consequences of current investments.

The prospect theory tenet of loss aversion, however, induces sunk cost pressure and renders the traditional economic perspective incomplete. People often feel obligated to use a service despite not really wanting to do so, because they have misgivings about “wasting” their investment. There is an “irrational perseverance”, whereby people “give up rationality rather than give up the enterprise” (Kahneman, 2011, p. 267). Consider the following scenario:

A man pays a \$300 yearly membership fee to join a tennis club. After one week of playing he develops tennis elbow. He continues to play (in pain) saying, “I don’t want to waste the \$300.” (Thaler, 1980, p. 47)

He wants to feel that he is getting “value for money.” A sunk cost investment creates a level of emotional commitment to a course of action beyond that of others who have less “skin in the game.” People are reluctant to walk away from an investment and accept it was unwise, since doing so would mean admitting failure. Sunk cost effect is defined as a “greater tendency to continue an endeavor once an investment in money, time or effort has been made” (Arkes & Blumer, 1985, p. 125). Hence, while orthodox economic theory directs that use will decline when prices are increased, the sunk cost effect suggests that if the expenditure is large enough then it could result in sustained participation (Thaler, 1991).

The sunk cost influence may extend to ancillary or complementary expenditures. Someone who has invested heavily in, for example, ski or golf equipment may not be as sensitive to changes in prices for lift tickets or green fees because of these associated capital expenditures.

The emotional influence exerted by sunk costs is likely to depreciate over time as the sense of loss aversion decays (Gourville & Soman, 1998). That is, as the length of time since a payment was made increases, the sense of obligation to use a service decreases. When payment is made at the time of use, then sunk cost pressure is high and people are likely to feel more compelled to use a service to avoid feeling they have wasted their money. In contrast, if an annual pass is purchased, it is likely there will be a decline in sunk cost pressure to use a service as the year progresses.

As the pain of paying fades from memory the decay effect is reinforced by adaptation, as the cost no longer forms part of an individual’s financial *status quo*. The new *status quo* becomes the reference standard against which the decision to use a service is made. This has been termed “payment depreciation” (Gourville & Soman, 1998). There is a gradual discounting of the initial price over time until ultimately the service takes on the characteristics of a free good. At that point, the reference standard is not the original monetary price paid. Rather, an individual evaluates only if the benefits accruing from the service outweigh the costs of immediate constraints associated with the activity, such as time availability, travel costs, amount of effort, and adverse weather. The discounting or discarding of the initial monetary price increases the probability that the service will not be used. If people cease to use a service over time, then they are likely to balk when requested to renew their payment in the future.

Implications for leisure managers

This phenomenon was illustrated in a study of payment plans at a health club (Gourville & Soman, 1998, 2002). The results are shown in Figure 5. All members paid the same annualized membership fee, but they could select one of four payment plans: (1) pay the whole fee once a

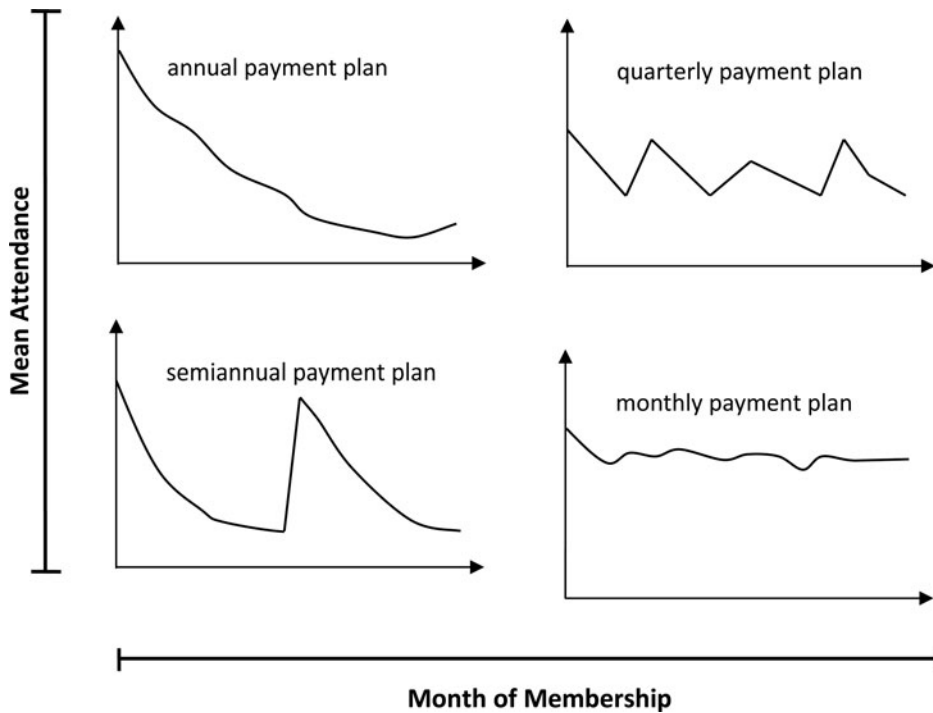


Figure 5. Patterns of use at a health club linked to the timing of payments. *Source:* Gourville & Soman(2002).

year, (2) pay half the fee every six months, (3) pay a quarter of the fee every three months, or (4) pay one-twelfth of the fee every month. The usage rate of the club's facilities among those selecting option (d) was approximately constant every month. These users felt sunk cost pressure to work out regularly each month to justify their investment. Those selecting the other three options felt this pressure immediately after their payment, but their drive dissipated as the pain of the cost faded into the past:

Members who made a single annual payment used the club most frequently in the months immediately following payment, reflecting a strong nexus between service use and time of payment. But as time passed, the effect dissipated. By the final months, individuals seemed to be treating their memberships as if they were free and worked out at a rate that was only a quarter of what it had been in the first few months. The same pattern held for members who had paid on a semiannual or quarterly basis: Attendance was highest immediately following payment, only to decline steadily until the next payment. This resulted in a saw-tooth pattern of usage, spiking in the first and seventh months for semiannual payment members and every three months for quarterly members. (Gourville & Soman, 2002, p. 94)

In endowment effect terminology, the monthly payers who participated regularly would have to give up an element of their lifestyle which had become part of their endowment, so it became difficult for them to terminate participating in the program.

When services are bundled, the emotional attachment to sunk costs typically is weaker. Since bundling results in a decoupling of transaction costs and benefits associated with each event, the costs associated with each event are unclear and so become less salient to the participation decision. For example, in both sports and arts events a common strategy is to bundle individual performances together and sell them as packages. An analysis of ticket purchase and attendance data at a Shakespearean summer festival comprised of four plays revealed the decreased attention to sunk costs brought about by price bundling:

Some ticket holders had purchased tickets to a single play, some to two or three of the plays, and others to all four plays. What we found was that the no-show rate for people who had bought tickets to a single play was 0.696%, indicating that almost all ticket holders showed up. But the no-show rate for those purchasing tickets to two plays was 3.596%; for three plays, 13.196%, and for four plays, 21.5%. As the bundling of tickets increased from one to four plays, the likelihood of a person not showing up for one of the plays rose 35-fold. (Gourville & Soman, 2002, p. 94)

From an orthodox economic perspective the format of the payment should not matter, since all who purchased the tickets are assumed to consider the sunk cost of their investment equally when making an attendance decision. However, the bundling creates an ambiguity in determining which costs are paying for what benefits. In this case, those who purchased single tickets explicitly recognized that the performance cost them \$40, for instance, and their decision to attend would be influenced by the sunk cost pressure. In contrast, among those who purchased the four-play bundle option were some who would ask themselves whether they had derived enough benefit from the first three plays to offset this cost. If yes, then they would be more willing to forego the fourth play.

These findings indicate the “no-show” effect induced by bundling can be reduced by the physical form in which admission to individual performances is facilitated. Season tickets in the form of a booklet with separate tickets for each performance or day suggest a single transaction nexus between cost and that event and, hence, induce sunk cost pressure to attend. If admission is gained by showing a single season ticket or card, it removes the coupling between cost and benefits and reduces the likelihood of attendance.

Odd number pricing

In the commercial market place, prices of products and services ending with the number 9 are omnipresent. For example, surveys reported that between 30% and 65% of all retail prices ended in the digit 9; and a series of eight studies published over a 17-year period reported that prices ending in the 9 digit increased sales by an average of 24% (Schindler & Kirby, 1997).

It is believed this practice creates an illusion of substantially lower prices and, consistent with prospect theory, offers a meaningful gain. Several explanations have been offered to explain this phenomenon, but the most convincing is termed “truncation.” Truncation involves people cutting off reading a price’s digits before all of them have been recognized and encoded (Stiving & Winer, 1997). This derives from research demonstrating that, despite years of school training to process numbers from right to left while adding and subtracting, people process prices from left to right. To illustrate: In the following examples, which program’s price increase appears to be highest: A: \$79 → \$93 or B: \$75 → \$89? And which discount is perceived to be largest: A: \$6.00 → \$4.95 or B: \$6.05 → \$5.00? In both cases, most people are likely to select program A. It is suggested this occurs because of a tendency to reach a decision by only comparing the left-side digits, so the differences between 7 and 9, and 6 and 4 are perceived to be greater than those between 7 and 8, and 6 and 5, respectively (Stiving & Winer).

The magnitude of the numbers is encoded very rapidly and a conclusion reached before all the digits are read. Thus, the price perception is anchored by the left-most digit(s). Since the left-most digits are the most important and people have a limited capacity to absorb information, this is a heuristic that enables them to simplify the complexity emanating from the bombardment of information to which they are subjected. Prospective purchasers are said to be “cognitive misers” so they ignore the right-hand digits, because they are “trading off the

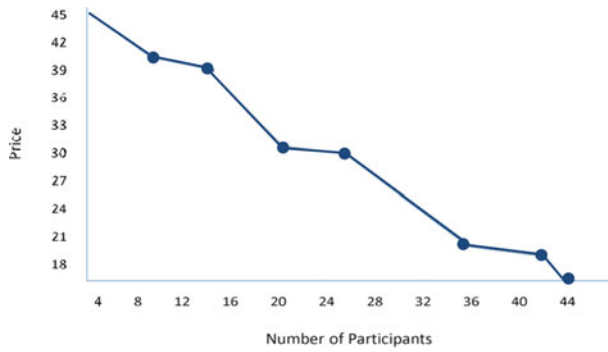


Figure 6. Influence of odd pricing on demand.

low likelihood of making a mistake against the cost of mentally processing the digit” (Stiving & Winer, 1997, p. 65).

Odd-ending pricing has most impact on price perceptions when the difference in the right-most digit alters the left-most digit. That is, \$19.99 (vs \$20) is more effective than \$17.99 (vs \$18), because the left-most digit changes from 2 to 1 (Thomas & Morwitz, 2009). Further, it is likely to be more effective at higher price levels, because the perceived dollar gain is much greater. Thus, the gain from a \$39.99 price if only the first digit is processed would be \$10 compared with a \$1 gain for a \$3.99 price.

A conceptual illustration of the influence of odd pricing on demand is shown in Figure 6. Consistent with classic economic theory, the figure shows that as price decreases from \$45 to \$18 the number of individuals enrolled in the program can be expected to increase. However, at the 9-digit prices of \$39, \$29, and \$19, disproportionately more people enroll than at the rounded prices immediately above them. Thus, 10 people enroll at \$40, but this increases to 15 at \$39. Similarly, Figure 6 shows enrollment of 20 people at \$30, but this number increases to 26 when the odd price of \$29 is used.

Implications for leisure managers

There would appear to be obvious advantages for leisure managers to adopt odd pricing. If a price of \$29.99 is rounded down to \$29.00 if the last two digits are omitted, or to \$20.00 if only the first digit is processed. If this strategy was used for pricing recreation classes, for example, then the agency would lower a user’s perceived price by almost either \$1 or \$10 for the cost of one penny. By the same token, offering a discount of \$10 will be more effective than a discount of \$9.99, since it is likely to be perceived as being a much larger number.

However, despite the widespread adoption of odd number pricing in the private sector, relatively few leisure agencies price their recreation classes at \$29, \$39, or \$49; their swim pool admission at \$5.99; or their annual passes at \$199. Two reasons may explain this lack of adoption. First, there may be a lack of awareness of the strategy’s framing potential for reducing perceptions of the magnitude of a price. Second, the absence of a tradition of odd number may cause managers to be reluctant to implement it, because of a concern it will be controversial. Since the underlying intent of odd number pricing is to create an illusion, its adoption may be viewed as manipulative, deceitful, slick, and exploitive; inconsistent with the criterion of fairness and the ethical standards expected of public agencies; and incongruent with a community’s social norms and value system.

There is empirical support for this perspective since it has been reported that the perceived quality and classiness of restaurants (Naipaul & Parsa, 2001) and of retailers (Schindler & Kibarian, 2001) is enhanced by the use of 0 rather than 9-ending prices. The implication is that prices ending in a 9 signify to users that they should buy because it is a good price; while those ending in 0 suggest they should purchase for quality reasons. This suggests, services aimed at users who are price sensitive may incorporate the 9, while those directed at higher end users should use round numbers.

Managers who have these reservations may argue against using this strategy when first pricing a recreational opportunity. However, there may be price revision decisions in which they consider odd number pricing to be appropriate.

- Consider a recreation class for which costs increase by \$3 each year. Last year this meant the price went from \$24 to \$27. It should be raised to \$30 this year. To reduce price resistance and potential decreases in enrollment, there may be merit in raising it only to \$29. Next year, the lost revenue could be recovered by setting a price of \$33, because odd pricing suggests there will be no more resistance to \$33 than there would be to \$32 or \$30. If there was a need in two years' time to generate more revenue, then the usual \$3 increase could be raised to (say) \$5 to move the price from \$33 to \$38. Given the first digit remains the same, it is likely there would be relatively little user resistance.

Concluding comments

Pricing is one of the most technically difficult and politically sensitive areas in which leisure managers and elected officials have to make decisions. Many elected officials are under relentless pressure from their constituents to lower taxes, or at least not to raise them. Consequently, they frequently position themselves as "fiscal conservatives" and proclaim their intent to keep taxes low. A primary strategy enabling them to meet that commitment without reducing the quality of services is to ensure users pay for them, rather than taxpayers. Hence, break-even pricing has emerged as a core principle of fiscal conservatism. However, elected officials can identify the losers from price increases and, while they want the additional resources in order to retain service quality, they fear the wrath of those who are adversely affected.

During the past 30 years, a substantial number of researchers with an interest in pricing in the fields of behavioral economics, welfare economics, psychology, marketing and political science have offered theoretical insights, provided useful observations, and reported experimental results suggesting how prices can be raised without offending users.

This impressive body of knowledge provides a strong scientific base for guiding price increases which will be accepted by those who are directly affected by them. Unfortunately, for the most part, it remains untapped. As a result, many good managers and elected officials make poor pricing decisions.

This article has synthesized the literature relating to pricing heuristics that are informed by prospect theory and related it to the leisure field. While these heuristics facilitate efficient interpretation of information, they are essentially automatic processes and are prone to error biases. The discussion has demonstrated how both the heuristics and their biases can be exploited by managers to minimize the controversy and resistance that often accompany price increases.

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