

## The Psychology of Windfall Gains

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We hypothesized that windfall gains are spent more readily than other types of assets. Three questionnaire studies supported this hypothesis and led us to the conclusion that the unanticipated nature of windfall gains is responsible for their heightened proclivity to be spent. We then tested this hypothesis in two studies using actual money. In both studies using money, one group of students was told 1 to 5 days before an experiment that they would be paid for their participation, whereas another group was told about the money only after they arrived at the experiment. In the first of the cash studies, those who were given no forewarning of the money bet significantly more during a gambling game than did those who anticipated the payment. In the second cash study, those who did not anticipate the money spent more money at a basketball game than did those who anticipated the money. We relate the results of these studies to economic theories and to theories of choice. © 1994 Academic Press, Inc.

A few years ago a large publishing company scheduled its annual meeting at a hotel in the Bahamas. A university had recently chosen to use one of the company's texts for one of its large courses, but this big sale could not be attributed to any one salesperson. Therefore the company decided to split the commission among the entire marketing staff. Thus all the

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salespersons were given \$50 upon their arrival at the hotel. Needless to say, they were all pleasantly and completely surprised.

Near the hotel was a gambling casino. Nancy, one of the salespersons, spent her entire \$50 there, as did nearly everyone else. She later said how disappointed she was with her own behavior: "If I hadn't been given the \$50, there's no way I would have spent a dime at the casino. There are plenty of things I could have used the money for. Why did I waste it?"

We propose that windfall gains are spent more readily than other types of assets. Although traditional economic theory generally does not consider the windfall status of assets in explaining the spending behavior of individuals, we suggest that this factor can exert a substantial influence. If our hypothesis is true, it would result in a fundamental complication of traditional economic analyses.

We believe that the hypothesized differential propensity to spend windfall and nonwindfall funds is pertinent to many common situations. For example, how many times have we been surprised to find a desired item on sale and then treated ourselves to some extravagance with the money we just "saved"? The savings represent a windfall gain. Its subsequent expenditure on the unplanned item is a manifestation of the heightened "spendability" which we believe characterizes windfall gains.

This paper is divided into three parts. First, we place windfall gains within the context of several economic theories, including those that have influenced psychologists' study of judgment and choice. Second we present three questionnaire studies and two studies using real money. These five experiments chronicle our attempt to discover exactly what defines a windfall gain. They also support our hypothesis that such gains are more "spendable" than nonwindfall gains. Third, we conclude with a discussion of possible applications of our findings and suggestions for future research.

## RELATION TO ECONOMIC THEORIES

### Malleable Yardstick of Utility

Expected utility theory, subjective expected utility theory, prospect theory (Kahneman & Tversky, 1979), and other theories of choice are generally illustrated with a graph containing an abscissa signifying an objective measure of gain or loss and an ordinate signifying a subjective measure such as utility or psychological value. Such analyses assume that the abscissa is the objective benchmark against which the psychological value can be assessed.

Suppose that a consumer contemplates whether \$10 of his or her salary should be exchanged for some consumer good. Based on the person's willingness to make this purchase, we might arrive at a conclusion about

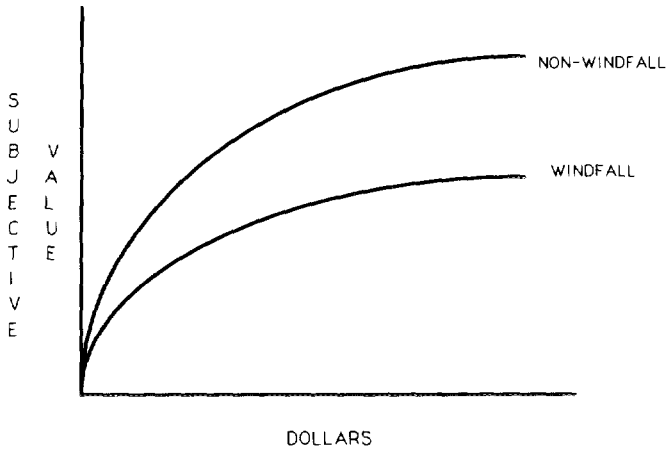


FIG. 1. Hypothesized relation between dollars and subjective value as a function of the windfall status of the dollars.

the subjective worth of the product and the dollars. For example, if the person opts not to make the purchase, we might conclude that the \$10 is believed to be more valuable than the consumer good.

Now suppose that the consumer contemplates whether he or she should exchange recently obtained *windfall* dollars for the same consumer good. If we are correct that windfall dollars are more readily spent, then this person might make the purchase. Based on this transaction, we would arrive at an entirely different conclusion about the relative worth of the product and the dollars than we would in the previous example. In short, there would be two different curves relating objective number of dollars and subjective value depending on whether the dollars had been part of a windfall. The subjective value of windfall dollars would be less than the subjective value of nonwindfall dollars, as depicted in Fig. 1. Predictions about a person's choice behavior would therefore depend on the source of the funds. This violates the fundamental economic assumption of fungibility—the proposition that the source of money should make no difference in its consumption (von Neumann & Morgenstern, 1947, p. 8).<sup>1</sup>

#### Other Analyses Which Have Relaxed the Fungibility Assumption

Keynes (1936, p. 115) defines the marginal propensity to consume (MPC) as the change in consumption divided by the change in income. If

<sup>1</sup> Several economists agree that fungibility is a fundamental feature of normative economic theory (P. Courant, personal communication, October 14, 1992; M. Kimball, personal communication, October 12, 1992; R. Thaler, personal communication, August 24, 1992; H. Varian, personal communication, August 28, 1992).

our hypothesis is correct, the MPC of windfall gains would be higher than that of nonwindfall gains. However, our analysis is not the first to suggest that the MPC of income depends upon the source of that income.

### *Mental Accounts*

Shefrin and Thaler (1988) and Thaler (1990) have suggested that households have separate mental accounts: a future income account, an asset account, and a current income account.

Income from an individual retirement account (IRA) is an example of future account. Thaler proposes that the MPC from future accounts is close to zero. This implies that additional funds placed in the future account will result in little or no change in consumption.

A savings account is an example of an asset account. Its MPC is between zero and unity. This implies that additional funds placed in the asset account will result in some consumption but not more than the amount placed in the account.

The current income account is most relevant for our purposes. Its MPC is close to unity. This implies that additional funds placed in the current income account will be spent. A monthly salary would go into the current income account. According to Thaler (1990), windfall gains would go in there, too. Therefore Thaler suggests that windfall gains are more spendable than funds in future or asset accounts, although not necessarily more spendable than other types of funds in the current income account.

The household account framework helps to explain the results of several economic analyses (see Shefrin & Thaler, 1988). However, this framework does not address three issues we wish to treat in this paper. First, what defines a windfall gain? That is, what specific characteristic makes a gain seem like a windfall? Not having earned the money? Not having anticipated the money? Second, is it the case that windfall gains are spent even more readily than other types of current income? Third, we want to consider the spending behavior of people when they are facing everyday consumer decisions with relatively small amounts of windfall money. For the purposes of the research to be reported in this paper, we will not be considering sums previously investigated when windfalls have been discussed in economic analyses, such as war reparations (Landsberger, 1966) or insurance payments to war veterans (Bodkin, 1959). For the amounts typically used in simple, daily purchases, can we detect differences in the MPC of money as a function of its windfall status?

## QUESTIONNAIRE STUDIES

### Experiment 1

Our first goal was to ascertain if windfall gains were indeed more spendable than other assets. In order to do this, we needed to determine what

defines a gain as a windfall. The *Random House Dictionary* (Stein, 1980, p. 1017) includes in its definition of "windfall" the following: "Something blown down by the wind, as fruit." The fruit obtained in this way is not at all like "the fruit of one's labor." The latter is earned, whereas the fruit blown down by the wind is not earned. So we initially hypothesized that the key feature of windfall gains is that such gains are unearned. Our conjecture was that unearned money is not perceived to be as valuable as earned money and is therefore more readily spent. To test this hypothesis we devised two questionnaires. One questionnaire contained a scenario in which money was unearned; the other contained a scenario in which money was earned.

### *Procedure*

For this and all subsequent questionnaire studies, subjects were tested in large groups. Subjects were undergraduates who received course credit for their participation. The number of persons answering each questionnaire is indicated at the end of the questionnaire. Each person responded to only one questionnaire to which he or she was randomly assigned.

#### *Questionnaire 1A.*

You work at Kroger's and make \$200 per week. Last weekend you received a phone call from the local radio station—WXTQ "Rock 105." The disk jockey said that you had just won \$105 on their "Dialing for Dollars" sweepstakes. They randomly chose your phone number from the phone book and called you! On Monday you went down to the radio station and collected your \$105.

You've been shopping for a portable TV for a couple of weeks. Yesterday you saw an ad for a very small color TV for around a hundred dollars. Should you buy the TV now or should you put the \$105 in the bank and save it? ( $N = 45$ )

#### *Questionnaire 1B.*

You work at Kroger's and make \$200 per week. However, for each of the last two weekends you worked overtime and have earned an additional \$105.

You've been shopping for a portable TV for a couple of weeks. Yesterday you saw an ad for a very small color TV for around a hundred dollars. Should you buy the TV now or should you put the \$105 in the bank and save it? ( $N = 48$ )

Respondents were asked to circle a number on a seven-point scale which appropriately expressed their opinion. The scale was anchored at 1 ("Definitely buy now") and 7 ("Definitely save the \$").

### *Results*

Those who won the money in a radio contest were more likely to spend the money ( $M = 3.11$ ) than those who earned it by working overtime ( $M = 4.25$ ). This difference was statistically significant,  $t(91) = 2.97$ ,  $p < .01$ .

### *Discussion*

The result of Experiment 1 demonstrates that windfall gains are spent more readily than earned money. However, a possible alternative explanation of this result is that respondents to Questionnaire 1B may have thought that the person described in the scenario might be in a difficult financial situation. Perhaps they felt that any person who has to work weekends should not spend his or her earnings on a portable TV. In contrast, those answering Questionnaire 1A might not have surmised that the person in the scenario was in an unfavorable financial situation. Such respondents would have deemed a TV purchase to be more acceptable.

We do not favor this "financial stress" explanation of our results. A person who works overtime may be in a *better* financial situation than one who wins a sweepstakes, since only the former person may have an opportunity to earn more. Nevertheless we conducted a second experiment to help rule out the "financial stress" explanation. In Experiment 2 this factor was not an issue. If we still found greater spendability of windfall gains, we would obtain convergent evidence to support to our hypothesis that windfall gains are spent more readily than nonwindfall gains.

### Experiment 2

Congressional consideration of a tax cut to help stimulate the economy stimulated the design of Experiment 2.

Suppose I have placed some of my own salary in the bank. These funds were earned. Furthermore, I can withdraw them from the bank whenever I want.

Contrast this with the situation in which a portion of my salary is in the hands of the federal government by dint of a withholding tax. I then receive notice that they are going to rebate some of it to me in the form of a tax cut. It is true that I initially had earned the money that I relinquished. However, I have done absolutely nothing to earn the government's largess. Hence we thought that subjects would consider the tax rebate to be less earned than the money withdrawn from the bank. We therefore hypothesized that it would be spent more readily.

#### *Questionnaire 2A.*

Suppose that your annual salary is \$20,000 per year. Some friends have asked you to invest \$1000 in the construction of an indoor tennis club. You've checked into the financial records of such clubs in other cities, and it looks like about half of such clubs prove to be good investments. People who invest \$1000 in such clubs earn about 20% interest on their money every year if the club is a success. If the club is not a success, you can figure on rescuing only \$250 of your original investment. *While you do not have any savings, the government has just announced that they will be giving an immediate rebate of \$1000 to every taxpayer in order to*

*stimulate the economy. You could use your upcoming rebate check for this tennis court investment. Should you do it? (N = 45)*

Yes 34

No 11

*Questionnaire 2B. The italicized portion of Questionnaire 2A was replaced by You have about \$1000 in savings, which you could use for this tennis court investment. (N = 47)*

Yes 25

No 22

None of the actual questionnaires in this or other experiments contained any *italicized* words.

### Results

A  $\chi^2$  analysis comparing the two questionnaires was significant,  $\chi^2(1, N = 92) = 5.00, p < .025$ . The tax rebate group was more likely to make the investment, whereas the savings group exhibited no marked preference between investing and not investing.

### Experiment 3

In Experiment 3 we varied the earnedness of money by manipulating the strenuousness with which subjects had to work in order to earn their salary. Subjects in a pilot group indicated what tedious summer job would foster the belief that they had really earned their salary and what easy summer job would lead to the opposite conclusion. We then asked other groups of subjects to pretend that they were employed in one of the two jobs, and we asked about their proclivity to spend their salary. If earned money is less likely to be spent than unearned money, those who worked hard for their salary would be less likely to spend it than those who had an easier job.

### Pilot Study

*Procedure.* Twenty-four undergraduates were given the following questionnaire:

Consider these four summer jobs:

1. Waiter/waitress at a restaurant.
2. Lifeguard at the beach.
3. Pouring hot tar working on a road construction crew.
4. Salesperson at a shoe store.

Assume that the four people who did these things for a summer job were paid the exact same amount. We're interested in how much a person who did these things for a summer job would have really earned their salary. Use the following scale. Please place a number after each job which reflects how difficult you think each job would be.

Subjects rated each job on a 0 to 10 scale, 0 being labeled "This job is extremely easy," and 10 being labeled "This job is extremely difficult."

*Results.* Pilot subjects indicated that pouring hot tar for a summer job was drastically more difficult ( $M = 8.58$ ) than being a lifeguard ( $M = 4.44$ ). This difference was significant,  $t(23) = 7.66$ ,  $p < .01$ .

### *Main Experiment*

#### *Questionnaire 3A.*

You're a college student, and your parents earn about \$20,000 a year. They pay for all of your school expenses, and you work during the summer to earn spending money. Last summer you had a job as a lifeguard earning minimum wage. It is now the end of the school year, and you have about \$400 left.

You've been looking at portable televisions for several months. Yesterday you saw an ad for a portable television in a store downtown for around \$100. Should you buy a television or put the money in the bank and save it? ( $N = 34$ )

Buy television 18  
Save money in bank 16

*Questionnaire 3B.* The italicized portion of Questionnaire 3A was replaced by "pouring hot tar for." ( $N = 33$ )

Buy television 16  
Save money in bank 17

*Results.* Despite the obvious difference in job difficulty, the groups in the main experiment did not differ in their willingness to buy the television. The  $\chi^2$  analysis comparing questionnaires 3A and 3B did not approach significance.

*Discussion.* The fact that job difficulty did not affect subjects' willingness to spend led us to doubt that the earnedness of funds was the determining factor in the tendency to spend money.

Perplexed by the fact that unearned money was more spendable than earned money in some experiments but not in others, we carefully examined the induction of the independent variable in our prior questionnaire studies. We noticed that we had not only manipulated the extent to which funds were earned; we inadvertently had also manipulated the extent to which they could have been anticipated. The Experiment 1 subjects who read about someone winning a sweepstakes would know that such financial gain would be entirely unanticipated. On the other hand, the salary one earns by working overtime would certainly be anticipated. Similarly, Experiment 2 subjects would know that persons described in the scenarios could not anticipate a tax "break" but would be aware of their money's presence in a savings account. Therefore the former source would be less anticipated than the latter. We had attributed these results to the fact that the former source of funds was unearned, but perhaps its unanticipated nature was critical to our subjects.

Experiment 3 subjects in both groups were working for their salary.



Therefore both groups would anticipate the money. Hence no difference would be expected in their willingness to spend it.

With this new hypothesis in mind we opted to do two experiments using actual money to test the role of anticipation in the proclivity to spend windfall gains. We also thought that experiments using actual money would be needed to provide more compelling tests of our hypotheses concerning windfall gains.

## EXPERIMENTS USING ACTUAL MONEY

### Experiment 4

The design of Experiment 4 is straightforward. One group came to the experiment anticipating some payment. A second group was surprised by being given money when they arrived. We merely assessed to what extent each group was willing to gamble their funds. If lack of anticipation is the key factor in the willingness to spend windfall gains, then the group surprised by being given money should be more likely to spend it.

#### *Method*

*Subjects.* Ten undergraduate males were in the anticipated-money group, and eight were in the unanticipated-money group. Subjects received course credit for their participation. At the university where this research took place, undergraduates in the subject pool are very rarely paid for their participation in research. Hence we could be certain that no one in the unanticipated group would expect payment. Their participation would be motivated solely by course credit.

*Procedure.* The sign-up sheet for this experiment directed male undergraduates to an office where they left their phone numbers. Between 1 and 5 days before the experiment was to take place, all subjects were telephoned by an experimenter. Those in the anticipated-money group were told the time and location of the experiment plus the following information:

Also, although it wasn't mentioned on the sign-up sheet, we want you to know that you will be paid for being in this experiment. We usually pay all our subjects \$3.00 for participating. You will be paid when you get there. I thought you should know that. Also, I'd like to ask you not to mention to anyone that you're being paid. The reason for this is that not all of the psychology experiments pay the participants, so it's better if no one knows one way or the other.

Subjects in the unanticipated-money group were merely told the time and location of the experiment when they were telephoned.

The experimenter who telephoned the subjects greeted each subject when he arrived for the experiment. Subjects were taken individually to another room while the remaining subjects within a group remained with

a proctor in the waiting room. (Anticipated and unanticipated subjects were run in separate groups.) A second experimenter introduced herself and presented the subject with \$3 in the form of 12 quarters. This comprised the payment promised to the anticipated subjects, but not previously mentioned to the unanticipated subjects. She then explained the experiment as follows:

The first part of this experiment involves gambling. You will need this pair of dice. You can bet as much as you want on the roll of the dice, from 25¢ to \$3. If you roll a number 7 or greater, you win. If you roll a number less than 7, you lose. For example, if you bet \$1 and you roll a number 7 or greater, I will pay you \$1. If you roll a number less than 7, you will pay me \$1. You can roll the dice only once. Do you understand?

How much do you want to bet? Please fill in your name and social security number on this sheet so we can document this bet. Now roll the dice.

Subjects stated their wager and rolled the dice. Subjects actually won or lost the money they bet.

### *Results*

Subjects who anticipated the money wagered an average of \$1.00. Subjects who did not anticipate the money wagered an average of \$2.16. This difference was significant,  $t(16) = 2.65$ ,  $p < .01$  (one-tailed).

### *Discussion*

In Experiment 4 no subject earned the money. It was given to everyone merely for being present. The groups did differ in the extent to which the money was anticipated, however. The group that did not anticipate the money spent about twice as much in the gambling situation as those who anticipated the funds. Hence we conclude that a key factor in the proclivity to spend windfall gains is their unanticipated nature.

## Experiment 5

Experiment 4 did not involve the spending of money to obtain consumer goods. Furthermore, the situation was contrived to some degree in that participants had to bet something. We attempted to minimize these factors in Experiment 5. The design was similar to that of Experiment 4. Half of the subjects anticipated receiving \$5 to participate in the experiment, whereas the others were surprised to receive \$5 when they arrived for the study. Both groups were then sent to a basketball game. Afterward we merely ascertained how much money the members of each group spent at the game.

### *Method*

*Subjects.* Thirty-five males were in the unanticipated-money group, and 31 were in the anticipated-money group. Subjects were randomly assigned to the two groups. Subjects received course credit for their participation.

Again we should note that at the university where this research took place, undergraduates in the subject pool are very rarely paid for their participation in research. Hence we could be certain that no one in the unanticipated group would expect payment.

*Procedure.* The sign-up sheet for this experiment contained a notice that the experiment was for males and would be conducted at an upcoming varsity basketball game. The sheet also contained a request for participants to go to an office where they left their phone numbers. Between 1 and 5 days before the experiment was to take place all subjects were telephoned by an experimenter. Those in the unanticipated-money group were merely reminded of the date, time, and location of the experiment. Those in the anticipated-money group were also told the following:

There's one more thing I ought to tell you. We've been allocated some money to give to participants in this experiment, so you and the other participants will each be given \$5. We'll pay you when you arrive at Porter Hall at 7:30. It's important that you not tell anyone about this feature of the experiment, because we don't want people to find out about the money. We'll then have people erasing the names of people who signed up and putting their own name on the sheet. So please don't tell anyone about the money until after the experiment.

When the anticipated-money and unanticipated-money groups arrived at their separate rooms, each subject was paid \$5 for their upcoming participation in the experiment. The experimenters said to subjects in each group, "Since we've been given funding to do this research, we're able to pay you. You can spend it at the basketball game, tomorrow, next week, or whenever. This money is yours to do with as you like."

Every subject was given a short questionnaire which asked about their interest in college sports, attendance at prior games, and their spending habits. Additionally, they used a 0–10 scale to express their mood at the current time. The scale was anchored with the labels "terrible mood" and "extremely good mood." We asked a question about mood, because it has been found that mood is a determinant of spending under some circumstances (Arkes, Herren, & Isen, 1988). The other questions were fillers. After the questionnaire was completed, all subjects were told, "OK. Just go on over to the convo to watch the basketball game. There is nothing special you need to do there in order to be in this experiment. Do whatever you like. You do need to return to this room immediately after the game to fill out a very short questionnaire . . . So I'll see you here after the game."

The postgame questionnaire was handed to each participant when he returned to the Psychology Department after the game. The first item asked subjects to indicate their enjoyment of the game on a 0 to 10 scale. The second item asked subjects to indicate how much money they spent at the game.

The experiment was run at two separate basketball games separated by 1 year.

### *Results*

Subjects in the unanticipated money group spent an average of 90¢ at the game. Subjects in the anticipated money group spent an average of 38¢. Since there was a severe positive skew in the data, we used a Mann-Whitney U test, which indicated that the spending of the two groups differed significantly (approximation to  $z = 2.22$ ,  $p < .015$ , one-tailed).

The two groups had nearly identical moods, 7.7 for the unanticipated-money group and 7.6 for the anticipated one. Therefore group differences in spending could not be due to the fact that one group was in a better mood than the other. Across all subjects spending and mood were uncorrelated ( $r = .01$ ).

### *Discussion*

As was the case in Experiment 4, people in the two groups were given identical amounts of money. The only difference between the groups was whether the money was anticipated. Those given unanticipated money were significantly more likely to spend it.

## GENERAL DISCUSSION

The five experiments reported in this paper have led us to two conclusions. First, windfall gains appear to be spent more readily than nonwindfall gains. Second, a defining characteristic of a windfall gain seems to be its unanticipated status.

Why do windfall gains have a relatively high MPC? At least two explanations are possible. First, unanticipated money may be put specifically into a "windfall" or "fun money" account whose MPC is at a level that would be deemed irresponsibly high in any other account. An acquaintance of ours whose consulting business was initially quite desultory told us that income from this "business" was put into an account that was outside the purview of his family's rational budgeting process. It was the "fun money" account with an enormous MPC. When his consulting business eventually grew, and he could anticipate a steady income from it, funds from this enterprise were placed in the family's regular accounts.

A second explanation for the higher MPC of windfall gains is that unanticipated money may be in no account. Planning for its expenditure

takes time. Until some reasonable target is decided upon, the money remains uncommitted and therefore available for extravagant, frivolous, or speculative use. When funds are anticipated, the budgeting process occurs before receipt of the funds. When the funds eventually arrive, they are not available to be spent on some whim. Our research does not allow us to choose between these two alternative explanations.

### *The Assumption of Fungibility*

Both the Shefrin–Thaler analysis and our experiments cast serious doubt on the economic assumption of fungibility. Funds should be freely transferable between accounts, according to this assumption. Therefore there should be no difference in the MPC from salary, dividends, or any other source. Our experiments suggest that an anticipated dollar is spent less readily than an unanticipated dollar. Without the assumption of fungibility economic analyses become much more complicated, because predictions about consumption will depend on the source of the funds to be spent.

There are at least two differences between Shefrin and Thaler's (1988) analysis and the results of our experiments. First, we emphasize the distinction between gains that are unanticipated, for which we suggest a high MPC, and gains that are anticipated, for which we suggest a lower MPC.<sup>2</sup> We think that the anticipated/unanticipated nature of the funds results in their placement into accounts which have different MPCs. In other words, differences in the extent of the anticipation are responsible for the lack of fungibility.

Second, Experiments 4 and 5 use amounts of money that would seem to be much too small for consideration in the Shefrin–Thaler "household account" analysis. We suggest that the spendability of even the very small amounts of money used in our research is influenced by its anticipated/unanticipated status.

### *"Playing with the House's Money"*

The difference between the MPCs of anticipated and unanticipated money can be used to explain the proclivity pointed out by Thaler and Johnson (1990) that gamblers' like to "play with the house's money." If I win \$100 on the first spin of the roulette wheel, I am likely to gamble rather freely with these new winnings. Economists would say that the MPC of these funds would be high. However, once the "house's money" is spent and I now consider spending the money I brought to the casino,

<sup>2</sup> Shefrin and Thaler (1988, p. 635) do mention the size and expectedness of windfalls as influences on MPC, and Thaler (1985, p. 200) suggests that money put into a windfall gain account is readily spent.

I become much more conservative. Of course, the \$100 I won on the first spin of the roulette wheel represents an unanticipated gain—a windfall, whose marginal propensity to be spent will be quite high according to our experimental results. The money brought to the casino is not a windfall gain, and we suggest its propensity to be spent would be lower. Note that in order to predict a gambler's risk-seeking or risk-averse behavior, it is not enough to know the probability of winning, the probability of losing, the amount to be won, and the amount to be lost, which are the traditional components of normative theories of choice. We also need to know whether the gambler is withdrawing the money from a pocket that contains previously anticipated or unanticipated funds. Thaler and Johnson (1990) were interested in how prior gains or losses might influence risk-seeking or risk-averse behavior. Our perspective is related but different. Prior gambling successes may cause subsequent risk-seeking behavior, as Thaler and Johnson (1990) hypothesize. We wish to emphasize the fact that prior unanticipated gains—be they gambling or nongambling—are themselves more readily spent than anticipated gains, whether the spending is done on a subsequent gambling adventure or on a product that has no element of risk.

*Henderson and Peterson (1992)*

The different MPC of anticipated and unanticipated money can also help explain the recent findings of Henderson and Peterson (1992, p. 110). Two different groups of subjects were asked to rank order the likelihood they would spend on themselves (group 1) or spend on a certificate of deposit (group 2) some funds obtained from each of seven sources. Although Henderson and Peterson did not divide the sources of funds into anticipated and unanticipated categories, we did so. Five of the sources may be unanticipated (gift, found in street, lottery, work bonus, inheritance) and two may be considered anticipated (debt repaid and sale of stereo). The four sources of funds most likely to be spent on oneself were all unanticipated, precisely as we would predict. Conversely, two of the three sources least likely to be spent on oneself were anticipated. The only unanticipated source not readily spent on oneself is the inheritance, which is usually a large amount. Shefrin and Thaler (1988) point out that large amounts generally go into the assets account, which has a very low MPC.

In a subsequent study by Henderson and Peterson (1992, p. 111), subjects were presented either with a bonus of \$2000 or a gift of \$2000. Subjects were asked to choose among four possible uses for the money, only one of which did not involve spending ("invest in stocks"). Since both a bonus and a gift would be unanticipated, our prediction would be

that investment in stocks would not be an appealing use of the money. In fact, it was ranked last and next-to-last by the two groups of subjects.

In a third study by Henderson and Peterson (1992, p. 113), subjects were asked how likely they were to put money from each of various sources into each of three accounts: general savings account, living expenses account, and a gift account. As we would predict, all anticipated sources of money were below the median in their propensity to be put into the gift account. Also, all unanticipated sources were above the median in their propensity to be put into the gift account with one exception: gift from a relative. We hypothesize that one would not want to appear to be totally devoid of gratitude or social grace by taking a gift from a relative and then spending it on a gift for someone else. With this sole exception, our analysis predicts quite accurately that unanticipated rather than anticipated funds are more likely to be spent on a gift.

### FUTURE RESEARCH

Although we have presented five studies in this paper, we have actually performed a large number of other experiments, which have provided us with some guidance concerning the route future research might take. We have done two different types of studies other than the ones reported here, and we offer information about them here in order to assist other researchers in this area.

One category consists of a trio of obvious experiments. Each used cash in a  $2 \times 2$  design with the independent variables being earned/unearned and anticipated/unanticipated money. From the results of these studies we have arrived at the conclusion that earned but unanticipated money has low ecological validity. Money that is earned, such as a salary, is generally anticipated. Therefore one of the four cells of the  $2 \times 2$  experiment (earned/unanticipated) might be quite artificial. When we asked subjects who had worked very hard whether they had earned the unanticipated payment we had given them, they responded that they did not consider the money to be earned. In three attempts we never could get subjects to pass the manipulation check, that is, to rate as more "earned" the unanticipated money for which they had worked long and hard compared to unanticipated money for which they had worked very little. Hence, it may be neither possible nor advisable to execute the  $2 \times 2$  study referred to above. Subjects seem to think that unanticipated money is not earned in the same sense that anticipated money may be earned.

The second type of study we performed but did not report consists of a few questionnaire studies similar to Experiment 1. Once we discarded earnedness as our defining characteristic of windfall gains and switched to the anticipated status of the money, we tried to manipulate anticipation in a questionnaire. This was very difficult to do. We found ourselves writing

questionnaires for the anticipated group that contained lines like, "Two months pass during which you anticipate your rebate check." While subjects are reading that sentence, only 5 s pass, not 2 months. The point is that the mimicry of the passage of time is extremely difficult to accomplish in a questionnaire study. The actual passage of time may be necessary for anticipated funds to be "worked into" an account, thereby making them less spendable. We finessed the issue in Experiment 2 by varying anticipation through the nature of the original source of the funds, not by the passage of time. That is, tax rebates are generally not anticipated, whereas one is presently aware of funds in one's savings account. Our recommendation is that "real-time" studies rather than questionnaire studies may be the best way to test the role of anticipation in the spending of windfall gains.

### Applications

Although our research has focused on windfall money, other types of windfalls are possible. For example, if one has anticipated spending several hours on a task but finds that it only takes 1 hour, how is the "extra" time spent? If there are other pressing demands on one's time, perhaps the windfall gain of time should be spent on completing those important tasks. However, it may be that windfall time is spent as frivolously as windfall money. ("I figured I'd spend the whole afternoon marking papers. But now that I got my assistant to do them I can play computer games for a while before finishing the grant request.")

There are numerous marketing applications of our research. We have noticed that some stores now dispense money-saving coupons for a particular product at the place in the store where the product is shelved. No one can anticipate the presence of this coupon. Is the money saved by using the coupon more likely to be spent in the store than money saved through use of coupons previously mailed to one's home? Savings in the latter case would be anticipated during the time period between the receipt of the coupon and the trip to the store. Such anticipated savings might not be spent so readily.

Another marketing strategy for store owners is to place sales items next to the state lottery ticket dispenser. Customers who save some money on a product then have funds available to spend on the adjacent ticket machine, a portion of whose sales are given to the proprietor of the store.

It may seem irrational that the MPC of a dollar depends on whether it was anticipated. One might consider the purchase of goods and services to be a contest between the worth of the dollar in hand and the worth of the item to be bought. If the consumer believes the former to be worth more than the latter, the purchase should not occur. If the item is deemed more valuable than the dollar, the purchase should be made. Despite the



axiomatic nature of this analysis, it appears to be incomplete: the history of the dollar seems to influence subjects' willingness to part with it.

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