

Lottery Winners and Accident Victims: Is Happiness Relative?

Philip Brickman and Dan Coates
Northwestern University

Ronnie Janoff-Bulman
University of Massachusetts

Adaptation level theory suggests that both contrast and habituation will operate to prevent the winning of a fortune from elevating happiness as much as might be expected. Contrast with the peak experience of winning should lessen the impact of ordinary pleasures, while habituation should eventually reduce the value of new pleasures made possible by winning. Study 1 compared a sample of 22 major lottery winners with 22 controls and also with a group of 29 paralyzed accident victims who had been interviewed previously. As predicted, lottery winners were not happier than controls and took significantly less pleasure from a series of mundane events. Study 2 indicated that these effects were not due to preexisting differences between people who buy or do not buy lottery tickets or between interviews that made or did not make the lottery salient. Paraplegics also demonstrated a contrast effect, not by enhancing minor pleasures but by idealizing their past, which did not help their present happiness.

Is Happiness Relative?

The idea that happiness is relative is at least as old as the Stoic and Epicurean philosophers of ancient Greece. It is also a solution to a number of intriguing puzzles in modern social science. American soldiers in World War II with a high school education or better had greater chances of being promoted but were less happy with their promo-

tion chances. Merton and Kitt (1950) evolved the notion of relative deprivation to explain this fact, among others. The better educated soldiers saw themselves as doing poorly compared to their peers in civilian life or their peers who were already officers. Less well educated soldiers, on the other hand, saw themselves as reasonably well off compared to similar others in civilian life or their peers in the service. Individuals in an experimental group that was objectively worse off, because one member was disadvantaged, were more satisfied than individuals in a group where everyone was equal or where one member was advantaged. Brickman (1975) predicted this result from the fact that in the first case, individuals would enhance the relative value of their own outcome by comparing it with the less fortunate other, whereas in the latter two cases, there would be no such comparison to elevate their appreciation of their standing.

Curiously enough, however, the limits of the proposition that happiness is relative have never been tested. If happiness were completely relative, groups that had received extremes of good and bad fortune in life—winning a million dollars versus suffering a

We wish to thank the following students who provided valuable assistance in collecting data for the first study: Debbie Ahner, Lowry Alexander, Mary Jo Barrett, Daryl Brandford, Dana Day, Pat Dennis, Susan Froikin, Frederick Garnett, Dana Gimbel, Rick Grossman, Elizabeth Guthridge, Jim Howard, Bob Hoyt, Aaron Janis, Janine Kushner, Leslie Levin, Rodney Martin, Dawson Moorer, Patti Riedle, Wendie Rose, Yamima Rubens, Eric Tep-litz, and Eileen Wise. We are also grateful to Colleen Dudgeon, Dorothy Echols, Steve Rosenthal, Ira Shapiro, Kurt Walsh, and Rhonda Welfare for their help with the follow-up study. Finally, we wish to thank Ralph Batch, Illinois State Lottery Superintendent, and Dennis Stone, Vice-President of Herbert H. Rozoff Associates, for their friendly cooperation.

Requests for reprints should be sent to Philip Brickman, Department of Psychology, Northwestern University, Evanston, Illinois 60201.

crippling accident—should differ from one another in happiness much less than we might expect. The most general framework for considering this possibility is adaptation level theory (Helson, 1964), whose application to the pursuit of pleasure and questions of happiness has been developed by Brickman and Campbell (1971). The most general principle of adaptation level theory is that people's judgments of current levels of stimulation depend upon whether this stimulation exceeds or falls short of the level of stimulation to which their previous history has accustomed them. Adaptation level theory offers two general reasons for believing that recipients of an extreme stroke of good fortune will not be generally happier than persons who have not been dealt such good fortune. The first is contrast. The second is habituation.

Contrast and Habituation

Experiences that are salient or extreme and simultaneously relevant to other experiences serve as heavily weighted inputs for adaptation level (Eiser & Stroebe, 1972; Helson, 1964). Winning a million dollars is both a distinctive event and an event that is relevant to many other life occurrences. Since it constitutes an extremely positive comparison point, however, the thrill of winning the lottery should result in an upward shift in adaptation level. Consequently, many ordinary events may seem less pleasurable, since they now compare less favorably with past experience. Thus, while winning \$1 million can make new pleasures available, it may also make old pleasures seem less enjoyable. That new pleasures are offset by the compensatory loss of old ones should in turn militate against any general gain in happiness by lottery winners.

The second limit to good fortune is habituation. Eventually, the thrill of winning the lottery will itself wear off. If all things are judged by the extent to which they depart from a baseline of past experience, gradually even the most positive events will cease to have impact as they themselves are absorbed into the new baseline against which further events are judged. Thus, as lottery winners become accustomed to the additional plea-

surements made possible by their new wealth, these pleasures should be experienced as less intense and should no longer contribute very much to their general level of happiness. In sum, the effects of an extreme stroke of good fortune should be weakened in the short run by a contrast effect that lessens the pleasure found in mundane events and in the long run by a process of habituation that erodes the impact of the good fortune itself.

The same principles hold in reverse for groups that suffer an extreme stroke of ill fortune, like accidental paralysis. In the short run, their unhappiness should be mitigated by a contrast effect that enhances the impact of mundane pleasures, which are now contrasted with the extreme negative anchor of the accident. In the long run, their unhappiness should be mitigated by a process of habituation that erodes the impact of the accident itself.

It was our purpose in this research to make a preliminary assessment of these propositions. Study 1 consisted of short interviews with three groups of people: a sample of lottery winners, a sample of paralyzed accident victims, and a sample of people who were neither winners nor victims. Study 2 investigated the possibility that the results of Study 1 were due to preexisting differences between people who buy lottery tickets and people who do not or between interview contexts in which winning a lottery was more or less salient.

Study 1

Method

Samples

Accident victims. The sample of accident victims was interviewed as part of an earlier study (see Bulman & Wortman, 1977, for details). Eleven paraplegic and 18 quadriplegic respondents were drawn from the full-time patient population at a major rehabilitation institute. Five other possible respondents were unavailable for interviews. Response rate was thus 85%.

Lottery winners. The winners were selected from a list of 197 major winners in the Illinois State Lottery. Winners were selected to be interviewed primarily on the basis of amount won, with larger amounts preferred. Proximity to other winners was also considered in the selection of this group, in order to minimize traveling for the interviewers. In

20 of the 42 attempted interviews, the potential respondent was either unattainable or unwilling, resulting in a 52% response rate. Among the 22 lottery winners who were interviewed, 7 won \$1 million, 6 won \$400,000, 2 won \$300,000, 4 won \$100,000, and 3 won \$50,000.

Controls. The names of 88 people who lived in approximately the same areas of the city as the lottery winners were selected from the phone book and used as the basic list from which the control group was drawn. Contact was attempted with 58 of these individuals. The response rate was 41%, providing a control group of 22 participants.

Interviewers

All of the paraplegic/quadruplegic respondents were personally interviewed in a face-to-face situation by a female graduate student. The winner and control respondents were interviewed by 11 two-person teams of students. Three of these teams consisted of two males, three of a male and a female, and five of the teams were composed of two females. Each team interviewed two winners and two control respondents.

Five of the teams conducted interviews only over the phone, whereas the remaining six teams tried for face-to-face interviews but settled for a phone interview if the respondent preferred this. Four of the control respondents and 6 of the winners were interviewed face to face, and 18 control and 16 winner participants were questioned over the phone. Past research (Janofsky, 1971; Rogers, 1976) has indicated that results from telephone surveys are comparable to results from face-to-face interviewing, and breakdown of our data found no differences between the telephone and face-to-face samples.

Procedure

Once the lists of winners and controls were compiled, letters were sent to all participants except two winners whose names arrived too late. These letters described the study and the possibility that an interviewer would be phoning. This was done to give people who were not interested an advance opportunity to refuse and to make the initial telephone contacts easier. The letters sent to winners and controls differed in that winners were informed that the research was a study of lotteries, whereas the control letters described the research as a study of everyday life. The control letter did not mention lottery winners, in order to avoid instituting an unfavorable comparison for the controls. The letter to the winners did make this reference, since these respondents were keenly aware of their special status and would expect an interview to deal with it. Participants were promised the results of the study if they were interested in them.

Measures

As general background, all respondents were asked their age, occupation, race, religion, and level of

schooling. The lottery winner and accident victim groups were then asked several open-ended questions. Winners were first asked, "Has your lifestyle changed in any way since you won? How?" Winners and victims were asked, "Do you feel you in any way deserved what happened?" and also, "Do you ask yourself, 'Why me?' How do you answer?" Respondents were also asked to rate how much credit or blame they assigned to themselves for their outcome and to divide 100% of the responsibility among four potentially causal factors: themselves, others, the environment, and chance. Winners were asked to rate winning, and victims were asked to rate their accident, on a scale anchored by "the best and worst things that could happen to you in your lifetime."

For a measure of general happiness, respondents were asked to rate how happy they were now (not at this moment, but at this stage of their life). They were also asked to rate how happy they were before winning (for the lottery group); before the accident (for the victim group); or 6 months ago (for the control group). Finally, each group was asked to rate how happy they expected to be in a couple of years.

For a measure of everyday pleasure, respondents were asked to rate how pleasant they found each of seven activities or events: talking with a friend, watching television, eating breakfast, hearing a funny joke, getting a compliment, reading a magazine, and buying clothes. The last item was added specifically for the lottery winner and control groups and was not asked of the accident victims. All ratings were made on 6-point scales ranging from 0 for "not at all" to 5 for "very much."

Results

Background Characteristics

For the most part, the different groups used in this study were similar in background. Men outnumbered women in each condition, with 63% of the winners, 55% of the controls, and 79% of the victims being males. Whites also held a consistent majority across groups, comprising 86% of the winners, 73% of the controls, and 72% of the paraplegics. The remainder of the winners (14%) and controls (27%) were black, as were 24% of the victims. One handicapped respondent was Latin American. About half the members of each group were Catholic (45% of winners, 50% of controls, and 48% of victims), and the rest were primarily Protestant (50% of winners, 41% of controls, and 31% of victims). Five percent of the winners, 9% of controls, and 21% of the paraplegics practiced some other or no religion.

In all three groups, 45% of the participants had finished their education with a high school diploma. Thirty-two percent of the winners, 18% of the controls, and 27% of the victims did not finish high school; 23% of the winners and controls and 21% of the paraplegics had some college training. Fourteen percent of the controls and 7% of the victims had advanced graduate or professional education. Most of the winners (63%) and controls (59%) held blue-collar jobs, and 23% of each of these groups consisted of students, housewives, and others who were technically unemployed. The rest, 14% of winners and 18% of the controls, were in white-collar positions. The handicapped sample was not asked for occupational information.

There were no significant differences among the study groups on any of these background characteristics, but the paraplegic sample was younger than the other two. The mean age for the handicapped group was 23 years old; it was 44 years for winners and 46 years for controls, $F(2, 65) = 29.12$, $p < .001$.

Life Changes

Although 64% of the lottery winners gave examples of how their lives had been changed, only 23% were willing to say that their lifestyle in general had changed. The large majority of the changes mentioned were positive, including financial security, increased leisure time, easier retirement, and general celebrity status. Negative effects of winning, if any, were always mentioned together with some positive feature. The life changes faced by the victims were severe and clearly evident. These formerly independent individuals now found themselves in a state near physical helplessness, in wheelchairs or beds, with their days at the rehabilitation center filled with therapy sessions.

In general, lottery winners rated winning the lottery as a highly positive event, and paraplegics rated their accident as a highly negative event, though neither outcome was rated as extremely as might have been expected. On a scale where 0 represented the worst possible thing that could happen in a lifetime and 5 represented the best possible

thing, with 2.50 as a hypothetical neutral point, lottery winners rated winning as 3.78, and victims rated their accident as 1.28. The ratings of the two groups are, of course, significantly different, $F(1, 47) = 37.31$, $p < .001$. It is especially interesting to note that the two ratings are roughly symmetric around the mean, with winning the lottery being about as positive as the accident is negative.

In both the winner and victim groups, time passed since the event was not significantly related to either happiness or pleasure ratings. The failure to find any relationship may have been due to the fact that people who had just encountered the extreme outcome, or people who had had years to adjust to it, were not represented in our sample. Only one of the winners had been aware of his good fortune for less than a month, and none of them had passed more than a year and a half with their new wealth. The victims had been specifically selected so that the time elapsed since the accident was never less than 1 month or more than 1 year.

Everyday Pleasures and General Happiness

The mean happiness and pleasure ratings of the various study groups are presented in Table 1. As the table shows, winners rated the seven ordinary activities as less pleasurable than controls did, and this difference is significant, $F(1, 42) = 7.05$, $p < .011$. Accident victims also tended to find the everyday events less enjoyable than controls, but the difference is not quite significant, $F(1, 44) = 3.14$, $p < .083$. The comparison between victims and controls is based on only six pleasure items, since victims were not asked one of the questions. Also, two paraplegics were not asked any pleasure questions, and three skipped some of the items, so their responses were unavailable for this analysis.

Lottery winners and controls were not significantly different in their ratings of how happy they were now, how happy they were before winning (or, for controls, how happy they were 6 months ago), and how happy they expected to be in a couple of years. The F values for present, past, and future happiness were .27, 1.43, and .02, respectively. Accident victims and controls were significantly

Table 1
Mean General Happiness and Mundane Pleasure Ratings

Condition	General happiness			Mundane pleasure
	Past	Present	Future ^a	
Study 1				
Winners	3.77	4.00	4.20	3.33
Controls	3.32	3.82	4.14	3.82
Victims	4.41	2.96	4.32	3.48
Study 2				
Buyers	3.76	3.81	4.40	3.65
Nonbuyers	3.89	4.00	4.58	3.73
Lottery context	3.52	3.73	4.62	3.69
Everyday context	4.10	4.02	4.29	3.68

^a In Study 1, 10 paraplegics, 3 winners, and 1 control did not answer the future happiness question. In Study 2, 3 lottery context and 2 everyday context respondents did not answer this question.

different in their ratings of both past happiness, $F(1, 47) = 12.23$, $p < .001$, and present happiness, $F(1, 47) = 7.16$, $p < .01$, but not future happiness, $F(1, 38) = .31$. Table 1 indicates that accident victims recalled their past as having been happier than did controls (which we may call a nostalgia effect), while experiencing their present as less happy than controls. It should be noted, however, that the paraplegic rating of present happiness is still above the midpoint of the scale and that the accident victims did not appear nearly as unhappy as might have been expected. Since 10 paraplegics refused to answer the question of future happiness (versus 3 winners and 1 control), the results for this question must be viewed most cautiously. If refusal to answer represents apprehension, inclusion of these respondents would have lowered the victim mean and perhaps the winner mean relative to the control group.

Assignment of Responsibility

Winners saw chance as a more important cause of their outcome than did victims. Winners assigned 71.4% of the cause to chance, whereas victims (who had been paralyzed for a variety of different reasons) assigned 33.6% of the cause to chance, $F(1, 43) = 13.36$, $p < .001$. On the other hand, a majority of the winners (13) felt that they in some way deserved what happened, where-

as only two of the accident victims felt they deserved what happened. These proportions are significantly different, $\chi^2(1) = 16.42$, $p < .01$.

Either because they saw the outcome as more a matter of chance or because the outcome was favorable, winners seemed less involved than victims with explaining why the outcome had happened to them. Half of the lottery winner sample either did not ask or did not answer the "why me" question, whereas only one of the accident victims did not ask and answer this question. This difference between groups is significant, $\chi^2(1) = 15.08$, $p < .01$.

Study 2

There are at least two major alternative explanations for the difference between lottery winners and controls that can be readily checked with further data. The first is that the difference is not an effect of the lottery but a general tendency for people who buy lottery tickets to find less pleasure in their lives than people who do not buy tickets. Indeed, a degree of dissatisfaction with mundane events could be the reason people buy lottery tickets, rather than a result of winning the lottery. This could account for the difference between the winners and controls in Study 1, presuming the controls contained significantly fewer ticket buyers than the win-

ners. On the other hand, Langer's (1975) finding that people are more willing to gamble when they feel confident suggests that ticket buyers could be more optimistic and confident than nonbuyers. The first purpose of Study 2 was to assess any general differences that might exist between people who bought or did not buy lottery tickets.

The second explanation is that the difference is not a result of past connections of respondents to the lottery but of the degree to which the idea of winning the lottery was made salient in the interview itself. The winners were clearly aware of the study's focus on the lottery, whereas the controls were only told that the study dealt with everyday life. Merely introducing the lottery as a context for the interview may induce people to take lottery winners as a reference group. If so, adaptation level theory (Brickman & Campbell, 1971) and social comparison (Thibaut & Kelley, 1959) predict that the lottery context should cause people to attach less importance to mundane pleasures than the everyday-life context. Thus, the lottery winner effect of Study 1 could be attributed to the fact that winning the lottery was made salient in the interview, rather than to the fact that winning the lottery was a continual and inescapable reference point for the winners. The second purpose of Study 2 was to assess the effects of mentioning the lottery in the interview on respondents' self-ratings.

Method

Sample

The names of 156 individuals living close to past lottery winners were drawn from the phone book. Sixty-nine either could not be reached or refused to participate, giving a response rate of 56% and a total sample of 86. Forty-four were assigned to the lottery cover-story condition and 42 to the everyday-life cover-story condition.

Interviewers

All participants were interviewed over the phone by two-person teams composed of one male and one female. In all, there were seven interviewers—four males and three females. Each team talked with an equal number of participants in both the lottery and everyday conditions, in a counterbalanced order. All but two interviews were tape recorded, with the permission of participants, with one team member operating the tape recorder and taking notes while

the other asked the questions. Members took turns in these two roles.

Procedure

Participants were randomly assigned to be sent either the same everyday-life letter as was sent to the control group in Study 1 or a similar letter that explained the study as dealing with the Illinois State Lottery. In fact, all respondents were asked questions about their participation in the lottery, but lottery condition respondents were asked these questions first, and everyday-life respondents were asked these questions last, with no prior mention of the lottery.

Measures

Questions were identical to those asked of the control group in Study 1, with the exception of several additional questions about the lottery. Respondents were asked to indicate if and how often they bought tickets, when their most recent purchase had been, and how much money they had won.

Results

Background Characteristics

Out of the total sample of 86 people, 59 of them, or 69%, had bought lottery tickets. Since these individuals were selected in the same way as the original control group, this breakdown suggests that among the original controls most people were probably ticket buyers and therefore comparable in this way to the lottery winners.

Buyers and nonbuyers shared fairly similar background characteristics. Forty-six percent of the buyers and 63% of the nonbuyers were males, and the remainder in each group were females. Most buyers (86%) and nonbuyers (74%) were white; 9% of buyers and 22% of nonbuyers were black; and 5% of the buyers and 4% of the nonbuyers were Latin American or Oriental. In terms of religious preference, 58% of the buyers and 33% of the nonbuyers were Catholic, with most of the remaining buyers (29%) and nonbuyers (56%) being Protestant. A few members of each group, 13% of buyers and 11% of nonbuyers, practiced some other or no religion.

Forty-one percent of the buyers and 30% of the nonbuyers had finished high school; 27% of the buyers and 11% of the nonbuyers had not reached this educational level. Most of the remaining participants reported

some college training (24% of buyers and 44% of nonbuyers), and 8% of the buyers and 15% of the nonbuyers had some graduate or professional education. These groups were almost identical in their occupational levels, with 44% of both groups in blue-collar jobs, approximately 23% of each sample in white-collar positions, and about 33% in each case being technically unemployed. The mean age for buyers was 46 years old and for nonbuyers, 40 years old. There were no significant differences between these groups on any of these background measures.

Buyers and Nonbuyers

Besides sharing comparable backgrounds, buyers and nonbuyers were apparently quite similar in how happy they felt, as Table 1 shows. The small differences between these groups in their happiness ratings are not significant: $F(3, 82) = 1.03$, for present happiness; $F(3, 82) = .42$, for past happiness; and $F(3, 77) = .72$, for future happiness. In addition to the absence of main effects, there were also no significant interactions between ticket buying and type of cover story for any dependent measure.

Study participants were divided into groups according to how often they bought tickets (more or less than once a month) and how recently they had purchased a ticket (more or less than 6 months ago). Again, there were no significant main effects or interactions on the happiness or combined pleasure ratings.

Study 2 used the same methodology as Study 1, selected participants in the same manner, and employed twice as many subjects, but failed to find any differences like those reported in Study 1. These results suggest, then, that among the kind of people who were included in the initial study, whether they played the lottery had little relationship to the satisfaction they reported. The results obtained in that study were therefore probably not due to more nonplayers among the controls.

Lottery and Everyday-Life Context

Although the lottery and everyday-life cover stories resulted in no significant differences

on the scores of present happiness or the pleasure derived from the daily activities, there were significant differences in the ratings of past and future happiness. Participants in the everyday-life cover-story condition rated their past as happier than lottery respondents did, $F(3, 82) = 6.21$, $p < .015$. The lottery group, on the other hand, rated their future happiness higher than those in the everyday group did, $F(3, 77) = 4.16$, $p < .05$ (see Table 1). Five respondents, three in the lottery condition and two in the everyday condition, did not answer the future happiness question. Perhaps, as was originally anticipated in Study 1, telling people that they are involved with a project on the lottery encourages them to compare themselves to lottery winners. In contrast to their image of a big winner's life, their own past seems rather unhappy. However, since such a comparison does hold the promise that they also could be winners, they are more hopeful in their future predictions.

In any case, these cover-story results do not substantially alter the interpretation of the findings from Study 1. Merely introducing the lottery as a context for the interview had no impact on participants' views of the ordinary pleasures they considered and did not consistently raise or lower reported happiness. In light of the available evidence, then, it seems unlikely that either the buyer/nonbuyer differences between the groups or the different cover stories can explain the results obtained in Study 1.

Discussion

Adaptation Level Interpretation

Although lottery winners felt very good about winning the lottery, they took less pleasure than controls in a variety of ordinary events and were not in general happier than controls. These results can be derived from an adaptation level analysis of the effects of a single extremely positive event (cf. Brickman, 1975; Parducci, 1968). Initially, such an event may be expected to depress ratings of related but less spectacular events, by contrast. Over time, such an event may be expected to cease having any effect on general happiness ratings, through habitua-

tion. It is certainly encouraging for adaptation level that the obtained pattern of results is compatible with this analysis.

On the other hand, our data are sharply limited by the fact that they were obtained at a single point in time and do not trace out the hypothetical temporal course of adaptation. When we broke down our sample by the time that had elapsed since the lottery or the accident, we found no changes in their ratings. Presumably, the present pattern of results was obtained because winning the lottery remained vivid enough to contrast with more ordinary events but no longer so vivid as to elevate general happiness ratings. This interpretation would be vastly strengthened, however, if our sample had included both people in the critical days and weeks right after the event, for whom the salience and relevance of the event should be maximal, and people in the equally critical many years after the event, for whom habituation should be complete. A larger study, preferably longitudinal, is needed to specify the exact parameters that determine how adaptation level effects change over time.

The results for accident victims appear to be less supportive of adaptation level theory. The accident victims did not tend to take more pleasure in ordinary events and rated themselves significantly less happy in general than controls. In a curious way, however, the paraplegics did demonstrate the positive contrast effect predicted by adaptation level theory. The events that become more positive for them, however, were not the ordinary events of their present (as we expected), but the ordinary events of their past. Paraplegics exhibited a strong nostalgia effect, rating their past as much happier than did controls. This result is not due to the age difference between the paraplegic and control samples, since people in their 20s do not generally rate their pasts as happier than people in their 40s (Andrews & Withey, 1976). Ironically, then, the paraplegics had just as strong a positive anchor as the lottery winners, which worked to make current mundane events seem less pleasurable by contrast. Since their positive anchor, unlike that of the winners, was now inaccessible to them, it made no positive contribution toward general

happiness to offset the negative impact it had on judgments of ordinary events. To the extent that paraplegics could become or be made less nostalgic for an idealized version of their past, we might find them taking more pleasure in the mundane events of their present.

Alternative Explanations

A general alternative explanation to adaptation level theory for the decreased satisfaction of the lottery winners is that good luck in a lottery may actually be more painful than pleasurable. Previous research suggests that sudden changes or extreme outcomes, even though positive, can be stress inducing (Dohrenwend & Dohrenwend, 1974; Rahe, 1972; but see also Vinokur & Selzer, 1975). Furthermore, well-known stories such as those about Faustus, King Midas, or the Sorcerer's Apprentice warn us that having our dreams fulfilled can create more problems than are solved. Finally, popular press articles (Royko, 1973; Safran, 1974) suggest that the social relationships of lottery winners may become strained. Friends who do not ask for money may shun the winner to avoid appearing to want money or simply to avoid social comparison (Brickman & Bulman, 1977). If winning produces problems, it could understandably be seen by winners as a mixed blessing.

But the winners in our study did not appear to find their good fortune problematic. They rated winning very high in relation to the best thing that could possibly happen to them. They typically listed positive life changes as resulting from the windfall, such as decreased worries and increased leisure time. This suggests that winning lessened the stress and strain of their lives. Furthermore, winners did not rate social activities, such as talking with a friend or receiving a compliment, as any less pleasurable than non-social ones, like reading a magazine or eating breakfast. We do not mean to suggest that no social problems are created for winners by their good fortune, or rather by other people's perception of their good fortune—an issue we will return to in a moment. However, the decreased pleasure they take in cer-

tain ordinary events does not seem to result from any general sense that winning the lottery was itself an unpleasant experience or at best a mixed blessing. The adaptation level explanation—that their peak experience with the lottery made more ordinary joys pale by comparison—remains the most plausible interpretation.

A second possibility is that lottery winners reported less pleasure in everyday events in order to appear modest and minimize the importance of their success, as subjects have sometimes been found to do after laboratory success (Schneider, 1969). However, if winners were trying to enlist sympathy or downplay their joy, we would have expected them to do it by mentioning negative features of winning rather than the very positive ones they emphasized. There is nothing particularly boastful about claiming an ordinary degree of pleasure in eating breakfast or watching television and, thus, nothing particularly modest about denying the pleasurable nature of such events.

Finally, it is always possible that winning the lottery changed the perspective people have on everyday events without changing the actual pleasure they received from these events. The variable perspective model of Ostrom and Upshaw (1968) would argue that the lottery simply gave winners a new and more extreme endpoint on their subjective pleasure scale. It is the new endpoint, rather than the actual experience of winning, that changed their pleasure ratings.

Perspective theory has been developed and tested almost exclusively in the laboratory, and at least some attempts to apply this model in the field have encountered difficulties (Kinder, Smith, & Gerard, 1976; Smith, Gerard, & Kinder, 1976; Upshaw, 1976). More importantly, however, evidence available suggests that our results were not due to alterations in the participants' pleasure perspectives. Winners typically rated their financial windfalls as less than the best thing that could happen to them. Interviews with the winners showed that they often considered qualities like good health or close social relationships to be more satisfying than a large cash surplus. Further, when nonwinners were interviewed

in a lottery context, which would likely extend their pleasure perspectives to include winning a large sum of money, their general satisfaction ratings were no lower than those provided by the everyday-context group. Similarly, most victims did not rate their paralysis as the worst thing that could happen to them and could imagine other more negative outcomes (Bulman & Wortman, 1977). While winning \$1 million or encountering a crippling accident may be the most extreme events participants have actually endured, these occurrences do not appear to be ultimate limits on the subjective range of pleasurable experiences that respondents considered in rating their happiness. The lower pleasure ratings of the winners and higher past-happiness scores of the victims are probably therefore due to the contrast with their previous extreme experiences rather than to alterations in their subjective scales.

Implications

The present study may be added to a small but growing body of literature that requires us to take seriously the notion that happiness is relative. There is evidence that the inhabitants of poorer cities (Schneider, 1975), regions (Liu, 1973), or countries (Easterlin, 1973) are not less happy than the inhabitants of more favored places. There is research suggesting that the blind, the retarded, and the malformed are not less happy than other people (Cameron, 1972; Cameron, Titus, Kostin, & Kostin, 1973). There is the fact that "in the United States, the average level of happiness in 1970 was not much different from what it had been in the late 1940's, though average income, after allowance for taxes and inflation, could buy 60% more" (Easterlin, 1973, p. 7; see also Gallup, 1977, for failure to find any consistent relationship between economic improvement and increased happiness). There are the findings that sex, race, age, income, education, family life-cycle stage, and other demographic classification variables accounted for relatively little variance in general happiness in two independent national surveys (Andrews & Withey, 1976). Although high-status

people felt better off in certain domains (not all), they worried just as frequently as did low-status people and wanted to make just as many changes in their lives.

This is not to say that there are no meaningful variations in people's judgments of the quality of life (Andrews & Withey, 1976; Campbell, Converse, & Rogers, 1976). But we know much less than we might about the dynamics of these variations. Apparently in consequence of this ignorance, we tend to overestimate the magnitude, generality, and duration of other people's feelings. Through overlooking compensatory contrast effects, we overestimate the overall magnitude and generality of the positive or negative feeling generated by an event. Through overlooking habituation effects, we overestimate the general duration of feeling generated by an event. Perhaps because observers see the momentary elation or despair of an actor as more extreme and more enduring than it is, they make inferences about the actor's disposition that the actor finds quite unwarranted (Jones & Nisbett, 1971). This calls to mind Deutsch's (1960) demonstration of the "pathetic fallacy" in observers, who see actors as more distressed by their misfortune than the actors see themselves—a fact also reported by Andrews and Withey (1976) and vividly if unwittingly demonstrated by Rubin (1976).

If observers overestimate the extent to which winning a lottery or being crippled affects the psychological state of participants, this fact itself can have serious consequences. Others may cut off interaction with participants, either to avoid potentially embarrassing social comparison (Brickman & Bulman, 1977) or simply to avoid having to respond to what they expect are extremes of happiness or despair. This tendency for others to reduce interaction can in turn make it harder on people who have experienced such extreme events to evolve a new adaptation to their social environment (Coates & Wortman, in press). If observers could be made aware that severe outcomes do not have as great an impact as might be expected, as the results of the present study show, they might find it less threatening to interact with others who have experienced such outcomes.

References

- Andrews, F. M., & Withey, S. B. *Social indicators of well-being*. New York: Plenum Press, 1976.
- Brickman, P. Adaptation level determinants of satisfaction with equal and unequal outcome distributions in skill and chance situations. *Journal of Personality and Social Psychology*, 1975, *32*, 191-198.
- Brickman, P., & Bulman, R. J. Pleasure and pain in social comparison. In J. M. Suls & R. L. Miller (Eds.), *Social comparison processes: Theoretical and empirical perspectives*. Washington, D.C.: Hemisphere, 1977.
- Brickman, P., & Campbell, D. T. Hedonic relativism and planning the good society. In M. H. Appley (Ed.), *Adaptation level theory: A symposium*. New York: Academic Press, 1971.
- Bulman, R. J., & Wortman, C. B. Attribution of blame and coping in the "real world": Severe accident victims react to their lot. *Journal of Personality and Social Psychology*, 1977, *35*, 351-363.
- Cameron, P. Stereotypes about generational fun and happiness vs. self-appraised fun and happiness. *The Gerontologist*, Summer 1972, *12*(2, Pt. 1), 120-123, 190.
- Cameron, P., Titus, D. G., Kostin, J., & Kostin, M. The life satisfaction of nonnormal persons. *Journal of Counseling and Clinical Psychology*, 1973, *41*, 207-214.
- Campbell, A., Converse, P. E., & Rodgers, W. L. *The quality of American life*. New York: Russell Sage, 1976.
- Coates, D., & Wortman, C. B. The social contribution to depression. In A. Baum, J. Singer, & Y. Epstein (Eds.), *Advances in environmental psychology* (Vol. 2). Hillsdale, N.J.: Erlbaum, in press.
- Deutsch, M. The pathetic fallacy: An observer error in social perception. *Journal of Personality*, 1960, *28*, 317-332.
- Dohrenwend, B. S., & Dohrenwend, B. P. (Eds.) *Stressful life events: Their nature and effects*. New York: Wiley, 1974.
- Easterlin, R. Does money buy happiness? *The Public Interest*, Winter 1973, *30*, 3-10.
- Eiser, J. R., & Stroebe, W. *Categorization and social judgment*. New York: Academic Press, 1972.
- Gallup, G. Human needs and satisfaction: A global survey. *Public Opinion Quarterly*, 1977, *40*, 459-467.
- Helson, H. *Adaptation-level theory*. New York: Harper & Row, 1964.
- Janofsky, A. I. Affective self-disclosure in telephone versus face to face interviews. *Journal of Humanistic Psychology*, 1971, *11*, 93-103.
- Jones, E. E., & Nisbett, R. E. *The actor and the observer: Divergent perceptions of the causes of behavior*. Morristown, N.J.: General Learning Press, 1971.

- Kinder, D. R., Smith, T., & Gerard, H. B. The attitude-labeling process outside of the laboratory. *Journal of Personality and Social Psychology*, 1976, 33, 480-491.
- Langer, E. J. The illusion of control. *Journal of Personality and Social Psychology*, 1975, 32, 311-328.
- Liu, D. C. *The quality of life in the United States: 1970*. Kansas City, Mo.: Midwest Research Institute, 1973.
- Merton, R. K., & Kitt, A. S. Contributions to the theory of reference group behavior. In R. K. Merton & P. F. Lazarsfeld (Eds.), *Continuities in social research: Studies in the scope and method of "the American soldier"*. Glencoe, Ill.: Free Press, 1950.
- Ostrom, T. M., & Upshaw, H. S. Psychological perspective and attitude change. In A. G. Greenwald, T. M. Brock, & T. M. Ostrom (Eds.), *Psychological foundations of attitudes*. New York: Academic Press, 1968.
- Parducci, A. The relativism of absolute judgments. *Scientific American*, 1968, 219, 84-90.
- Rahe, R. H. Subjects' recent life changes and their near-future illness susceptibility. *Advances in Psychosomatic Medicine*, 1972, 8, 2-19.
- Rogers, T. F. Interviews by telephone and in person: Quality of responses and field performance. *Public Opinion Quarterly*, 1976, 40, 51-56.
- Royko, M. Pity the poor rich man. *Chicago Daily News*, Wednesday, January 8, 1973, p. 3.
- Rubin, L. B. *Worlds of pain: Life in the working-class family*. New York: Basic Books, 1976.
- Safran, C. All right! I won a million bucks. Now what do I do with it? *Today's Health*, November 1974, pp. 56-61.
- Schneider, D. J. Tactical self-presentation after success and failure. *Journal of Personality and Social Psychology*, 1969, 13, 262-268.
- Schneider, M. The quality of life in large American cities: Objective and subjective social indicators. *Social Indicators Research*, 1975, 1, 495-509.
- Smith, T., Gerard, H. B., & Kinder, D. R. Placing perspective research in perspective: Reply to Upshaw. *Journal of Personality and Social Psychology*, 1976, 34, 704-707.
- Thibaut, J. W., & Kelley, H. H. *The social psychology of groups*. New York: Wiley, 1959.
- Upshaw, H. S. Out of the laboratory and into wonderland: A critique of the Kinder, Smith, and Gerard adventure with perspective theory. *Journal of Personality and Social Psychology*, 1976, 34, 699-703.
- Vinokur, A., & Selzer, M. L. Desirable versus undesirable life events: Their relationship to stress and mental distress. *Journal of Personality and Social Psychology*, 1975, 32, 329-337.

Received September 15, 1977 ■