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Winners Love Winning and Losers Love Money

Karim S. Kassam[1], Carey K. Morewedge[1], Daniel T. Gilbert[2], and Timothy D. Wilson[3]
[1]Department of Social and Decision Sciences, Carnegie Mellon University; [2]Department of Psychology, Harvard University; and [3]Department of Psychology, University of Virginia

Abstract

Salience and satisfaction are important factors in determining the comparisons that people make. We hypothesized that people make salient comparisons first, and then make satisfying comparisons only if salient comparisons leave them unsatisfied. This hypothesis suggests an asymmetry between winning and losing. For winners, comparison with a salient alternative (i.e., losing) brings satisfaction. Therefore, winners should be sensitive only to the relative value of their outcomes. For losers, comparison with a salient alternative (i.e., winning) brings little satisfaction. Therefore, losers should be drawn to compare outcomes with additional standards, which should make them sensitive to both relative and absolute values of their outcomes. In Experiment 1, participants won one of two cash prizes on a scratch-off ticket. Winners were sensitive to the relative value of their prizes, whereas losers were sensitive to both the relative and the absolute values of their prizes. In Experiment 2, losers were sensitive to the absolute value of their prize only when they had sufficient cognitive resources to engage in effortful comparison.

Keywords

comparison, affect, happiness, attention, judgment and decision making

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The human brain is tuned in a fundamental way to make relative judgments. People see objects as bigger or smaller depending on their surroundings, judge personalities relative to their contexts, and make decisions by comparing alternatives with reference points (Tversky & Kahneman, 1991). Happiness is no exception to the rule of relativity. Increasing one person's income relative to that of others raises that person's happiness, but increasing everyone's income (i.e., changes in a country's gross domestic product) does not affect happiness (Clark, Frijters, & Shields, 2008). Standards of comparison—whether past outcomes (Strack, Schwarz, & Gschneidinger, 1985), other people's outcomes (Strack, Schwarz, Chassein, Kern, & Wagner, 1990), or counterfactual outcomes (Larsen, McGraw, Mellers, & Cacioppo, 2004; Roese, 1994)—have a significant effect on people's happiness. One consequence of the prevalence of relativity is that in order to understand an event's hedonic impact, one needs to know what comparisons the event will evoke.

Research suggests that two factors—salience and satisfaction—are important determinants of the standards people use in comparisons. When standards of comparison are made more salient, they have greater impact on hedonic judgment. People tend to make comparisons with what they have been thinking about and with what is right in front of them (Epstude & Roese, 2008; Kahneman & Miller, 1986; Mussweiler, 2003). People also make the comparisons they find most satisfying. For example, people tend to compare themselves with others who are less fortunate (Pyszczynski, Greenberg, & LaPrelle, 1985; Taylor, Wood, & Lichtman, 1983), to avoid comparing themselves with others who are more fortunate (Lyubomirsky & Ross, 1997; Shepperd & Taylor, 1999), to compare themselves with others on those dimensions on which they are more fortunate (Kruger, 1999), to perpetuate misfortune for the people with whom they compare themselves (Tesser & Smith, 1980), to exaggerate how unfortunate they once were (Wilson & Ross, 2001), and so on.

Salience and satisfaction are both important factors in determining the comparisons people make. But what happens when these factors point to different standards—when the most salient standard is the least satisfying, or the least salient standard is the most satisfying? What happens when one gets

Corresponding Author:
Karim S. Kassam, Department of Social and Decision Sciences, Carnegie Mellon University, 5000 Forbes Ave., BP 208, Pittsburgh, PA 15213
E-mail: kskassam@cmu.edu

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a good job, but not the job one most wanted? We suggest that as a general rule, people initially make the most salient comparison and then stop if they are happy. If they are unhappy, they then engage in an effortful search for more satisfying comparisons (e.g., comparing having their good job with having no job).

This suggests an asymmetry between people who gain something when the alternative was worse ("winners") and those who gain something when the alternative was better ("losers"). Winning entails a salient comparison with the worse alternative, and because that comparison generates satisfaction, winners have no need for additional comparisons. Consequently, the happiness of winners can be relatively independent of the value of their outcomes. A winner who receives $10 when the alternative was $5 and one who wins $15 when the alternative was $10 should be about equally happy; in both cases, the outcome is $5 better than the alternative, and that comparison should be foremost on the winner's mind. Losers, however, are unlikely to stop at the first comparison, to wallow in misery while thinking about what they might have won. Losing motivates a search for a comparison standard other than the salient alternative that frames things negatively. For losers, the difference between $5 when the alternative was $10 and $10 when the alternative was $15 is likely to have a significant hedonic impact. Losers are likely to compare their consolation prizes with what they had before (i.e., no prize at all), to compare their situation with that of another person who did not win a prize, or to make any other comparison that leaves them feeling good. The satisfaction generated by such additional comparisons will depend on the obtained prize's absolute value. In short, losers should be relatively sensitive to what they win, whereas winners should be relatively insensitive to what they win. We conducted two experiments to test this hypothesis.

Experiment 1

Method

Two hundred ninety-seven people (158 females, 139 males; mean age = 25.74 years, $SD = 11.4$) were approached in public places in Boston, Massachusetts, and were given a scratch-off ticket on which two printed cash amounts were covered with opaque latex. They were asked to scratch off the latex to reveal either one of the amounts, which they received in cash. Participants were then asked to scratch the ticket again to reveal the other amount, which they did not receive. The amounts printed on the card were (a) $7 and $5, (b) $5 and $3, or (c) $3 and $1. *Winners* were participants who won the larger of the two amounts on their card, and *losers* were those who won the smaller of the two amounts. After revealing both amounts, participants completed a questionnaire that checked to make sure they had noticed the amounts and asked them to report how happy, disappointed, and regretful they felt, on scales anchored with the phrases *not at all* (1) and *extremely* (7).

Results and discussion

We averaged participants' reports of happiness, disappointment (reversed-coded), and regret (reverse-coded) to create a positive-affect index ($\alpha = .73$). We then performed a regression analysis with this index as the dependent variable, amount of cash ($1, $3, $5, or $7) and relative status (winner vs. loser) entered as independent variables in a first block, and the interaction of these two entered in a second block. The results revealed that participants reported significantly more positive affect when they won more cash, $t(293) = 2.39$, $p = .02$, $\beta = 0.267$, and that winners reported more positive affect than losers, $t(293) = 4.89$, $p < .001$, $\beta = 0.304$. As predicted by our hypothesis, adding the interaction term resulted in a significant change in R^2, $F(1, 293) = 5.77$, $p = .02$, $\beta = 0.127$ (Fig. 1). Planned

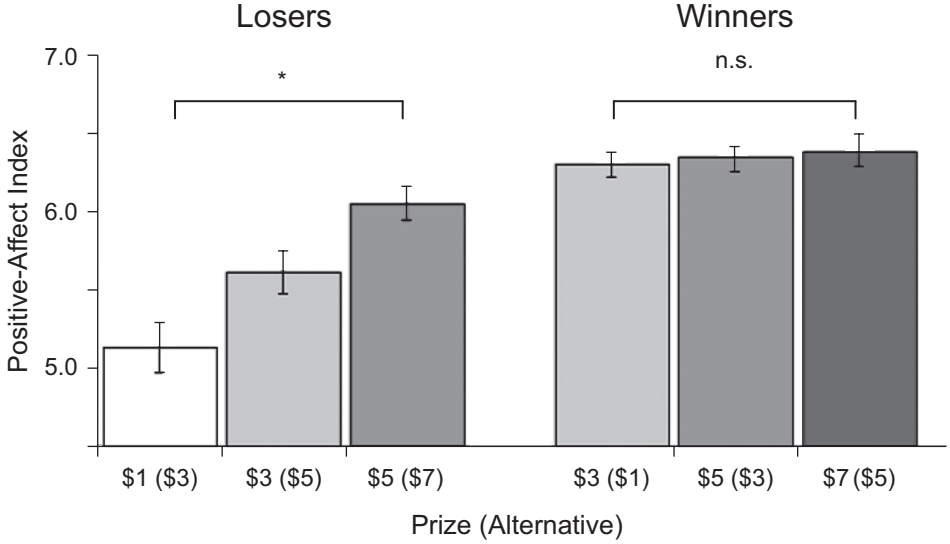

Fig. 1. Results of Experiment 1: winners' and losers' positive affect as a function of the amount of the cash prize won. The asterisk indicates a significant difference across amounts won ($p < .05$). Error bars represent ±1 *SEM*.

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comparisons (ANOVAs) revealed that the amount of cash received affected losers, $F(2, 147) = 4.77$, $p = .01$, but not winners, $F(2, 144) = 0.250$, $p = .78$.[1]

Experiment 2

Some comparisons arise spontaneously and are made with little effort, whereas others require conscious deliberation (Dunning & Hayes, 1996; Gilbert, Giesler, & Morris, 1995; Mussweiler, Ruter, & Epstude, 2004; Stapel & Blanton, 2004). The salient comparison for winners in Experiment 1, for example, simply required determining whether one number was smaller or larger than another, a process that was easy and automatic (Moyer & Landauer, 1967). Comparison with other standards can be much more resource intensive, and may therefore occur only when people have not only the motivation but also the cognitive capacity to make the comparison (Morewedge, Gilbert, Myrseth, Kassam, & Wilson, 2010). As a result, anything that makes it difficult for losers to search for satisfying comparisons should lead them to feel equally happy whether their prize is a small or a large amount. Cognitive load should impair losers' abilities to make comparisons and, in particular, to perform the second stage of the hypothesized two-stage comparison process (Gilbert, 1991). Therefore, we predicted that when losers were under cognitive load, they would—like winners—be equally happy with a small and a large cash prize.

Method

Thirty-one individuals (15 females, 16 males; mean age = 27.2 years, $SD = 11.5$) in Boston, Massachusetts, participated in Experiment 2 in exchange for $5. Participants sat at a computer that displayed two boxes and were asked to choose one of the boxes on each trial. They were told that at the end of the study, the experimenter would randomly select a trial and give them the amount in their chosen box. When participants chose a box, both boxes opened, revealing the cash prize as well as its alternative. After choosing a box, participants reported how happy, disappointed, and regretful they felt, on scales anchored with the phrases *not at all* (1) and *extremely* (9).

On each of four critical trials, participants were asked to memorize either a two-digit number (*low load*) or an eight-digit number (*high load*) before choosing a box. These trials were rigged such that participants always received the worse prize (i.e., all participants were losers). Each loser was under high load and won a large amount ($5) on one critical trial, was under low load and won a large amount ($5) on one critical trial, was under high load and won a small amount ($3) on one critical trial, and was under low load and won a small amount ($3) on one critical trial.

Results and discussion

Two participants failed to complete the experiment and were therefore excluded from the analyses. We created a positive-affect index for each type of critical trial (αs for the four trials ranged from .78 to .82), as described in Experiment 1. A repeated measures ANOVA on this index revealed a significant main effect of amount of cash, $F(1, 28) = 6.38$, $p = .02$, which was qualified by a marginally significant Cognitive Load × Amount of Cash interaction, $F(1, 28) = 3.23$, $p = .08$. Planned comparisons showed that losers were influenced by the amount of cash when they were under low load ($5 prize: $M = 4.71$, $SD = 1.72$; $3 prize: $M = 4.07$, $SD = 1.73$), $t(28) = 3.52$, $p = .002$, but not when they were under high load ($5 prize: $M = 4.61$, $SD = 1.64$; $3 prize: $M = 4.48$, $SD = 1.53$), $t(28) = 0.77$, $p = .45$ (Fig. 2.).

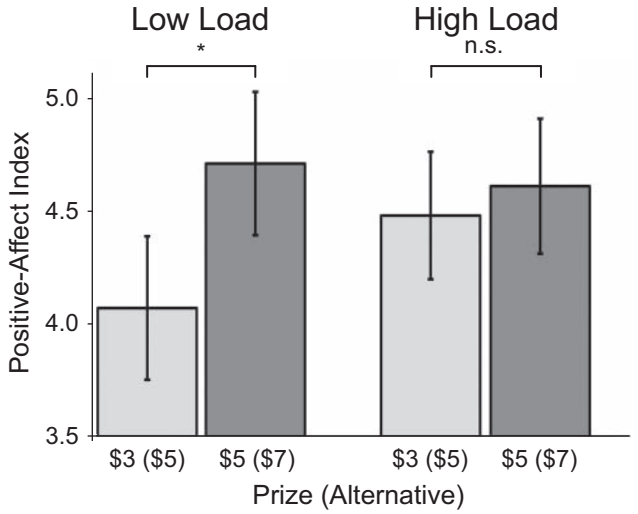

Fig. 2. Results of Experiment 2: losers' positive affect as a function of cognitive load and amount of the cash prize won. The asterisk indicates a significant difference across amounts won ($p < .05$). Error bars represent ±1 *SEM*.

General Discussion

We found that winners were sensitive to the relative value of their outcomes, whereas losers were sensitive to both the relative and the absolute value of their outcomes. In Experiment 1, participants won one of two monetary prizes on a scratch-off ticket. Losers were happier when the absolute amount they won was larger, whereas winners were insensitive to the amount they won. In Experiment 2, losers were sensitive to the absolute value of their outcomes only when they had sufficient cognitive resources to engage in effortful comparison. Under high cognitive load, losers were equally happy winning larger and smaller amounts of money. It appears that both winning and losing evoke salient standards of comparison, but only losing prompts a search for satisfying standards of comparison.

An ancillary study suggests that people do not anticipate this asymmetry in valuation between winning and losing. In a 2 (relative status: winner or loser) × 2 (amount of cash: $5 or $3) between-subjects design, 139 pedestrians saw an image of the scratch-off ticket used in Experiment 1 and predicted their hedonic response, using the same scales as in Experiment 1.

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Participants correctly anticipated that if they won, they would not be sensitive to the amount of the cash prize, $t(134) = 0.05$, $p = .96$, but failed to anticipate that if they lost, they *would* be sensitive to the amount of the cash prize, $t(134) = 0.84$, $p = .40$. The interaction between relative status and amount of cash, indicative of the asymmetry observed in Experiment 1, was not significant, $F(1, 134) = 0.312$, $p = .58$.

Our results by no means suggest that winners never care about what they win. We expect that winning $1 million in a national lottery would make most people much happier than winning $3 on our scratch-off ticket. Winning and losing, as is the case with any outcome, can elicit a variety of comparison standards with complex effects on happiness (Kahneman & Miller, 1986; Mussweiler, 2003). Our studies simply demonstrate that losers are more likely than winners to search for comparisons beyond the salient ones, and that those additional comparisons make losers more sensitive to the absolute value of their outcomes than winners are (Hsee & Zhang, 2010).

Our results fit well with decision affect theory (DAT; Mellers, Schwartz, Ho, & Ritov, 1997), as well as regret theory (Loomes & Sugden, 1982), in that they suggest that affective reactions depend not only on obtained outcomes, but also on unobtained alternatives. The refinement to these models that our results suggest is that the magnitude of an outcome will matter more in situations in which it holds smaller value than an unobtained alternative (i.e., for losers). The presence of a better possibility frames an outcome as a loss and makes people sensitive to its value, whereas the presence of a worse possibility frames an outcome as a gain and makes people insensitive to its value. In terms of DAT, this would entail a weighting on u_a, the utility of the obtained outcome, that depends on whether the outcome is larger or smaller than its alternatives. It is important to note that this modification should apply to experienced utility but not to decision utility (used in choice), as our ancillary study shows that participants are generally unaware of the demonstrated asymmetric valuation of outcomes with superior and inferior alternatives.

Our results also shed some light on processes underlying rationalization. Amnesiacs, children, and even capuchin monkeys have been shown to rationalize, or reduce cognitive dissonance (Egan, Santos, & Bloom, 2007; Lieberman, Ochsner, Gilbert, & Schacter, 2001). Such results imply that higher-order cognition may not be integral to this process. The present experiments and our past work (Gilbert, Lieberman, Morewedge, & Wilson, 2004) indicate, however, that some threshold of negative affect must be reached before rationalization is engaged, and that rationalization requires cognitive resources. Taken together, these studies suggest that rationalization is not mediated by a single type of cognitive process. Both automatic and controlled processes can serve to reduce dissonance, and the exact nature of the recruited process may depend on the thoughts, beliefs, and behaviors that give rise to the need for rationalization in the first place (Fazio, Zanna, & Cooper, 1977).

In summary, winning and losing have asymmetric effects on the way people evaluate their outcomes. Both winners and losers make the salient comparison between what they receive and what they do not, but losers go on to make other, more satisfying comparisons, for example, between what they used to have and what they have now. This search for satisfaction leads losers to be more sensitive to absolute value.

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Declaration of Conflicting Interests

The authors declared that they had no conflicts of interest with respect to their authorship or the publication of this article.

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Note

1. The same pattern of results held when participants' reports of happiness alone, rather than the positive-affect index, were used as the dependent measure. That is, when happiness was regressed on amount of cash and relative status, a significant interaction resulted, $F(1, 293) = 4.03$, $p = .046$, $\beta = 0.112$. Likewise, planned comparisons showed significant differences in happiness across amounts of cash for losers, $F(2, 147) = 6.27$, $p = .002$, but not for winners, $F(2, 144) = 0.424$, $p = .655$. These supplemental analyses rule out ceiling effects as an alternative explanation for the results of Experiment 1, as reports of happiness were much further from the scale maximum ($M = 5.06$, $SD = 1.39$) than were reports of disappointment and regret.

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