I Never Had a Chance: Using Hindsight Tactics to Mitigate Disappointments

Orit E. Tykocinski

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Orit E. Tykocinski
Ben Gurion University

People seem to have a rather rich repertoire of tactics for regulating moods and dealing with unpleasant events. The current work examines one such tactic. It suggests that to render a disappointing reality more palatable, people sometimes change the perceived probabilities of relevant events post facto so that the disappointing reality appears almost inevitable and the more positive alternatives now seem highly unlikely. This "retroactive pessimism" effect was demonstrated in two studies. In the first, participants were asked to imagine themselves in a situation in which they experienced a disappointing outcome and then assess the likelihood that a more favorable alternative could have occurred. In the second, participants were asked to evaluate each candidate's chances of winning in the recent prime minister race in Israel before and after the elections.

There is something odd about the human tendency to find comfort in the inevitability of tragic events. Nevertheless, pointing out that a tragic event was inescapable, or somehow "bound to happen," appears to be a popular tool in our solace repertoire. The grieving family waiting outside the operation room is offered consolation in that "nothing could have been done, the illness was too far gone." The young widow in a Western movie is expected to find comfort in knowing that "poor Joe never had a chance drawing against Billy, the fastest gun in the West." Accepting painful reality seems to be facilitated by the perceived ineluctability of these sad events.

The tendency to perceive inevitable events as less tragic is well documented in the counterfactual thinking literature. The consideration of alternative outcomes was demonstrated to play a major role in determining the emotional impact of events and outcomes (Gleicher et. al., 1990; Johnson, 1986; Kahneman & Miller, 1986; Kahneman & Tversky, 1982; Landman, 1987, 1995; Medvec, Madey, & Gilovich, 1995; Miller, Turnbull, & McFarland, 1990). When one can easily imagine a multitude of more favorable outcomes and a host of ways in which an unfortunate event could have been avoided, the fact that the incident had nevertheless occurred despite its mutability seems to enhance its emotional impact. To illustrate this point, Miller et al. (1990) contrasted the fate of two passengers killed in an air crash. One of the passengers was booked on this flight for weeks. The other passenger just switched to this flight a few minutes before take-off. Although both passengers perished in the same accident, the death of the second was experienced as more tragic. An alternative scenario that restores normality (e.g., "if only he did not switch flights") is quick to suggest itself, and it is this high mutability of the "just switched" scenario that amplifies its emotional impact. This amplification effect was demonstrated in a relatively large number of experiments in which various methods were employed to increase the mutability and consequently the emotional impact of negative events (see Roese, 1997). Not much explicit attention was paid, however, to the fact that whereas increasing the mutability of an event amplifies its negative impact, transforming its circumstances so that perceptions of inevitability are promoted is likely to produce just the opposite effect.

In view of the above, it is no wonder that pointing out the inevitability of a tragic event often is used by well-intending others as a means of consolation. Even if a negative event was not entirely inevitable, solace could still be obtained by noting that the more positive alternatives, although possible, were highly improbable. Thus, a student who failed to be accepted into a prestigious grad-

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uate program could remind himself or herself that the program only takes 2 students each year out of 400 applicants. Similarly, reminding yourself of a journal's rejection statistics may come in particularly handy when that journal's editor had just failed to recognize the merits of your work.

The objective probability of many events in our life is not, however, as readily available as professional journal rejection statistics. Often we have to subjectively evaluate these probabilities and, following some form of Bayesian logic, continue to refine and readjust our estimates in line with our ongoing experiences. Thus, for example, before we call to invite someone on a date, we will be wise to consider the probability of being rejected. If we decided to go ahead and make that call, we are likely to readjust our rejection estimates up or down based on the result of the phone conversation.

According to the hindsight bias literature, retrospective, post facto readjustments of probability estimates are not only natural but almost inescapable (Christensen-Szalanski & Willham, 1991; Fischhoff, 1975; Hawkins & Hastie, 1990; Wasserman, Lempert, & Hastie, 1991). Once the outcome of an event is known, the perception of causes leading to this outcome shifts so that they engulf the representation of the past in a way that makes this outcome appear predetermined. Fischhoff (1975) used the term *creeping determinism* to illustrate the "sneaky" nature of this reassessment process. The retroactive increase in probabilities assigned to an outcome takes place without awareness, to the extent that the possible influence of outcome information may actually be denied.

The hindsight bias is generally discussed in terms of information selection, evaluation, and integration. Its underlying mechanisms are described first and foremost in cognitive terms, whereas the contribution of motivational factors, beyond the general need to make sense of our past experiences, seems to be less central (Fischhoff, 1975; Hawkins & Hastie, 1990). Nevertheless, a similar process of reevaluation may serve more specific needs. If we are inclined to view inevitable events as less tragic, as suggested by counterfactual research, could we not employ hindsight tactics to help ourselves deal with disappointments?

The goal of the current work was to test the idea that when faced with disappointment, people may mentally minimize the estimated odds for a better outcome post facto, thus making the actual outcomes more palatable. It is further suggested that these retroactive estimate shifts will be larger the greater is the disappointment.

Two experiments were conducted to test this idea. The first experiment employed a scenario methodology, whereas the second took advantage of naturally occurring disappointments during the 1999 prime minister election in Israel.

In the first experiment, participants were asked to imagine themselves in a situation in which they are trying to get to a store on time so that they can enjoy a special sale price. By the time they reach the store, it is already closed. The magnitude of the disappointment was manipulated by varying the attractiveness of the sale price. A control condition in which judgments were made without knowledge of outcomes was also included in the design. In addition, the first study included a measure of individual differences in desire for control. This scale was included in the assumption that if people indeed shift their likelihood estimates in an attempt to control and regulate their mood, persons high in the desire for control may be more likely to show this effect.

EXPERIMENT 1

Method

Participants. The experiment included 57 introductory psychology students (9 men and 48 women) at Sapir College (a college associated with Ben Gurion University) who participated in this study in exchange for course credit.

Procedure. The experimental session was held in a large classroom. The students were randomly assigned to one of six cells in a 2×3 design with two levels of price reduction value (large reduction vs. small reduction) and three levels of circumstances (prior to outcome, following success, following failure). During the experimental session, all participants completed a desire for control scale and then read and responded to one of the scenario conditions according to their condition.

Materials

Desire for control. This scale was developed by Burger and Cooper (1979) to measure general motivation for control over the environment. The scale includes 20 items (e.g., "I prefer a job where I have a lot of control over what I do and when I do it"), which are rated by the respondents using the numbers 1 to 7 according to the extent to which each statement is judged to be self-descriptive.

Scenario. The scenario consisted of a short paragraph. In the large reduction failure condition, this paragraph read as follows (the text for the small reduction success conditions is shown in parentheses):[1]

> For a while now you have been looking to purchase a relatively hard-to-find Swatch model. Last Thursday around five in the evening you met a friend at the university in Beer-Sheva who reproached you for not returning his call in the beginning of the week. "This time," he says, "it

was your loss." Apparently he wanted to tell you that he came across a store on Bugrashov Street in Tel-Aviv that carries the watch you wanted and even had it on a special deal, 195 (300) shekels instead of the 350, which is the regular price. He also tells you that this is a limited-time offer and today is in fact the last day for this special price. "Who knows," he says. "If you hurry you may still make it on time."

You rush home to change and take some cash and order a taxi to the central bus station. You wait anxiously for the bus to Tel-Aviv, which for some reason appears to be late. Glancing at your watch you notice that it is already 5:30. When at last you arrive in Tel-Aviv, it is rush hour and it takes some time before you find a taxi. When you reach Bugrashov Street, you realize you don't have the exact address and it is not easy to locate the store, which is rather small. Finally, when you reach the store, you are disappointed to find out that your efforts were in vain as the store is already closed. (Finally, when you reach the store, you are pleased to find out that your efforts were successful as the store is still open.) A sign in the window clarifies that today is indeed the last day for the special offer.

The dependent measure question was presented directly after the scenario as a part of it, as follows:

On the bus going back to Beer-Sheva you try to figure out in retrospect what were the chances of arriving at the store on time considering that you left Beer-Sheva rather late. You conclude that your chances to get to the store on time were . . . .

Participants rated their estimates on an 11-point scale ranging from 0 (*almost zero*) to 10 (*very high*).

The prior to outcomes condition scenario was identical to the one above except that it terminated before the participant arrives at the store. After the sentence concerning the difficulties of getting a taxi in Tel-Aviv during rush hour, the following sentence was added:

In the taxi heading toward Bugrashov Street you try to figure out what are the chances of arriving at the store on time considering that you left Beer-Sheva rather late. You conclude that your chances to get to the store on time are . . . .

The same rating scale was used here as above.

Results

The mean probability ratings in the six groups are presented in Table 1. To avoid a problem of very small *n*s, the results were first analyzed without categorization into high and low desire for control (DC). This categorization, based on a median split (*Mdn* = 5.05), was added as a third variable later in the analysis.

TABLE 1: Participants' Mean Probability Estimates as a Function of Circumstances and Reduction Value

	Circumstances		
	Failure	*Success*	*Prior*
Small reduction	4.05 (1.74)	4.60 (2.18)	5.05 (2.04)
Large reduction	2.72 (1.93)	5.72 (2.02)	4.90 (1.77)

NOTE: Higher numbers indicate higher probability estimates for arriving at the store on time. Standard deviations are in parentheses.

A two-way ANOVA on participants' probability ratings revealed a significant main effect for the circumstances, $F(2, 110) = 9.65$, $p < .0001$. The ratings of participants in the success and the prior to outcomes groups were not significantly different ($F < 1$). Consistent with the hindsight bias, ratings of participants in the failure condition were significantly lower compared with the ratings of participants in both the success condition (*M*s = 3.43 vs. 5.13), $F(1, 113) = 13.9$, $p < .0002$, and the prior to outcomes condition (*M*s = 3.43 vs. 4.97), $F(1, 113) = 11.6$, $p < .009$.

The main effect for circumstances was qualified by a significant interaction between the circumstances and the reduction value, $F(2, 110) = 3.76$, $p < .02$. To further explore this interaction, the mean ratings of participants in the large and the small reduction conditions were compared separately at each level of circumstances.

As predicted, the size of the reduction had a significant effect on the probability ratings of participants in the failure condition. If by failing to arrive at the store on time participants missed out on a large reduction, their retroactive estimates were significantly lower than those of participants who missed out on a relatively small price reduction, $F(1, 110) = 4.46$, $p < .03$.

Large and small reduction groups did not differ significantly in the prior to outcomes condition ($F < 1$). In the success condition, however, probability ratings in the large reduction group tended to be higher than those in the small reduction group, with marginal significance, $F(1, 110) = 3.12$, $p < .08$.

Reanalyzing the results this time with DC as a third variable revealed a significant three-way interaction, $F(2, 102) = 3.05$, $p < .05$. As can be seen in Figure 1, the pattern of results identified above was characteristic of people with high desire for control but not for those with low desire for control. Specific pairwise comparisons for each of the three outcome groups revealed that the attractiveness of the reduction had no significant effect on the likelihood ratings of low-DC participants (all *F*s < 1). Simple comparisons for the high-DC participants showed that the magnitude of the reduction had no significant effect on likelihood ratings in the prior to outcomes condition ($F < 1$). Large and small reduction groups did, however, differ significantly in the success

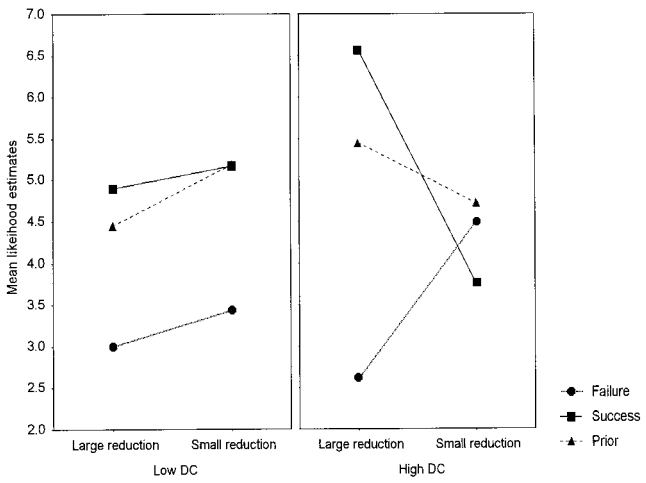

Figure 1 **Mean likelihood estimates as a function of circumstances, reduction size, and desire for control (DC).**

and failure high-DC conditions. Those experiencing success rated the likelihood of arriving on time significantly higher in the large reduction compared with small reduction condition (*M*s = 6.57 vs. 3.75), $F(1, 102) = 7.97$, $p < .005$. Reduction magnitude had exactly the opposite effect on participants in the failure group. Participants in the large reduction failure condition indicated lower likelihood estimates when they missed a large rather than a small price reduction (*M*s = 2.61 vs. 4.50), $F(1, 102) = 5.96$, $p < .01$.

Discussion

The results of Experiment 1 supported the idea that post facto assessments of outcome probabilities are sometimes influenced by the desirability of these outcomes. Participants who failed to secure an attractive deal rated the likelihood of a counterfactual alternative (i.e., getting to the store on time) as significantly lower compared with participants who failed to secure a less attractive deal. The suggestion that this shift in assessment represents an attempt to deal with disappointment is supported by the fact that attractiveness of the deal had no significant effect on assessments made before the outcomes were known.

The notion that by playing with the odds, people may be able to contain or control their disappointments is further supported by the fact that this shift seems to characterize first and foremost people with high desire for control. The level of desire for control had little effect on the judgments of individuals in the prior to outcomes conditions. It seems that the emotional regulation aspect of the desire for control becomes particularly relevant when the outcomes are already known and are being psychologically processed. Individuals with high desire for control could be thought of as people who take more liberties in manipulating perceived events in a way that is conducive to a positive sense of self. This characterization may explain not only the fact that they show more evidence of the retroactive pessimism effect but also the higher ratings of probability following a significant rather than a more minor success.

The notion of hindsight with a self-serving twist was again tested in Experiment 2. Unlike the first experiment, in which an imaginary scenario was used, the setting of the second study was entirely real. On May 17, 1999, a prime minister election was held in Israel. In Israel, the prime minister is the leader of the country, a role equivalent to that of a president in the United States. Thus, this election was extremely important to many Israelis, some of whom were bound to be disappointed with its outcomes.

A few days before the elections, students were asked to assess the chances of each of the three major candidates: Benyamin Netanyahu, Itzhak Mordechai, and Ehud Barak. These estimates were later compared to retroactive estimates made after it was already known that Ehud Barak won the election.

EXPERIMENT 2

Method

Participants. The experiment included 387 undergraduate students at Ben Gurion University, majoring in economics (40), psychology (138), and industrial engineering (164), who participated in this study on a voluntary basis. Of these, only the data from 202 participants who completed both the before and after questionnaires were used in the analyses.

Procedure. The participants completed the first questionnaire 5 to 6 days before the election and the second questionnaire 2 to 3 days after election day.

Both questionnaires were completed in large auditoriums during scheduled class breaks. Because of these less-than-optimal conditions, the questionnaires were kept as short as possible. The participants were told that they would be asked about their voting intentions and, after the election, about their reactions to the results. They were asked to choose an identifying number or name that would make it possible to match their responses before and after the election while maintaining their anonymity. Participants who failed to indicate an identification number, forgot the identification they used initially, or were absent from class during one of the two sessions were not included in the analyses.

Materials. In the preelection questionnaire, the participants were asked to indicate their voting intentions

using a multiple-choice question with six response categories. These included a decision to vote for each of the three candidates running at the time—Netanyahu, Mordechai, and Barak, a decision to abstain (voting with a blank slip), indecision, and an open category ("other") with a request to elaborate.

Participants were then asked to assess the chances of winning for the three major candidates, each on a separate scale ranging from 0 (*zero*) to 10 (*very high*). The students were instructed to make these evaluations based on the way they perceived the situation at the present time.

On the postelection questionnaire, participants were asked to indicate their actual voting behavior using five alternatives: voted for Netanyahu, voted for Barak, voted with a blank slip, did not vote, and "other."[2]

The students were then asked how they felt about the election of Barak for prime minister. They indicated their responses on a scale ranging from 0 (*very disappointed*) to 10 (*very satisfied*).

Finally, participants were asked to reassess retroactively, and in view of the actual election results, what the chances of winning the election were for each of the three original candidates. The scale for these assessments was identical to the one used in the preelection questionnaire.

Results

Out of the 202 participants who completed both the preelection and the postelection questionnaires, 18 voted for Netanyahu and 171 voted for Barak. The remaining 13 were omitted from analysis based on their reports that they did not vote or chose to abstain (voted with a blank slip). As one would expect, Netanyahu voters tended to be significantly less satisfied with the election results compared with Barak supporters (*M*s = 4.16 vs. 9.18), $F(1, 187) = 183.26$, $p < .0001$.

The estimates for Barak's success before and after the election are shown in Table 2. Before the election, Netanyahu and Barak's voters were not significantly different in their estimates for Barak's success. After the election, although both groups seemed to show hindsight bias, retroactive estimates made by Netanyahu voters were higher than those made by people who voted for Barak.

Because of the unequal cell sizes (18 vs. 171), the results were analyzed in a stepwise regression model. The preelection estimates were entered first, followed by a two-level variable representing voter preference (Barak or Netanyahu), with postelection estimates serving as the dependent variable. This analysis yielded a significant contribution for the first variable entered into the regression (preelection estimates), $F(2, 186) = 71.8$, $p < .00001$ ($\beta = .528$). More important, the manner in which people voted (whether they voted for Barak or for Netanyahu) had a significant independent contribution to the prediction of postelection estimates, $F(2, 186) = 5.05$, $p < .02$ ($\beta = -.14$).

TABLE 2: Mean Estimates for Barak's Success Made by Barak and Netanyahu Voters Before and After the Election

	Preelection	*Postelection*
Voted for Netanyahu	6.67 (2.05)	7.72 (1.40)
Voted for Barak	6.72 (1.69)	7.02 (1.54)

NOTE: Higher numbers indicate higher likelihood for winning the election. Standard deviations are in parentheses.

Evidence of hindsight was also found in estimates made for Netanyahu. Participants rated his chances lower after the election compared with the estimates indicated on the preelection questionnaire (*M*s = 5.52 vs. 4.58), $F(1, 187) = 23.77$, $p < .00001$. Unlike the estimates that were made for Barak, however, the two voter groups did not differ in the magnitude of their hindsight shift ($F < 1$).

Discussion

The results of the second study again supported the idea that the retroactive estimates of outcome probabilities may serve to render unwelcome outcomes more palatable. For people who voted for Netanyahu and were no doubt disappointed by the election results, the increase in the retroactive odds for Barak represents not just hindsight but probably an initial step toward coming to terms with the inevitable.

There are several possible explanations for the fact that a mirror image shift was not obtained for estimates made for Netanyahu. Because Netanyahu conceded defeat and retreated into the background almost immediately, whereas the celebrations of Barak's victory went on for weeks after the election, in processing the outcomes voters may have focused on the winner rather than on the candidate who lost the race. This focus is consistent with research on the feature positive effect, which suggests that people experience greater ease in processing occurrences than nonoccurrences (Allison & Messick, 1988; Fazio, Sherman, & Herr, 1982; Newman, Wolff, & Hearst, 1980).

One could also hypothesize that for a disappointed voter it is probably easier to admit a misestimate of Barak's chances rather than a misestimate of Netanyahu's chances. Apart from the fact that such a realization is probably associated with a devaluation of Netanyahu, which may be troubling for someone who just voted for him, it also may give rise to the question of "If Netanyahu's chances were this slim, why did I vote for him?"

GENERAL DISCUSSION

Before we embark on a new endeavor, we often try to evaluate our chances of success, the likelihood that we will reach our goals and accomplish our objectives. According to several Expectancy × Value Motivational formulations, it is this evaluation, coupled with the desirability of the anticipated outcome, that determines our ability to mobilize motivational energy (e.g., Feather, 1990; Kuhl, 1986). The role of this likelihood of success estimate in our decision to act is crucial. Motivational energy will drop to zero, regardless of the desirability of the outcomes, if achieving these outcomes seems impossible (Brehm & Self, 1989). At the preaction stage, it seems, then, that an exaggerated evaluation of the odds favoring success might be instrumental simply to attain the encouragement one needs to get started.

Once already embarked on this new adventure (e.g., the application forms and fee had already been sent out) the perceived odds of success might shift. This will be the time when friends will warn us "not to get our hopes up" or we will remind ourselves that "they only accept a handful" and that because we applied rather late our chances are even less than average. At this stage, lining up some disclaimers might be a good idea in an event that we end up with a blow in need of softening (Snyder & Higgins, 1988). Yet, it seems that even if we succeeded in curbing our expectations for success, the actual experience of disappointment may still be bitter enough to necessitate some further processing to render it palatable.

For those seeking solace following a bitter disappointment, the changing of the odds is of course but one option that could be used on its own or perhaps in combination with other more classical self-regulatory mood-repair tactics.

Festinger (1957) used the term *cognitive dissonance* to describe the unpleasant psychological state caused by discrepancies between and among cognitions. Of the different domains in which dissonance was studied, the unpleasant psychological experience it denotes is probably most closely related to disappointment in the case of effort investment. These are situations in which one's efforts fail to produce a desired outcome or produce an outcome that fails to correspond to expectation (Aronson & Mills, 1959). Festinger (1957) suggested three modes of reducing dissonance: a change of one of the dissonant elements, an addition of consonant cognitions, and a change in importance through trivialization of the conflict. Thus, faced with a rejection letter, one can decide that "the program was not that good after all," that "there are clear advantages to other programs," or that "nowadays the actual work experience is far more important than the source of the training." If relief is not attained with these classic dissonance-driven tactics one could turn to reevaluation of the odds of getting into the program in the first place.

An inescapable failure might be easier to digest than a failure that could have been easily avoided. The two reported studies provided no direct evidence indicating that the shift in estimates is indeed effective in making people feel better about their disappointments. There are several facts, however, that seem to be consistent with this interpretation. First, the estimate shift seems to characterize people who experienced disappointment rather than people who were either satisfied with their outcomes or people who were yet uninformed concerning their outcomes. Second, as we see in Experiment 1, the magnitude of the shift seems to be proportional to the magnitude of the disappointment experienced. In addition, the timing of the shift, the fact that it takes place post facto, also is consistent with its characterization as an attempt to deal with already-known unpleasant outcomes. Finally, the fact that this estimate shift seems to be particularly evident in people with high need for control further supports its characterization as a self-regulatory mood control tactic.

NOTES

1. This is a translation by the author of the original Hebrew text.
2. Mordechai decided to withdraw his candidacy shortly before the election.

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