

# Affective Impact of Close Counterfactuals: Implications of Possible Futures for Possible Pasts

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Close outcomes have been shown to influence counterfactual thoughts and affective reactions. Not quite achieving a goal can be particularly disheartening, and just making it can be particularly uplifting. Prior research (Medvec, Madey, & Gilovich, 1995; Medvec & Savitsky, 1997) has demonstrated a satisfaction reversal: People who just miss a better outcome (e.g., losing by 1 point) actually feel worse than those who were not as close (e.g., losing by 10 points). It was hypothesized that this effect should depend critically on whether there are future possibilities. In Study 1, analyses of newspaper articles showed that reactions to a close game depended on whether it was the first or last game of a series. Study 2 demonstrated a new type of satisfaction reversal: At halftime, people felt better when their team was down by 1 point than if their team was up by 1 point. It is suggested that finality evokes contrast effects and that future possibilities evoke assimilation. © 2001 Elsevier Science

How does it feel to “come close” or to “just miss”? How does a team feel after winning or losing in the last seconds of a game? Who feels better—a student who almost achieves a higher grade or one who just barely makes the grade? These feelings are determined, in large part, by the counterfactual alternatives that are readily apparent in these situations. It is easy to imagine that these events could have turned out otherwise, and this influences affective reactions (for a review, see Roese & Olson, 1995).

Medvec and Savitsky (1997) demonstrated that when we almost reach a cutoff point, as when a student receives a score of 89%, the salience of the counterfactual outcome, “I could have received an A,” makes us feel worse than if we were not as close such as when we receive a score of 85%. This is particularly intriguing because it demonstrates a *satisfaction reversal*: People who perform better actually feel worse. For example, Olympic silver medalists, who focus on not “winning the gold,” feel worse than bronze

medalists, who are happy just to have won any medal (Medvec, Madey, & Gilovich, 1995).

These reversals constitute a special case of the *affective contrast effect* (Markman, Gavanski, Sherman, & McMullen, 1993; Roese, 1994; Sanna, Turley-Ames, & Meier, 1999). Contrast effects occur when judgments are displaced away from the counterfactual comparison standard. The individual who just misses a better grade has a highly salient upward counterfactual, which evokes negative affect due to the contrast between what is and what could have been.

Recently, however, research in counterfactual thinking has demonstrated not only affective contrast but also affective *assimilation* (Markman & Tetlock, 2000; McMullen, 1997; McMullen & Markman, 2000). Assimilation effects occur when judgments are pulled toward the counterfactual comparison standard and are exemplified by statements such as “that was too close for comfort,” suggesting that a downward counterfactual can be unpleasant, and “you almost did it,” suggesting that an upward counterfactual can be uplifting. In general, counterfactual thoughts carry a double meaning—it *could have* happened, but it *did not* happen. People may focus on either interpretation, and affect will differ accordingly.

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One recent example involves the American presidential election of 2000, one of the closest in history. Certainly, the contrast effect must play a role in the feelings of those involved. But does the closeness of the outcome serve *only* to increase the disappointment of the loser and the happiness of the winner? We think not. Of course, in a complex political event such as this, there are many factors at play (Tetlock, 1998). But one notion that consistently surfaces among political commentators is that the loser will be the presumptive nominee in the *next* presidential contest, whereas the winner will be vulnerable at that time due to the closeness of the first election (e.g., Fournier, 2000; Kramer, 2000). This type of temporal perspective taking plays an important role in psychology in general (for a review, see Karniol & Ross, 1996) and counterfactual thinking in particular.

Several counterfactual thinking studies have explicitly manipulated temporal perspective. For example, Miller and Gunasegaram (1990) found that later events in a sequence tend to evoke more counterfactual thinking, and thus more blame, than earlier events. Markman et al. (1993) showed that people preferred satisfaction-enhancing downward counterfactuals after playing a gambling game, but only if it was the last game they were to play; if they were to play again, then they were willing to make satisfaction-decreasing upward counterfactuals. Similarly, Boninger, Gleicher, and Strathman (1994) found that when people imagined doing poorly in a track meet, the negative affect from thinking that they could have performed better was mitigated when they focused on future races. These studies suggest that temporal perspective plays a role in our affective reactions to counterfactual thinking.

This is important because the studies demonstrating affective contrast have generally examined final outcomes. For example, the aforementioned research by Medvec and Savitsky (1997) looked at students' perceptions of their final grades of the semester. Of course, students receive individual grades throughout the semester, not just at the end. In our view, the final outcomes used in the counterfactual thinking literature present too narrow a view of the situations people encounter. We would argue that few of the outcomes people experience are final: A team will play other games, a student will take more exams, and an applicant will apply for other jobs. The many individual outcomes along the way are neither final nor conclusive, but they can suggest what the future may hold, especially when they are close outcomes.

Hsee and Abelson (1991; see also Hsee, Salovey, & Abelson, 1994) termed the expectation of future change *velocity* and formalized how the rate of change influences satisfaction. They demonstrated that satisfaction is a function not only of absolute position (e.g., "I have \$100") and displacement (e.g., "That's \$50 more than I expected to have") but also of the rate of change or velocity (e.g., "I am

increasing by \$50 each week"). When people expect improvements over time, they are more satisfied with their outcomes, and when they expect to do worse, they are less satisfied.

By examining close counterfactuals in the context of future possibilities, a new perspective emerges. Close upward counterfactuals suggest that better possibilities are easily attainable, for example, "I almost did it, I will do it next time." Likewise, close downward counterfactuals suggest that worse possibilities may be unavoidable, for example, "I almost failed, I could fail next time." In effect, close counterfactuals suggest that it easily could have gone either way and that future outcomes may change.

With this reasoning, we formulated two basic hypotheses. First, we expect timing to moderate the impact of the counterfactual, such that affective assimilation should occur for early outcomes but, as others have found, affective contrast should occur for final outcomes. Second, under the right conditions, the assimilation effect should be strong enough that we expect a satisfaction reversal: Those who narrowly win should actually feel worse (e.g., "that was bad, we almost lost") than those who narrowly lose (e.g., "that was good, we almost won"). To evaluate these hypotheses, we examined reactions to sporting events, which have clear goals, quantitative measures of performance, and early as well as final outcomes.

## STUDY 1

Our first hypothesis is that timing should moderate the impact of the counterfactual. For a final outcome, such as the deciding game of a series, we expect to replicate Medvec et al.'s (1995) satisfaction reversal: Losing by just a few points should be worse than losing by a lot. However, for the first in a series of games, we expect the opposite pattern: It should be better to lose by a small margin than by a large margin. Thus, we hypothesize a Time X Closeness interaction.

### *Method*

Coders analyzed newspaper articles about the National Basketball Association (NBA) playoff games between 1985 and 1998. All articles appeared in the sports section of the *Billings Gazette*, but most were written by the Associated Press wire service. The playoffs in the NBA consist of series of best-of-five and best-of-seven matchups between teams. To examine our hypothesis, only articles about the first and last games in a series were analyzed.

The difference between the teams' scores was used to categorize the games into "close" and "blowout" games. Point differences were split into three equal parts, so that blowout games were classified as those in the highest third (difference between scores greater than or equal to 11

points) and close games were classified as those in the lowest third (difference between scores less than or equal to 5 points). Those in the middle third were excluded. The coders recorded positive and negative statements about the winning and losing teams. These statements generally included quotes from team members and coaches as well as opinions and statements by the writers. Although only statements about the outcomes of the games were relevant for our purposes, much of the articles consisted of play-by-play content; therefore, the written statements were categorized according to whether they were about the outcomes of the games or about the play during the games. One primary coder coded all of the articles. In addition, all of the articles were divided up and coded by five secondary coders. The interrater reliability between the primary coder and the secondary coders was computed by performing correlations between the number of statements in each category (e.g., positive statements about the winning team, negative statements about the winning team) for each article. Those correlations ranged from .75 to .85. All further analyses were performed only on the primary coder's ratings.

### Results and Discussion

Of all statements recorded, 73% were coded as play-by-play content and 27% were about the outcomes of the games. Only the latter statements—about the outcomes of the games—were used in the analyses. Because some articles were longer (e.g., those about the last game in a series, those later in the playoffs), the key dependent measure was computed as a proportion of the total statements recorded in those articles rather than the raw number of statements.

The complete 2 (Closeness: close vs blowout)  $\times$  2 (Time: first game vs last game)  $\times$  2 (Statement: positive vs negative)  $\times$  2 (Team: winning vs losing) analysis of variance (ANOVA) showed a significant four-way interaction,  $F(1, 108) = 3.45, p < .05$ . This four-way interaction was driven largely by one significant two-way interaction on negative statements about the losing team. For those statements alone, the hypothesized Time  $\times$  Closeness interaction was significant,  $F(1, 108) = 5.1, p < .05$ . This interaction shows that losing teams received more negative statements when they lost the first game in a blowout (11.8%) than when the game was close (8.3%), but this pattern reversed for the last game, where they received more negative statements for losing a close game (9.8%) than for losing a blowout (9.3%). The same interaction did not reach statistical significance for positive statements about winning teams,  $F(1, 108) = 1.3, n.s.$ , although the pattern of means was as expected (Table 1). The reason why this pattern was significant for losing teams but not winning teams is unclear, but it suggests that the upward counterfactual had more impact than the downward counterfactual, which is consistent with previous research (Medvec & Savitsky, 1997).

TABLE 1  
Coded Newspaper Statements

	First game	Last game
Positive statements about the winning team		
Close	11.2	18.5
Blowout	13.1	18.2
Negative statements about the losing team		
Close	8.3	9.8
Blowout	11.8	9.3
Positive statements about the losing team		
Close	0.3	2.4
Blowout	0.2	2.3
Negative statements about the winning team		
Close	0.7	0.9
Blowout	0.4	0.4

*Note.* Numbers are the mean percentages of affective statements about the outcome of the game per article.

To substantiate the hypothesized link between first games and affective assimilation (e.g., positive reactions to almost winning) and last games and affective contrast (e.g., negative reactions to losing a close game), quotes from players and coaches that included both counterfactual and affective statements were categorized by first or last games. For example, in the 1995 Eastern Conference semifinals, New York center Ewing said that “this was worse than last year because we had it won this time” after losing to Indiana in the last game of the series. This is an example of affective contrast because an upward counterfactual (“we had it won”) is expressed along with negative affect (“this was worse than last year”). After losing the first game of a series against Los Angeles in 1987, Seattle Coach Bickerstaff said, “I think we did a great job of hanging in there. The guys who have been getting it done for us had the shots but didn’t make them. I’ll take that situation any day.” This was coded as affective assimilation because an upward counterfactual (“had the shots but didn’t make them”) is expressed along with *positive* affect (“I’ll take that situation any day”). A total of 35 statements were found in the articles that met our criteria of including both a counterfactual and an affective statement. For last games, 15 of the statements showed contrast and 6 showed assimilation; for first games, 5 statements showed contrast and 9 showed assimilation,  $\chi^2(1) = 4.4, p < .05$ .

### STUDY 2: TWO TYPES OF SATISFACTION REVERSALS

Study 1 demonstrated our hypothesized Time  $\times$  Closeness interaction and provided some direct evidence that although affective contrast is more likely to occur after the last game of a series, affective assimilation is more likely to occur after the first game. However, the strongest evidence for our hypothesis would be a type of satisfaction reversal in

which a team that narrowly loses actually feels *better* than a team that narrowly wins.

Medvec & Savitsky (1997) demonstrated one type of satisfaction reversal in which a team that loses by 1 point feels worse than a team that loses by more points. In this type of *contrast-based satisfaction reversal*, although both teams lose the game, the team that objectively performed better actually feels worse due to the frustration of the close game, for example, “We could have won the game, but we lost.” Consider, however, the impact of a close game at halftime. A team that is down by 1 point sees an opportunity, for example, “We almost have the lead, we can win this game.” The team that is narrowly ahead at halftime sees a threat, for example, “We could lose this game.” In this *assimilation-based satisfaction reversal*, the losing team feels better than the winning team.

Participants in Study 2 read descriptions of a basketball game that followed the action either up to the end of the first half or from the beginning of the second half up to the end of the game. It was hypothesized that those reading about the end of the game would show the contrast-based reversal, whereas those reading about the first half of the game would show the assimilation-based reversal.

### Method

A total of 70 Montana State University–Billings undergraduate psychology students read a one-page play-by-play account of one half of a college basketball game from the perspective of a fan of one of the two teams. They were randomly assigned to one cell of a 2 (Team: winning vs losing)  $\times$  2 (Closeness: close vs blowout)  $\times$  2 (Time: first half vs second half) between-subjects design. In the play-by-play account, the game started out tied (0–0 for the first half, 40–40 for the second half), but one team took a small lead. In the blowout version, the lead increased throughout the half and ended up with a 15-point difference (44–29 for the first half, 84–69 for the second half). In the close version, the team that was behind took a 1-point lead, only to see it lost when the other team made a last-second shot.

The last lines of the close version of the play-by-play account were as follows:

Red brings it down the court with time running out, and Reynolds of Red shoots from the baseline. It hits the rim and bounces 4 feet into the air just as the buzzer sounds and then goes in the basket.

The [game] [first half] ends with just a one-point difference.

All participants then answered several questions about their feelings after reading about the game. They indicated, on a 9-point scale, the extent to which they were dissatisfied–satisfied, sad–happy, depressed–elated, frustrated–excited, and disappointed–relieved. They then wrote a free response about their general thoughts about the game. Next, as a manipulation check, they rated the closeness of the game and then wrote another free response with their thoughts about the closeness of the game.

TABLE 2  
Affective Reactions to a Basketball Game

	First half	Second half
Fan of winning team		
Close	4.9	8.1
Blowout	7.2	7.5
Fan of losing team		
Close	6.4	2.9
Blowout	3.8	3.9

### Results and Discussion

The manipulation check showed that the close games were indeed perceived to be closer (mean of 1.5 on a scale of 1 to 9) than the blowout games (mean of 6.0),  $t(67) = 13.0$ ,  $p < .0001$ . In addition, all affect adjectives were highly correlated ( $r$ s ranged from .73 to .89) and were averaged to form one overall affect score.

The three-way ANOVA on affect showed a significant main effect of Team (fans of the winning team felt better than fans of the losing team),  $F(1, 62) = 123.0$ ,  $p < .0001$ ; a significant Team  $\times$  Time interaction (fans of the winning team felt better than fans of the losing team, but only at the end of the game, not at halftime),  $F(1, 62) = 52.6$ ,  $p < .0001$ ; a significant Team  $\times$  Closeness interaction (fans of the winning team felt better than fans of the losing team, particularly if the game was a blowout),  $F(1, 62) = 11.8$ ,  $p < .05$ ; and the hypothesized Team  $\times$  Closeness  $\times$  Time interaction,  $F(1, 62) = 44.8$ ,  $p < .0001$  (see Table 2 for all means).

The three-way interaction is best understood by considering the specific assimilation- and contrast-based predictions. There are two hypothesized contrast-based reversals. The first is that the losing team should feel better if the second half was a blowout compared to a close game. These means (3.9 and 2.9, respectively) were significantly different,  $t(19) = 2.1$ ,  $p = .05$ . The second contrast-based reversal is that the winning team should feel better if the second half was close compared to a blowout. These means (8.1 and 7.5, respectively), were significantly different,  $t(16) = 2.2$ ,  $p < .05$ . In addition, there is one hypothesized assimilation-based reversal—that the team that was down by 1 point in the first half would feel better than the team that was up by 1 point. These means (6.4 and 4.9, respectively) were significantly different,  $t(18) = 2.7$ ,  $p < .05$ .

In support of affective contrast at the end of the game, those who lost close games expressed negative affect in their free responses, for example, “Sometimes I think it is harder to lose by a close amount because then you have to dwell on the what-ifs” and “I was sad because we only lost by 1 point. . . . Although we almost won there is no prize for the #2 team.” Those who won close games expressed pos-



itive affect, for example, "I was very excited when we won since the game became so close at the end. I was starting to get nervous and was relieved when our team pulled through at the end. We did great!" and "I don't want the scores to be too far apart. If we win, then it doesn't show how good of a team we are because they [our opponents] were easily beat." A few individuals actually expressed some disappointment that their teams won games by large margins, for example, "I would rather have Red come from behind and win with just a short amount of time left. Edge-of-your-seat games make me happier when my team wins."

In support of our assimilation-based satisfaction reversal, many individuals expressed positive affect even though they were down by 1 point at the half, for example, "because we are neck-and-neck, I know we have the possibility to win," "really excited at this game because it was so close—we have a chance to win," "at least they are within 1." On the other hand, many individuals expressed negative affect when their teams were winning by just 1 point at the half, for example, "feel frustrated that the Red team seems to be falling behind" and "I wish it were a farther point spread because being this close, it could go either way."

We performed a similar coding and analysis of these statements as in Study 1. Two coders examined free responses to the question that asked participants to describe their thoughts about the closeness of the game and counted only explicit affective statements (e.g., excited, happy, sad, disappointed). Only responses from those 40 participants who read about a close game were coded; therefore, positive statements from the losing team would be assimilation, positive statements from the winning team would be contrast, and so forth. Of these 40 participants, 22 made explicit affective statements in their free responses. There was 92% agreement between the coders initially, and disagreements were resolved through discussion. Consistent with hypotheses, there were 10 assimilation and 4 contrast statements in the first half but 2 assimilation and 6 contrast statements in the second half,  $\chi^2(1) = 4.4, p < .05$ .

## GENERAL DISCUSSION

Study 1 found that reactions to close outcomes depend on whether there are future possibilities. For the last game of a series, the frustration of coming close is quite powerful because the season is now over, for example, "We could have won, but we did not." Our analyses of newspaper articles showed that losing a close game is actually perceived to be *worse* than losing a blowout. On the other hand, when there are future possibilities, close outcomes have the opposite effect because the focus no longer is on what could have happened but rather on what can happen, for example, "We almost beat them in the first game, maybe we can win the next one." When it was the first game of a series rather than the last game, it was *better* to lose a close game than to

lose a blowout. Study 2 demonstrated this phenomenon in an even more striking way: Losers felt better than winners. At halftime, people felt better when their team was down by 1 point than when it was up by 1 point.

Although previous research has demonstrated that thinking about the future can mitigate the negative affect derived from counterfactual thinking (Boninger et al., 1994), we have clarified and expanded this notion in two respects. First, by analyzing these situations in terms of upward and downward comparisons, it is clear that counterfactual thinking does not result solely in negative affect. Thinking about the future can both decrease the usual negative affect from upward counterfactual thinking (e.g., "next time I can do better") and decrease the usual positive affect from downward counterfactual thinking (e.g., "I should be careful, that could happen next time").

Second, by examining these effects in the context of assimilation and contrast, we have attempted to place these effects into a general theoretical framework. By doing so, we have shown that thinking about the future not only can dilute affective reactions but also can actually reverse them. In other words, our results show clear evidence of assimilation effects, not merely a weakening of the contrast effect, as Boninger et al. (1994) demonstrated.

Future research might be directed toward discovering other moderating factors that influence the interpretation of the counterfactual. Recently, social comparison researchers have focused on the possibility that upward comparisons can actually be enhancing and inspiring if, by comparing oneself to such outstanding individuals, one is led to believe that similar successes for oneself are also attainable. Major, Testa, and Bylsma (1991), for example, concluded that the impact of an upward comparison target was positive in studies in which participants viewed their own performance as controllable and, thus, viewed future success as attainable (e.g., Meichenbaum, 1971; Testa & Major, 1990), whereas the impact of superior others was negative in studies in which participants viewed their own performance as uncontrollable and, thus, viewed future success as unattainable (e.g., Salovey & Rodin, 1984; Tesser & Paulhus, 1983). Perhaps most impressively, Lockwood and Kunda (1997; see also Smith, 2000) recently found that role models ("superstars") were most likely to affect self-views when they were considered relevant and, furthermore, that relevant superstars provoked self-enhancement and inspiration when their success seemed attainable but provoked deflation when their success seemed unattainable.

In turn, these ideas have important implications for understanding the relationship between counterfactual thinking and affective experience. McMullen (1997) suggested that affective assimilation is more likely to occur when an individual's attention is focused more on the counterfactual than on the actual outcome. To the extent that individuals perceive themselves to be on a trajectory (cf. Hsee &

Abelson, 1991; Hsee et al., 1994) toward either a desired or an undesired end state—one that is highly and plausibly attainable—ffective assimilation is quite likely to occur because attention will be more focused on the counterfactual outcome. On the other hand, more static outcomes—outcomes that are perceived as uncontrollable, nonrepeatable, and lacking trajectory—should be more likely to invoke affective contrast because attention will be relatively more focused on the factual outcome.

Future research may also examine whether upward or downward counterfactuals are more prone to assimilation effects. We speculate that downward counterfactuals, when they are capable of producing fear about what could have happened, may elicit assimilation more readily. Almost being killed in a car accident seems likely to provoke negative affect, whereas almost avoiding an accident seems unlikely to produce much positive affect. Perhaps negative outcomes, whether factual or counterfactual, tend to draw attention (Taylor, 1991), and this makes contrast more likely for upward counterfactuals and assimilation more likely for downward counterfactuals.

On the other hand, previous research has more often focused on the affect-enhancing capabilities of upward counterfactuals. For example, Boninger et al. (1994) found that simulating positive future events diminished negative affect, and Roese (1994) found that upward counterfactuals improved future performance but did not lead to negative affect. The difference here is that these studies had people explicitly generate counterfactuals. Perhaps people *intentionally* use upward assimilation to improve affect via hope, for example, “it’s OK, I can do better next time” (Taylor & Lobel, 1989), but the vivid nature of certain downward counterfactuals *automatically* attracts attention and produces assimilation, for example, “I can’t believe it, I could have been killed!”.

To conclude, we return to the example of the close presidential election. For several weeks, although George W. Bush had a lead of a few hundred votes over Albert Gore, Jr., the election was not finalized due to a recount that could have made Gore the president. In our view, during this time, Gore and his supporters may have actually felt *better* than Bush and his supporters, even though Bush held the narrow advantage. The logic is that Bush had more to lose—he was the winner, but that could have changed. On the other hand, Gore, as the loser, could not have done any worse, and he actually had a chance to win in the end. Of course, we would not suggest that our hypothesis explains this complex political drama fully. We do suggest, however, that many events in real life share similar elements: A goal is within reach, the situation is still in flux, and the future looms ahead. Under these conditions, those who presently maintain a narrow edge are faced with the future possibility of failing, whereas those who are narrowly behind see an opportunity for succeeding.

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