
All Our Troubles Seem So Far Away: Temporal Pattern to Accessible Alternatives and Retrospective Team Appraisals

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Three studies tested the hypothesis that thoughts about alternatives become increasingly accessible over time, leading poor outcomes to feel subjectively farther away and less inevitable. This subjective temporal distance bias was obtained even though actual time since poor and good outcomes was identical. In Study 1, participants who recalled distant poor team outcomes thought of alternatives easily and outcomes felt farther away and less inevitable. Thoughts about outcomes were most easily accessible after good outcomes, which felt closer and more inevitable. In Study 2, with measures obtained immediately or at a later time on a negotiation task, changes over time occurred primarily for poor team outcomes. In Study 3, team performance on an investment task indicated it is whether alternatives are thought of easily, not thought content, that produces this effect. Discussion centers on temporal appraisals, other temporal biases, and teams.

Keywords: *accessibility experiences; mental simulation; debiasing; hindsight bias; teams*

In their well-known tune *Yesterday*, Lennon and McCartney (1966) referred to how many of life's travails and tribulations can sometimes appear so distant. But can the past be distorted so that problems and negative events actually seem farther away? Does this allow people to deal with adversity and maintain a favorable outlook? Research on subjective temporal appraisals (Ross & Wilson, 2002; Wilson & Ross, 2001) supports the idea that people are motivated to maintain favorable self-regard by viewing negative past experiences as farther away than positive past experiences. We propose and test

the previously unexamined hypothesis that thoughts about alternatives become increasingly accessible over time, leading poor team outcomes to feel subjectively farther away and less inevitable. Our studies coincide with hindsight bias research (Christensen-Szalanski & Willham, 1991; Hawkins & Hastie, 1990) and with that on accessibility experiences (Schwarz et al., 1991) indicating that ease of thinking about alternatives or outcomes can influence it (Sanna, Schwarz, & Small, 2002a). We report three studies examining this subjective temporal distance bias using multiple contexts, manipulations, and measures.

RETROSPECTIVE SUBJECTIVE TEMPORAL DISTANCE BIAS

People are biased in their judgments of the subjective temporal distance of past events that have negative implications for self-worth versus equally distant past events that have positive implications for self-worth. Temporal self-appraisal theory (Ross & Wilson, 2002; Wilson & Ross, 2001) proposes that this private, intraindividual,

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retrospective temporal distancing phenomenon works because past selves can be regarded as analogous to other persons. People, for instance, frequently promote associations with successful other persons and dissociate from unsuccessful others (Cialdini, 1989; Cialdini et al., 1976; Snyder, Lassegard, & Ford, 1986). A classic example of this is reporting a sports victory as “we won” and a defeat as “they lost” (Cialdini et al., 1976). The underlying motive for these effects is impression management or a desire to maintain high self-regard (Cialdini, 1989; Tesser, 1988). Applied to temporal self-appraisals, people can similarly (a) enhance past selves that already feel close and disparage past selves that feel far (Wilson & Ross, 2001) or (b) regard unfavorable past selves as farther away than favorable past selves (Ross & Wilson, 2002). In short, subjective temporal distance can serve as an independent or dependent variable, with the latter being the focus of our studies. Both routes could allow a person to feel good about the present (see also Albert, 1977; Wills, 1981).

Of importance, at issue are subjective feelings of temporal distance, not actual calendar or clock time. Feelings of subjective distance can differ even though actual time since events is constant. For instance, both failing and succeeding athletes can be aware of events occurring precisely 1-month prior, but temporal self-appraisal theory proposes that poor outcomes may nonetheless feel more remote (Ross & Wilson, 2003). This follows other research indicating that people’s experiences of time (Brown, Rips, & Shevell, 1985; Schacter, 1996; Walker, Skowronski, & Thompson, 2003) depend on more than just objective distance. Given the increasing interest in teams and other groups across diverse areas such as social psychology, management, and organizational behavior (Ancona, Okhuysen, & Perlow, 2001; Guzzo & Dickson, 1996; Parks & Sanna, 1999; Stangor, 2003), we chose as a context for our research people’s responses to team outcomes. Some support exists for interpersonal distancing among groups and teams. For example, Schlenker and Miller (1977) found that people whose performances were combined into team decisions later distanced themselves from other group members after unfavorable team outcomes accrued (see also Mussweiler, Gabriel, & Bodenhausen, 2000). No extant research yet examines whether team members also use intertemporal distancing as another tactic.

ACCESSIBLE THOUGHTS ABOUT ALTERNATIVES OR OUTCOMES

There may be several mechanisms underlying the subjective temporal distance bias. We propose and test the novel hypothesis that whether thoughts about alternatives or outcomes are brought to mind easily influences when past events are viewed as subjectively close or

far and more or less inevitable. This idea relies on both motivational and cognitive components and connects subjective distance to the hindsight bias, another retrospective bias. Support for motivational interpretations of subjective distance comes from findings that the bias is stronger for high than low self-esteem persons and for personal than acquaintances’ past events (Ross & Wilson, 2002). The hindsight bias also can be self-serving (Campbell & Tesser, 1983; Hölzl, Kirchler, & Rodler, 2002; Mark & Mellor, 1991). For instance, Louie, Curren, and Harich (2000; see also Louie, 1999) found that the hindsight bias is influenced by the valence of obtained outcomes. Teams who learned of positive outcomes displayed the hindsight bias and took credit for successes (they “knew all along” that good things would happen), whereas teams who learned of unfavorable outcomes did not display the hindsight bias and denied blame for failures. We suggest that feelings of subjective distance and inevitability are affected similarly: Poor outcomes that are perceived as less inevitable may correspondingly seem subjectively farther away.

By what mechanisms might this occur? Hindsight bias research has shown that feelings of inevitability are influenced by how easily thoughts about outcomes or alternatives are brought to mind. When thoughts about outcomes (what happened) come to mind easily, outcomes seem inevitable; when thoughts about alternatives (what might have happened instead) come to mind easily, outcomes seem less inevitable (Sanna et al., 2002a; Sanna, Schwarz, & Stocker, 2002b). If subjective distance and hindsight bias are related, then easily thinking about outcomes also may make them feel close, and thinking about alternatives may make them feel far. But good and bad events can differ in impact. Negative events are processed deeply, require explanation, and are subject to self-presentation concerns (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001; Schwarz & Clore, 1996; Taylor, 1991). This could influence thought accessibility in at least two ways: (a) people may be motivated to discount bad outcomes by thinking about alternatives and this increases over time until they feel better and (b) thoughts about alternatives may become naturally more accessible over time as the salience of the poor outcome fades. Each of these processes suggests the relative accessibility of thoughts about alternatives versus outcomes may change over time, serving as one mechanism underlying feelings of subjective distance and inevitability.

OVERVIEW OF THE RESEARCH

We hypothesize that thoughts about alternatives may come to mind more easily when distant team outcomes are poor, making them feel farther away and less inevitable, whereas thoughts about outcomes may come to mind more easily when distant team outcomes are good,

making them feel closer and more inevitable. To test this, we conducted three studies, one involving recalled real-life events and two laboratory studies. In Study 1, participants recalled real-life teams that they were members of in the distant past in which outcomes turned out well or poorly. They rated whether thoughts about outcomes or alternatives came to mind easily and feelings of subjective distance and outcome inevitability were assessed. Thus, we hoped to provide initial evidence for our hypotheses and to demonstrate that effects can be obtained when looking back on real-life events. In Study 2, using a laboratory negotiation task, we conceptually replicated and extended Study 1 while enabling greater control over the type of outcome and temporal distance. Teams received feedback indicating bad or good performance and measures were obtained immediately or 3 months later.

Study 3 varied thought ease and numbers factorially on an investment task in which team members interacted face to face. This took advantage of ideas about accessibility experiences (ease of thought generation) and accessible content (topic of thoughts) (Schwarz, 1998; Schwarz et al., 1991; Winkielman & Schwarz, 2001). Sanna et al. (2002a) found that the hindsight bias was increased when thinking about 10 alternatives (experienced as difficult) rather than only 2 (experienced as easy) (see also Sanna et al., 2002b). Finding it difficult to think of alternatives, people concluded there cannot be many, leading to effects opposite of thought content. We predicted that outcomes would feel farther away and less inevitable either when thoughts about alternatives are easy, or when thoughts about outcomes are difficult, to bring to mind; outcomes would feel closer and more inevitable either when thoughts about outcomes are easy, or when thoughts about alternatives are difficult, to bring to mind. This suggests that outcomes can feel retrospectively close or far irrespective of actual temporal distance, providing greater evidence for the role of accessibility experiences. In short, a consistent pattern of findings across the three studies using diverse settings, manipulations, and measures would provide strong support for our hypotheses.

STUDY 1: TROUBLES SEEM FAR AWAY

Our first study was designed to provide an initial test of our hypotheses linking accessibility of alternatives versus outcomes to subjective temporal distance and perceived inevitability. We asked participants to recall a real-life team that they were members of in the distant past. In between-participants fashion, they recalled either a good or poor team outcome that occurred 2 years ago. Participants rated whether the outcome itself or alternative outcomes were thought of easily and subjective tem-

poral distance to the outcome and outcome inevitability were measured. We predicted the following:

Hypothesis 1:

Thoughts about alternative outcomes come to mind relatively easier when distant team outcomes are poor, but thoughts about outcomes come to mind easier when distant team outcomes are good, even when actual temporal distance is constant.

Hypothesis 2:

Poor team outcomes feel subjectively farther away than good team outcomes, even when actual temporal distance is constant.

Hypothesis 3:

Poor team outcomes seem less inevitable than good team outcomes, even when actual temporal distance is constant.

Method

PARTICIPANTS

Seventy-three MBA students participated as part of a class assignment and were randomly assigned to outcome conditions. They had an average of 9 years work experience.

PROCEDURE

Participants filled out questionnaire booklets during regularly scheduled class sessions and were assured anonymity. The booklet was composed of activities from several researchers that were not pertinent to our study and our measures were included.

TEAM OUTCOMES

Participants were asked to recall a real-life team they were members of in the distant past (2 years ago) in which either unsuccessful (poor condition) or successful (good condition) outcomes accrued. A team was described as "a group of people who are interdependent with regard to skills, resources, or information, and who combine their efforts to achieve a common goal, objective, or decision" (see Naquin & Tynan, 2003, p. 334; Orasanu & Salas, 1993). Manipulation checks and dependent measures were presented in counterbalanced order.

MANIPULATION CHECKS

Participants evaluated the valence of recalled team outcomes on two 21-point scales (1 = *unsuccessful*, 21 = *successful*; 1 = *very poor*, 21 = *very good*). Using an open-ended response format, participants also indicated to the best of their ability the precise time that they became aware of the team outcome they recalled.

DEPENDENT MEASURES

Accessibility of thoughts. Thought accessibility measures were constructed by adapting ideas from prior research (Sanna et al., 2002a; Schwarz et al., 1991). Participants read,

When considering past experiences, people often have thoughts about outcomes (what actually happened) as well as possible alternatives to outcomes (what might have happened instead). With the team outcome you recalled in mind, please indicate how easy it is to bring to mind thoughts about the outcome and alternatives.

They responded to two 21-point scales, one for the outcome and one for alternatives (1 = *difficult to bring to mind*, 21 = *easy to bring to mind*).

Subjective temporal distance. Subjective distance measures were adapted from prior research (Ross & Wilson, 2002; Wilson & Ross, 2001). Participants read, "Past experiences can sometimes feel close or far away, irrespective of how long ago they actually occurred. With the team outcome you recalled in mind, please indicate how close or how far away that outcome feels to you." They responded to two 21-point scales (1 = *feels very near*, 21 = *feels very distant*; 1 = *feels very close*, 21 = *feels very far away*).

Outcome inevitability. Outcome inevitability measures also were adapted from prior research (Louie, 1999; Mark & Mellor, 1991). Participants were asked to "think back to a time before the team outcome was known" while responding to two 21-point scales (1 = *I wouldn't have predicted the outcome*, 21 = *I would have predicted the outcome*; 1 = *the outcome feels in doubt*, 21 = *the outcome feels inevitable*).

Results and Discussion

MANIPULATION CHECKS

The two outcome valence questions were reliably correlated, $r(71) = .83$, $p < .01$, and averaged. Participants perceived recalled outcomes as worse in the poor ($M = 6.78$, $SD = 6.20$) than good ($M = 15.22$, $SD = 6.97$) team outcome condition, $F(1, 71) = 29.92$, $p < .01$, $\eta^2 = .29$. Of importance, recalled poor ($M = 2.22$, $SD = 0.28$) and good ($M = 2.27$, $SD = 0.33$) outcomes did not differ on the basis of when they became known to participants, $F < 1$, $\eta^2 < .01$. Thus, participants recalled poor and good outcomes as we requested and the recalled outcomes occurred equivalently about 2 years ago. Our manipulations were effective.

DEPENDENT MEASURES

Means and standard deviations are presented in Table 1.

TABLE 1: Accessibility of Thoughts, Subjective Temporal Distance, and Outcome Inevitability by Team Outcome for Study 1

Measures	Team Outcome			
	Poor ^a		Good ^b	
	M	SD	M	SD
Accessibility of thoughts				
Difference	-8.34	9.61	5.52	9.32
Outcomes/alternatives	7.86/ 16.20	9.41/ 9.81	14.89/ 9.37	8.86/ 9.78
Subjective temporal distance	16.39	7.73	8.66	6.99
Outcome inevitability	9.56	8.32	14.74	7.99

NOTE: Difference $M = (\text{outcomes} - \text{alternatives})$. Component outcome/alternative M s and SD s, respectively, are presented separately within each cell for interested readers.

a. $n = 39$.

b. $n = 34$.

Accessibility of thoughts. We predicted that thoughts about alternatives are relatively easier to bring to mind when poor team outcomes are viewed from a distance. To assess this, we constructed an index of thought accessibility by subtracting ease of thinking about alternatives from ease of thinking about outcomes ratings (i.e., positive values indicating outcomes and negative values indicating alternatives are easier to bring to mind); these two measures were reliably correlated, $r(71) = -.75$, $p < .01$. Supporting Hypothesis 1, thoughts about alternatives were easier to bring to mind after poor outcomes, but thoughts about outcomes were easier after good outcomes, $F(1, 71) = 38.81$, $p < .01$, $\eta^2 = .35$.¹

Subjective temporal distance. The two subjective temporal distance questions were reliably correlated, $r(71) = .70$, $p < .01$, and averaged. Supporting Hypothesis 2, participants felt subjectively farther away from poor than good team outcomes, $F(1, 71) = 19.80$, $p < .01$, $\eta^2 = .21$.

Outcome inevitability. The two outcome inevitability questions were reliably correlated, $r(71) = .69$, $p < .01$, and averaged. Supporting Hypothesis 3, participants felt that poor team outcomes were less inevitable than good team outcomes, $F(1, 71) = 7.29$, $p < .05$, $\eta^2 = .09$.

In summary, results support our hypotheses that ease of thinking about alternatives versus outcomes underlies subjective temporal distancing and outcome inevitability. This idea is bolstered further by significant relations between measures of accessibility of thoughts (index) and subjective distance, $r(71) = -.53$, $p < .01$, and thoughts and outcome inevitability, $r(71) = .37$, $p < .01$. When alternatives were brought to mind easily, outcomes seemed farther away and less inevitable, but when outcomes were brought to mind easily, outcomes seemed closer and more inevitable. It is important to emphasize that this occurred even though actual time since

recalled outcomes became known to participants was equivalent (see Manipulation Checks). The study also extends research on subjective distance (Ross & Wilson, 2002) to reactions to team outcomes.

STUDY 2: HALF WHAT WE USED TO BE

Study 1 provided initial support for our hypotheses across settings and in real-life contexts. However, one possible limitation of Study 1 was that we relied on participants' abilities to recall past events and we did not specify which domain of team outcomes to recall. On one hand, one way to look at our results is that they were particularly impressive because they were obtained despite this uncontrolled variability; on the other hand, the procedures of Study 1 could have introduced other unknown factors that might have affected our results. Study 2 was designed to address this issue by conceptually replicating Study 1 in a controlled laboratory setting. We manipulated both time of ratings and valence of outcomes while examining additional issues.

Study 1 focused on only distant team outcomes. Study 2 also assessed perceptions of recent outcomes. Teams took part in a laboratory negotiation task, with measures obtained immediately after feedback or at a later time. The design of Study 2 was a 2 (outcome: good, poor) \times 2 (time: immediate, distant) between-participants factorial. Including immediate conditions enabled us to further determine the nature and direction of effects; for example, from a distance, poor team outcomes can feel farther away, good team outcomes can feel closer, or both feelings can occur. Extending Hypotheses 1 to 3, we predicted the following:

Hypothesis 4:

Poor team outcomes (a) bring to mind alternative thoughts more easily, (b) feel subjectively farther away, and (c) seem less inevitable at a distance than immediately after feedback.

Hypothesis 5:

Good team outcomes (a) bring to mind outcome thoughts more easily, (b) feel subjectively closer, and (c) seem more inevitable at a distance than immediately after feedback.

Method

PARTICIPANTS

Participants were 120 students enrolled in introductory management courses who received extra credit.

PROCEDURE

Participants were randomly assigned to negotiating teams and to team outcome and time of measurement conditions.

TEAM SALIENCE

Team salience was induced using procedures modified from prior research (Gelfand & Realo, 1999). Participants arrived at the laboratory in groups of 12 and were randomly assigned to three-person "negotiation teams." Teams were told they would be either buying or selling advertising (for *The Gallery* or *NDC Printing*, respectively). Each team first met in separate rooms for 10 min, at which time they were given tags specifying a team name and members got acquainted. After this, teams were separated and each member was brought to individual rooms with computer terminals to await further instructions.

NEGOTIATION TASK

The negotiation task was modified from prior research (see Gelfand & Realo, 1999) and was administered by computer. Negotiations involved four issues: (a) discount—discount off advertisement cost, (b) colors—number of colors in the advertisement, (c) billing—when the bill required payment, and (d) circulation—number of people receiving the advertisement. Each issue had five options with associated monetary values. Issues, options, and values were depicted in charts given to each participant (see Gelfand & Realo, 1999, Appendix A, p. 735). Participants tried to maximize their team's profits. They were told opposing teams had identical charts, but as in real-life negotiations, they would not be told the other team's values.

Computers were said to be networked to team members and to a randomly selected opposing team. Participants made proposals from depicted options and were told that because they negotiated as a team, the average proposal made by members would be forwarded. Once entered, screens appeared with "Calculating Team Proposal" and then "Sending Team Proposal. Please Wait for Response." After a delay, a message appeared stating whether the other team accepted it. Unacceptable proposals included counteroffers, which participants could accept or reject. If rejected, participants made another proposal, which was then similarly submitted. If accepted, the next issue appeared. This continued until all four issues reached agreement. Participants were told that issues were accepted when at least two team members agreed (i.e., by majority).

Unknown to participants, computers were not networked; they were programmed to respond to their own selections. Team impressions were maintained by team salience manipulations and by the fact that participants believed team proposals (i.e., averages) were forwarded and any counteroffers responded to this; also, participants believed offers were accepted when team majority agreed. In reality, any counteroffers always matched or were less than participants' proposals, with specific val-

ues randomly determined. For example, a proposed 15% discount by *The Gallery* could elicit responses from *NDC Printing* of 15% (i.e., accept) or 10%, 5%, or 0% counteroffers. This continued for up to three rounds (maximum rounds unknown to participants), after which the opposing team's responses always matched and accepted their proposal. Also in reality, issues were accepted totally by participants' own responses, although they thought it was by majority.

TEAM OUTCOMES AND MANIPULATION CHECKS

Team outcomes were manipulated by combining framing (Louie, 1999) and (false) feedback (Sanna & Mark, 1995). After negotiations, participants read that the task had been used in prior research and there were norms indicating how well their team did relative to other teams. They were told that these norms had been entered into the computer and that their team's performance would be determined. Participants pressed the spacebar to begin calculations and, after a short delay in which "Calculating Team Performance" flashed on the screen, they read either that their team performed well and was in the top 25% (good condition) or poorly and was in the bottom 40% (poor condition).²

After feedback, participants responded to outcome valence manipulation checks similar to Study 1 but for the negotiation task. We also included two questions assessing participants' perceptions of themselves as a team and decision-making group (1 = *not at all*, 21 = *very much*). Finally, monetary amounts earned during negotiations were recorded.

DEPENDENT MEASURES

Subjective temporal distance and outcome inevitability measures were similar to Study 1 but referred to the negotiation task.

Thoughts. Participants listed thoughts about outcomes and alternatives. Modified from Study 1, they read,

When considering past experiences, people often have thoughts about outcomes (what actually happened) as well as possible alternatives to outcomes (what might have happened instead). While thinking about your team outcome, use the spaces below (the eight lines) to list as many thoughts about outcomes or alternatives as come to mind.

Once listed, participants coded whether thoughts referred to outcomes or alternatives by placing an "O" or "A" beside them, respectively.³ Prior research has used similar solicitation (Naquin & Tynan, 2003) and coding (Roese & Olson, 1995; Sanna, 1996). Listed thoughts should generally represent those that come to mind easily.

TIME OF MEASUREMENT

Dependent measures were assessed either during the same study session (immediate condition) or at a later time (distant condition). Distant participants were phoned and scheduled to meet in the laboratory approximately 3 months (82-86 days) after their original study session to complete the dependent measures. Three groups within each outcome condition were called at 3 months but were not included due to participant attrition.

Results and Discussion

Participants responded individually, and in actuality did not interact, so participant was the unit of data in a series of 2×2 analyses of variance (ANOVAs), with simple effects tests used to compare means. Results did not differ on the basis of role assignment (i.e., *The Gallery* or *NDC Printing*) and thus analyses were collapsed across this variable.

MANIPULATION CHECKS

The two outcome valence measures were reliably correlated, $r(118) = .67$, $p < .01$, as were the two questions assessing perceived teamness, $r(118) = .64$, $p < .01$. An outcome main effect revealed that participants perceived worse outcomes in the poor ($M = 8.47$, $SD = 7.78$) than good ($M = 13.95$, $SD = 7.48$) condition, $F(1, 116) = 15.47$, $p < .01$, $\eta^2 = .12$. Similar 2×2 ANOVAs also revealed no differences between study conditions in perceived teamness (overall $M = 16.55$, $SD = 7.21$) or in amount earned in negotiations (overall $M = \$5,295$, $SD = \$346$); for both variables, all F 's < 1.2 , $\eta^2 < .02$. Thus, participants perceived poor and good outcomes as we desired and any differences on the dependent measures are unlikely due to divergences on the latter two variables. Our manipulations were effective.

DEPENDENT MEASURES

Means and standard deviations are presented in Table 2.

Proportion of alternatives. To obtain generality, participants listed thoughts instead of simply rating thought accessibility as in Study 1. We predicted that alternatives would be easier to bring to mind when poor team outcomes were viewed from a distance. To assess this, we constructed an index using the proportion of thoughts devoted to alternatives (i.e., alternatives/total). There was only an interaction, $F(1, 116) = 6.36$, $p < .05$, $\eta^2 = .06$. Supporting Hypothesis 4a, higher proportions of thoughts about alternatives were listed at a distance (3 months later) than were immediately for poor team outcomes, simple effect $F(1, 56) = 9.12$, $p < .01$, $\eta^2 = .14$. In contrast to Hypothesis 5a, thought proportions did not

TABLE 2: Proportion of Alternatives, Number of Total Thoughts, Subjective Temporal Distance, and Outcome Inevitability by Time and Team Outcome for Study 2

Time and Measures	Team Outcome			
	Poor		Good	
	M	SD	M	SD
Immediate				
Proportion of alternatives	0.39	0.34	0.47	0.42
Number of total thoughts	4.97	1.64	5.00	1.68
Subjective temporal distance	5.70	6.83	6.21	6.72
Outcome inevitability	13.61	8.23	12.52	7.45
Distant				
Proportion of alternatives	0.68	0.40	0.41	0.36
Number of total thoughts	5.07	1.73	5.06	1.77
Subjective temporal distance	13.93	7.21	5.03	6.35
Outcome inevitability	7.43	7.62	14.00	7.07

NOTE: $n = 30$ per cell. Proportion of alternatives = (number of alternatives/number of total thoughts). The proportion of outcome thoughts is the obverse of the proportion of alternatives.

differ between time for good team outcomes, simple effect $F(1, 56) = 0.34, p = .56, \eta^2 < .01$.

Similar analyses of the number of total thoughts listed revealed that thought numbers did not differ by study conditions, all F s $< 1, \eta^2$ s $< .01$.⁴

Subjective temporal distance. The two questions assessing subjective distance were reliably correlated, $r(118) = .73, p < .01$, and averaged. Main effects indicated that both good and immediate outcomes were viewed as closer, $F(1, 116) > 8.10, ps < .01, \eta^2$ s $> .06$, qualified by an interaction, $F(1, 116) = 14.45, p < .01, \eta^2 = .11$. Supporting Hypothesis 4b, poor team outcomes felt subjectively farther away at a distance than immediately, simple effect $F(1, 56) = 14.45, p < .01, \eta^2 = .20$. In contrast to Hypothesis 5b, subjective distance did not differ between time for good outcomes, simple effect $F(1, 56) = 0.48, p = .49, \eta^2 < .01$.

Outcome inevitability. The two outcome inevitability questions were reliably correlated, $r(118) = .54, p < .01$, and averaged. A main effect indicated that good team outcomes felt more inevitable, $F(1, 116) = 3.91, p = .05, \eta^2 = .03$, qualified by an interaction, $F(1, 116) = 7.63, p < .01, \eta^2 = .06$. Supporting Hypothesis 4c, poor outcomes seemed less inevitable at a distance than immediately, simple effect $F(1, 56) = 9.06, p < .01, \eta^2 = .07$. In contrast to Hypothesis 5c, inevitability did not differ between time for good outcomes, simple effect $F(1, 56) = 0.62, p = .44, \eta^2 < .01$.

In summary, building conceptually on Study 1 in a controlled laboratory setting, participants after poor team outcomes listed higher proportions of thoughts about alternatives, felt subjectively farther away from outcomes, and their outcomes seemed less inevitable,

supporting Hypotheses 4a, 4b, and 4c.⁵ This was obtained using another measure of thought accessibility (listed thought proportions) and using a negotiating context, adding generality. Our hypotheses are additionally supported by associations between the proportion of alternatives and temporal distancing, $r(118) = .46, p < .01$, and between alternatives and inevitability, $r(118) = -.28, p < .01$. When more alternatives were listed, outcomes seemed farther away and less inevitable (conversely, when more outcome thoughts were listed, outcomes seem closer and more inevitable). This was true even though the total number of thoughts listed within conditions did not differ. Study 2 also provides an important clarification to Study 1 in that effects were obtained primarily in response to poor team outcomes (i.e., Hypotheses 5a-c was not supported).

STUDY 3: AN EASY GAME TO PLAY

A third study examined some final issues. First, Study 2 was constructed such that, from their perspective, participants believed they interacted in teams (as Manipulation Checks verified). But no interaction among team members actually took place. This gave us greater experimental control. In Study 3, we gave up some control but allowed face-to-face interaction among team members, enabling stronger generalizations of our hypotheses. Teams read a managerial case description and made stock purchasing decisions.

Second, we hypothesized that ease of bringing to mind thoughts about alternatives versus outcomes was an underlying mechanism. Study 1 found evidence for this when accessibility was measured on rating scales and Study 2 when differing thought proportions were listed. Although both may generally index thought accessibility, distinguishing further between thought ease and thought numbers is seen critically when ideas about accessibility experiences (ease of thought generation) and accessible content (topic of thoughts) are considered (see Schwarz, 1998). In Study 3, we provided a more direct test of this distinction by varying thought ease and thought numbers factorially.

Third, we wanted to tie together research on subjective temporal distance and hindsight bias even more directly. Hindsight bias research normally includes unknown outcome conditions, such as when making predictions (Christensen-Szalanski & Willham, 1991). In Study 3, we thus added a prediction control condition. The design of Study 3 was a 2 (thoughts-focus: outcome, alternative) \times 2 (thoughts-number: 2, 10) factorial, with three nonfactorial controls, all between participants. The two other nonfactorial control conditions were immediate and distant (each described below).

Because differences in Study 2 occurred primarily for poor performances (Hypothesis 4), this outcome alone

was used in Study 3. Extending Hypothesis 4, we predicted the following:

Hypothesis 6:

Poor team outcomes (a) feel subjectively farther away and (b) less inevitable at a distance when thoughts about alternatives are easy to bring to mind or thoughts about outcomes are difficult to bring to mind.

Hypothesis 7:

Conversely, poor team outcomes (a) feel subjectively closer and (b) more inevitable even at a distance when thoughts about outcomes are easy to bring to mind or thoughts about alternatives are difficult to bring to mind.

Method

PARTICIPANTS

One-hundred forty students enrolled in introductory marketing courses participated and received extra credit.

DESIGN AND PROCEDURE

Participants were paired in same-sex teams (70 pairs). They made stock investment decisions jointly but responded to the dependent measures individually. There were three nonfactorial controls and a factorial portion to our design, all between participants. The controls included prediction, immediate, and distant conditions. Prediction participants simply predicted their investment performance and did not receive any outcome information before completing the dependent measures during the study session.

Participants in the two other control conditions and those in the factorial portion of the design all received outcome information indicating that their stock investment decisions turned out poorly before completing the dependent measures. Participants in the immediate condition completed the measures during the study session, whereas those in the distant condition were called back to the laboratory 2 months later to complete the measures.

Participants in the factorial portion of the design were also called back 2 months later and were asked to list either 2 or 10 thoughts about either outcomes or alternatives before completing the measures.

TEAM DECISIONS AND OUTCOME

Teams assumed the role of investment managers and read a case description (Hayes, 1992) adapted from prior research (Louie, 1999). Company names and authentic identifying information were disguised. Participants read that the company offered a recycled motor-oil product that could be reused in various motor vehicles. The company devised ways to filter impurities out of the used oil, which would allow for an ecologically

sound product. Costs of the process made the price of the recycled product higher than nonrecycled types. Thus, the success of the company, and the value of the stock, depended on consumer responses to a product with ecological benefits but higher costs. The stock was said to be valued at \$17.50 per share.

Teams were given 10 min to discuss stock purchases among themselves. They could discuss things from the case description, or anything else. Teams made yes or no purchase decisions by checking boxes, without knowing whether outcome information would be forthcoming. As described, participants in all but the prediction condition received outcome information indicating their decision turned out poorly; that is, if teams decided to purchase, they learned the stock decreased in value to \$12 per share; if they decided against purchasing, they learned it increased to \$23 per share. As in prior research (Louie, 1999), whether stocks were purchased did not matter; only relative outcomes mattered.

MANIPULATION CHECK

For generality, all manipulation checks and dependent measures in Study 3 allowed for the possibility of neutral ratings. Participants in the immediate, distant, and factorial portion of the design received feedback (prediction participants did not) and rated decision outcomes on two 21-point scales ($-10 = \textit{very poor}$; $0 = \textit{neither poor nor well}$; $+10 = \textit{very well}$; and $-10 = \textit{very bad}$; $0 = \textit{neither bad nor good}$; $+10 = \textit{very good}$).

DEPENDENT MEASURES

Subjective temporal distance. Modified from Study 1, participants read, "Decisions can feel either close or far away, irrespective of how long ago they actually occurred. With your team's stock decision in mind, please indicate how close or how far away it feels to you." There were two 21-point scales ($-10 = \textit{feels very far}$; $0 = \textit{neither far nor close}$; $+10 = \textit{feels very close}$; and $-10 = \textit{feels very distant}$; $0 = \textit{neither distant nor near}$; $+10 = \textit{feels very near}$). All participants made purchase decisions, as described, but those in the prediction condition did not receive outcome information about stock performance.

Outcome inevitability. Participants in the prediction condition rated the degree to which they thought the stock decision would turn out poorly on two 21-point scales ($-10 = \textit{I predict it will not be poor}$; $0 = \textit{I think it's unpredictable}$; $+10 = \textit{I predict it will be poor}$; and $-10 = \textit{I predict it will not be bad}$; $0 = \textit{I think it's unpredictable}$; $+10 = \textit{I predict it will be bad}$). Other participants learned decisions turned out poorly and rated what they thought would have happened had they not known the outcome on two 21-point scales ($-10 = \textit{I would have predicted it would not be poor}$; $0 = \textit{I would have thought it's unpredictable}$; $+10 = \textit{I would have predicted it would be poor}$; and $-10 = \textit{I would have predicted it$

would not be bad, 0 = I would have thought it's unpredictable, +10 = I would have predicted it would be bad).

THOUGHTS-LISTING

The thoughts-listing task was modeled after prior research (Sanna et al., 2002a; Schwarz, 1998). Only participants in the factorial portion of the design listed thoughts before responding to the dependent measures. Modified from Study 2, outcome focus participants read, "After decisions, people often have thoughts about outcomes (what actually happened). With your team stock decision in mind, use the spaces below to list [2, 10, respectively] thoughts about the outcome." Alternative focus participants read, "After decisions, people often have thoughts about possible alternative outcomes (what might have happened instead)" and were asked to list 2 or 10 thoughts about alternatives.⁶ Within thoughts-focus, instructions varied only by whether participants were asked to provide 2 (2-thoughts condition) or 10 (10-thoughts condition) thoughts.

As a manipulation check, participants in the thoughts-listing conditions rated the degree of difficulty they had in listing thoughts on two 21-point scales (-10 = very difficult, 0 = neither difficult nor easy, +10 = very easy; and -10 = very hard, 0 = neither hard nor simple, +10 = very simple). Actual numbers of thoughts listed also were recorded.

Results and Discussion

Unlike in Study 2, team members in Study 3 interacted when making decisions. Thus, members' experiences were not completely independent, so the team (average of the pair) was used as the analysis unit.⁷ ANOVAs were conducted and planned contrasts (Rosenthal, Rosnow, & Rubin, 2000) were used to compare means.

MANIPULATION CHECKS

Except in the prediction condition, all participants received outcome information and rated its valence. All those who received this information found team decisions equally poor (overall $M = -5.68$, $SD = 4.01$), as indicated by ANOVAs and contrasts on the average of the two questions, $r(38) = .77$, $p < .01$, $F_s < 1.1$, $\eta^2_s < .01$. In the four thoughts-listing conditions, participants listed thoughts and rated their difficulty. Those in the 2-thoughts condition listed two thoughts ($M = 2.00$, $SD = 0.00$) and those in the 10-thoughts condition listed a mean of 7.79 ($SD = 2.42$).⁸ An average of the two thoughts-listing difficulty checks, $r(38) = .85$, $p < .01$, indicated that participants in the 10-thoughts condition also rated this task more difficult ($M = -5.11$, $SD = 5.50$) than those in the 2-thoughts condition ($M = 6.17$, $SD = 5.92$), $F(1, 36) = 39.06$, $p < .01$, $\eta^2 = .52$. All manipulations were effective.

TABLE 3: Subjective Temporal Distance and Outcome Inevitability by Thoughts-Listing (Focus and Number) and Controls for Study 3

Measure	Factorial Portion (Distant Thoughts-Listing)					
	Outcome Focus		Alternative Focus			
	M	SD	M	SD		
2 thoughts						
Subjective temporal distance	3.00	4.21	-5.12	3.80		
Outcome inevitability	2.25	5.32	-4.04	5.00		
10 thoughts						
Subjective temporal distance	-4.22	3.98	2.39	4.11		
Outcome inevitability	-3.51	5.21	3.31	5.42		
	Nonfactorial Controls					
	Prediction		Immediate		Distant	
	M	SD	M	SD	M	SD
Subjective temporal distance	3.25	4.20	1.50	4.08	-4.80	4.25
Outcome inevitability	-2.42	5.31	3.78	5.05	-3.66	5.19

NOTE: n = 10 teams per cell.

DEPENDENT MEASURES

Means and standard deviations are presented in Table 3.

Subjective temporal distance. The two subjective distance questions were reliably correlated, $r(68) = .70$, $p < .01$, and averaged. First, we conducted a 2 x 2 ANOVA on the factorial portion of the data, which revealed only an interaction, $F(1, 36) = 33.48$, $p < .01$, $\eta^2 = .48$. Participants who found listing alternatives easy (2-thoughts) or outcome thoughts difficult (10-thoughts) felt subjectively farther away (combined $M = -4.67$, $SD = 3.89$) from poor team investment decisions than did participants who found listing alternatives difficult (10-thoughts) or outcome thoughts easy (2-thoughts; combined $M = 2.69$, $SD = 4.16$), contrast $F(1, 36) = 33.40$, $p < .01$, $\eta^2 = .47$, supporting Hypotheses 6a and 7a.

Second, we made comparisons within the nonfactorial controls. Replicating Study 2, poor decisions were viewed as farther away by distant rather than immediate participants, contrast $F(1, 16) = 11.42$, $p < .01$, $\eta^2 = .41$; prediction and immediate conditions did not differ.

Third, we compared the factorial portion with the nonfactorial controls. Thoughts-listing participants who found listing alternatives easy (and outcomes difficult) felt equally far away as distant controls, contrast $F < 1$, $\eta^2 < .01$, but farther away than immediate controls, contrast $F(1, 26) = 16.20$, $p < .01$, $\eta^2 = .35$. Conversely, thoughts-listing participants who found listing outcome thoughts easy (and alternatives difficult) felt equally close as im-

mediate controls, contrast $F < 1$, $\eta^2 < .01$, but closer than distant controls, contrast $F(1, 26) = 21.25$, $p < .01$, $\eta^2 = .44$.

Outcome inevitability. The two outcome inevitability questions were reliably correlated, $r(68) = .93$, $p < .01$, and were averaged. First, a 2×2 ANOVA on the factorial portion of the data revealed only an interaction, $F(1, 36) = 15.71$, $p < .01$, $\eta^2 = .30$. Participants who found listing alternatives easy (2-thoughts) or outcome thoughts difficult (10-thoughts) felt poor team decisions were less inevitable (i.e., more unpredictable; combined $M = -3.77$, $SD = 5.10$) than did participants who found listing alternatives difficult (10-thoughts) or outcome thoughts easy (2-thoughts) (combined $M = 2.78$, $SD = 5.37$), contrast $F(1, 36) = 15.60$, $p < .01$, $\eta^2 = .29$, supporting Hypotheses 6b and 7b.

Second, we made comparisons within the nonfactorial controls. Immediate participants rated that they would have predicted poor team outcomes to a greater degree than prediction participants, contrast $F(1, 16) = 7.21$, $p < .05$, $\eta^2 = .33$, replicating a hindsight bias (e.g., Fischhoff, 1975). Replicating Study 2, distant participants rated that they would have predicted poor team outcomes to a lesser degree than those in the immediate condition, contrast $F(1, 16) = 10.49$, $p < .01$, $\eta^2 = .39$.

Third, we compared the factorial portion with the nonfactorial controls. Participants who found listing alternatives easy (and outcomes difficult) felt poor team outcomes were equally unpredictable (i.e., uninevitable) as distant and prediction controls, contrast $F < 1$, $\eta^2 < .01$; poor outcomes also were seen as less predictable than immediate controls, contrast $F(1, 26) = 14.66$, $p < .01$, $\eta^2 = .36$. Conversely, participants who found listing outcome thoughts easy (and alternatives difficult) felt they were equally predictable (i.e., inevitable) as immediate controls, contrast $F < 1$, $\eta^2 < .01$; poor outcomes also were seen as more predictable than prediction and distant controls, contrast $F(1, 36) = 11.97$, $p < .01$, $\eta^2 = .24$.

In summary, Study 3 provides strong evidence that ease of thinking about alternatives versus outcomes matters, not simply thought numbers, supporting Hypotheses 6a and 6b and 7a and 7b.

For subjective distance and inevitability, the pattern of thoughts-listing matched distant judgments when alternatives were easy (outcomes difficult) to bring to mind but matched immediate judgments when outcomes were easy (alternatives difficult) to bring to mind. Associations within outcome focus between thoughts-listing difficulty (manipulation checks) and subjective distance—outcome, $r(18) = .51$, $p < .05$; alternative, $r(18) = -.63$, $p < .01$ —and inevitability—outcome, $r(18) = .43$, $p = .05$; alternative, $r(18) = -.46$, $p < .05$ —bolster this. When outcomes were thought of easily, outcomes felt closer and more inevitable, but when alternatives were thought of easily, outcomes felt farther away and less in-

evitable. The pattern conversely supports the idea that when alternatives are difficult (outcomes easy) to bring to mind, even at a distance, poor decisions seem closer and more inevitable, further reinforcing the potentially crucial role of accessibility experiences in this context.

GENERAL DISCUSSION

Three studies provided converging evidence for a previously untested hypothesis that thoughts about alternatives become increasingly accessible over time, leading poor team outcomes to feel subjectively farther away and less inevitable. We found this for recalled teams with setting unspecified (Study 1) and negotiation (Study 2) and investment (Study 3) teams in the laboratory. In Study 1, recalled actual team outcomes suggested that findings are obtained for real-life events. Study 2, manipulating timing of measures and outcome valence, indicated that effects occurred primarily in response to poor outcomes. Study 3, directly varying thoughts, found that effects were due to ease of thinking about alternatives, not simply thought numbers. Support was obtained across measures, including rating scales (Study 1), listed thought proportions (Study 2), and manipulated thoughts (Study 3), irrespective of whether participants believed they (Study 2), or actually (Studies 1 & 3), interacted in teams. In short, using multiple manipulations and measures across studies (although each might have individual limitations) provided strong support our ideas.

Multiple Mechanisms for Subjective Distance Bias?

By focusing on subjective distance, temporal self-appraisal theory (Ross & Wilson, 2002; Wilson & Ross, 2001) follows research indicating that experiences of time (Brown et al., 1985; Schacter, 1996; Walker et al., 2003) are not accounted for by only objective distance. We held actual time constant (Study 1) or time was manipulated (Studies 2 & 3) so objective distance alone cannot account for our results. As yet, “temporal self-appraisal theory does not specify any particular mediator of the distancing bias” (Ross & Wilson, 2002, p. 802). Our research provides evidence for one. When alternatives were thought of easily, outcomes seemed farther away and less inevitable; when outcomes were thought of easily, outcomes seemed closer and more inevitable. This appears to be due to both motivational and cognitive factors. Because negative events have greater initial impact (Baumeister et al., 2001; Schwarz & Clore, 1996; Taylor, 1991), (a) people may be motivated to discount bad outcomes by thinking about alternatives and this increases over time until they feel better and (b) thoughts about alternatives may become naturally more accessible over time as the salience of poor outcomes fade. We did not specifically distinguish between these two, or

other, possibilities in our research; we believe that both may operate. Of course, people can think of alternatives (perhaps spontaneously; Sanna & Turley, 1996) immediately after bad outcomes, but initially, the failed outcome is more salient. Our studies suggest that alternatives versus outcomes become differentially accessible over time.

However, as with most psychological phenomena, the subjective distance bias is probably multiply determined. Evidence that subjective distancing is self-serving comes from findings that it is more likely for important attributes, high self-esteem persons, and the self than others (Ross & Wilson, 2002; Wilson & Ross, 2001) and that it is not simply due to actual growth, feedback, or change in recall over time (McFarland & Alvaro, 2000; Safer, Bonanno, & Field, 2001). This is consistent with Studies 1 and 2. But Study 3 suggests there also may be a cognitive component. We demonstrated that the normally observed pattern of retrospective appraisals could be reversed. Even at a distance, outcomes seemed closer and more inevitable when alternatives were difficult (outcomes easy) to bring to mind. This also implicates processes beyond those induced simply by the actual passage of time (e.g., differential recall). Although difficult to discern precisely whether cognitive or motivational factors are at work (Kunda, 1990), our results hint that both were operative. Thought accessibility, generally seen as cognitive, and attempting to mitigate failures, generally seen as motivational, were both found to be important. Furthermore, there may be yet another interesting twist to this matter. People may sometimes enable themselves to feel better by not thinking about alternatives (Sanna & Chang, 2003; Tykocinski, 2001).

Temporal Biases and Further Implications for Teams

There is increasing interest in how time influences and biases judgments. For instance, when people look to the future, they change confidence (Shepperd, Ouellette, & Fernandez, 1996), engage in planning fallacy (Buehler, Griffin, & Ross, 1994), and commit affective forecasting errors (Gilbert, Pinel, Wilson, Blumberg, & Wheatley, 1998); when people look to the past they are susceptible to hindsight biases (Fischhoff, 1975). Each temporal bias can be influenced by the accessibility of thoughts about outcomes and alternatives (Sanna & Schwarz, in press). Part of our rationale was built on hindsight bias research. Thus, it is in a continuing tradition of bringing together biases over time. Although subjective distance and hindsight bias may not be identical, they appear to be associated in particular ways. Study 1 found good outcomes seemed closer and more inevitable but bad outcomes seemed farther away and less inevitable, clearly suggesting relations between the two. Hindsight biases also can be self-serving (Hölzl

et al., 2002; Louie, 1999; Mark & Mellor, 1991). But simple hindsight bias (Fischhoff, 1975) explanations alone may not easily account for changes over time only after failures (Study 2) or greater distancing for important attributes and for self versus others (Wilson & Ross, 2001). Noteworthy is that recent research has found that hindsight biases also can change over time (Bryant & Guilbault, 2002).

It is interesting to speculate about whether people's judgments of future events parallel that of the past; that is, future events that could threaten people's self-regard might seem farther away, and also perhaps less inevitable, than do equally distant events that could enhance self-regard. Indirect evidence for this possibility comes from the finding that people often "brace for the worst" as impending negative feedback looms (Shepperd et al., 1996; Shepperd, Findley-Klein, Kwavnick, Walker, & Perez, 2000). As performances draw near, people might subjectively distance themselves from potentially negative futures. Conversely, even at a distance, people may feel subjectively closer to potentially good futures (and perhaps they correspondingly seem more inevitable), resulting in unduly high confidence in their eventual occurrence. Individual differences, such as defensive pessimism (Norem & Cantor, 1986; Sanna, 1996) in which people are particularly self-protective, might provide further qualifications. Adding to this, as in prior research (Ross & Wilson, 2002), participants' responses always were anonymous in our studies, lessening public self-presentation concerns. Future research explicitly comparing conditions under which concerns are public versus private (Sanna & Mark, 1995) may prove interesting.

Examining reactions to team outcomes could have particularly critical implications. Research on teams and other groups cut across diverse areas, such as social psychology, management, and organizational behavior (Ancona et al., 2001; Guzzo & Dickson, 1996; Parks & Sanna, 1999; Stangor, 2003). Drawing connections between subjective distance and hindsight biases may be especially relevant because the latter already had been shown to occur at both individual and group (Bukszar & Connolly, 1988; Stahlberg, Eller, Maass, & Frey, 1995) levels. It is in this regard that retrospective temporal appraisals are likely multifaceted and double-edged. On the positive side, team successes remained close over time (although they may not have seemed any closer); team failures increased in distance over time. This may enable team members to deal with adversity and to maintain a positive outlook. On the negative side, this also may result in overconfidence (Sniezek & Henry, 1989), hubris (Louie et al., 2000), or inability to learn from past (Fischhoff & Beyth, 1975) mistakes. Knowledge of subjective distancing can thus allow members, teams, man-

agers, and others to pursue more thoughtful and presumably more accurate diagnostic reasoning about performances. As such, our research specifies the importance of the many and varied implications of the ways in which people come to construe the past.

NOTES

1. Supplementary analyses conducted separately on the ease of thinking about outcomes and alternatives ratings (see Table 1) were consistent with analyses using difference scores. There were differences between poor and good team outcomes for both ease of thinking about outcomes, $F(1, 71) = 10.69, p < .01, \eta^2 = .13$, and for ease of thinking about alternatives, $F(1, 71) = 8.82, p < .01, \eta^2 = .11$.

2. Pilot-testing revealed that participants found the top 25% and bottom 40% most believable for good and poor performance feedback, respectively. This asymmetry may simply reflect that people are generally more accepting of favorable feedback (Wyer & Frey, 1983). Most important, as our Manipulation Checks indicated, participants viewed team performances as significantly worse in the poor than good conditions.

3. Two judges, each unaware of participants' codings, also rated whether thoughts pertained to outcomes or alternatives. Agreement with participants was high (Cohen's $\kappa = .93$), verifying self-ratings, and thus participants' classifications were used for analyses.

4. Because the number of total thoughts did not differ by conditions (see Table 2), analyzing the proportion of outcome thoughts essentially mirrors results for the proportion of alternatives, interaction $F(1, 116) = 6.32, p < .05, \eta^2 = .06$.

5. Supplementary analyses on each dependent variable including manipulation check measures of teamness and amount earned as covariates produced a pattern of results in which the only significant effects were identical to those reported in the text. For proportion of alternatives: interaction, $F(1, 114) = 6.27, p < .05, \eta^2 = .05$. For subjective temporal distance: outcome and time main effects, $F(1, 114) > 7.80, ps < .01, \eta^2s > .06$; and interaction, $F(1, 114) = 11.12, p < .01, \eta^2 = .09$. For outcome inevitability: outcome main effect, $F(1, 114) = 3.45, p = .07, \eta^2 = .03$; and interaction, $F(1, 114) = 7.58, p < .01, \eta^2 = .06$.

6. Pilot-testing indicated that listing 2 thoughts was significantly easier than 10 thoughts on this task; also, these numbers were beyond 1 *SD* below and above the mean number of thoughts (see Schwarz, 1998) listed by participants in Study 2.

7. Using individual participants as the unit of analysis (or using other analysis strategies such as HLM) does not change interpretations of our results or conclusions.

8. Because the *SD* in the 2-thoughts condition was effectively zero, reporting ANOVA results for this comparison is inappropriate.

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