

When Thinking Beats Doing: The Role of Optimistic Expectations in Goal-Based Choice

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We propose that, in the pursuit of ongoing goals, optimistic expectations of future goal pursuit have greater impact on immediate actions than do less optimistic considerations, such as retrospections on past goal pursuit or less optimistic expectations. Further, we propose that the direction of the impact is determined by the framing of goal pursuit: it motivates goal-congruent actions when goal pursuit is framed as commitment to the goal but motivates goal-incongruent actions when the pursuit is framed as progress toward the goal. Four studies provided consistent support for the proposed hypothesis.

Many everyday choices are driven by underlying, ongoing goals that are rarely fully attained, such as to stay in shape or to save for retirement. These ongoing goals are often abstract (Emmons 1992; Vallacher and Wegner 1987) and require the pursuit of multiple actions over time—for example, deciding to eat healthy at mealtimes or to resist spending on different occasions. Although ongoing goals are never fully accomplished, expectations of partial goal attainment still exert influence on immediate goal pursuit (Bandura 1997). These expectations are often based on reflecting on past attainment (e.g., Carver 2004) or plans for future attainment (e.g., Oettingen and Mayer 2002). However, relatively little is understood about how thinking optimistically about future goal pursuit can affect the immediate decision to pursue the ongoing goal and what the direction of the impact would be: that is, more or less selection of goal-congruent actions in the present.

This article proposes that optimistic expectations of future goal pursuit have greater impact on immediate goal-related choices than retrospection on past pursuits or less optimistic expectations. For example, the decision whether or not to

eat healthy food in the present may be affected by one's estimate of future workouts more than by retrospection of actual workouts in the past. We base our hypothesis on the findings that people are unrealistically optimistic in making predictions regarding their future goal pursuit (Buehler, Griffin, and Ross 2002; Weinstein 1989; Zauberman and Lynch 2005) and therefore believe more goal-congruent activities will be accomplished in the future than in the past. The impact of future expectations should vary with the degree of optimism; that is, more optimistic expectations of future goal pursuit should have greater impact on immediate choices.

We further propose that greater impact of optimistic expectations does not necessarily mean increased goal-congruent or goal-incongruent choices. Instead, the greater impact may result in either more goal-congruent actions or more goal disengagement in the present, depending upon the mental framing of goal pursuit. Specifically, when individuals infer higher goal commitment based on expected goal pursuit, optimistic predictions lead to greater persistence on the goal in the present. Conversely, when individuals infer greater goal progress based on expected goal pursuit, optimistic predictions justify disengagement from the focal goal in the present. The relative focus on commitment versus progress is determined by several factors, including external framing cues, individuals' framing tendencies, and the temporal distance from pursuing a goal, with greater distance leading to commitment (vs. progress) frame.

The remainder of the article is organized as follows. We review research that leads to our prediction that optimistic expectations for future goal pursuit exert greater impact on immediate choices than do retrospection on past attainment and less optimistic expectations. This hypothesis is tested

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in four studies that manipulate the time focus of goal pursuit (future vs. past) or the degree of optimism in expectations (high vs. low), and people's inferences based on these pursuits (goal commitment vs. goal progress), before assessing immediate choice of complementary actions that serve the same goal. We conclude by addressing implications of these findings for understanding consumer choice.

THEORETICAL BACKGROUND

The regulation of many ongoing goals requires repeated actions over time (Carver and Scheier 1998). For example, saving for retirement requires repeated contributions and doing well academically requires studying on many occasions. Our main focus is whether optimistic future plans to pursue a goal have a greater impact on immediate goal-related actions than considering actual attainment of the same actions in the past.

Past versus Future-Based Choice

Past pursuits are often considered to be a good predictor of present choices (Doll and Ajzen 1992), and thinking of past pursuits should be relevant for choosing to pursue a goal in the present. As a demonstration of the effect of past actions, attitudes research documented that initial actions increase the likelihood that congruent actions will follow (Bem 1972; Cialdini, Trost, and Newsom 1995; Freedman and Fraser 1966). For example, the foot-in-the-door phenomenon (Freedman and Fraser 1966) refers to individuals' increased willingness to comply with a larger request after an initial compliance with a smaller request that refers to the same goal. In the domain of self-regulation, cybernetic models (see Carver 2004; Carver and Scheier 1998) suggest that recalling past accomplishment provides an important input for monitoring goal pursuit in the present since it determines the remaining distance and rate of progress to goal attainment. Although these models are not proposed in the context of ongoing goals, it is possible that in the pursuit of ongoing goals initial actions also affect one's subsequent motivation to choose consistent actions.

In contrast with the effect of past actions, relatively less is known about expectations of future goal pursuit and how they might affect immediate choices. Several researchers have suggested that future plans are relevant for the processes of self-regulation as people's decision making is, after all, oriented to thinking about the future (Bandura 1997; Nowlis, Mandel, and McCabe 2004; Oettingen and Mayer 2002; Taylor and Brown 1988). In support of this notion, Oettingen and Mayer (2002) found, for example, that having favorable future career expectations (vs. positive fantasies of success) increased graduating students' actual efforts, as reflected in the number of job offers and entering salaries they received over a period of two years. This research demonstrates that a belief about future attainment can increase perceived self-efficacy (Bandura 1997), which leads to improved performance and greater success in the present. Thus, having plans to work on a goal in the future affects

the motivation to choose activities that serve the same goal in the present.

The Effect of Optimistic Expectations

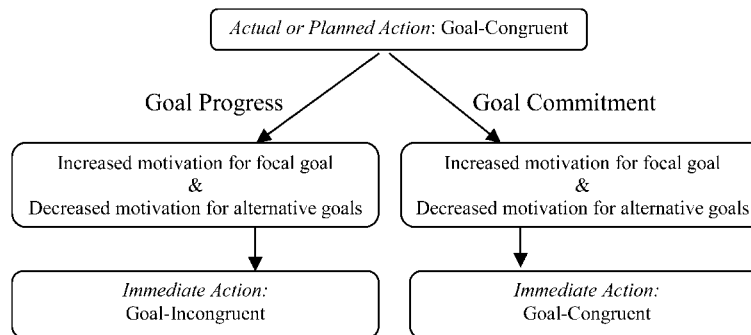
Expectations that are based on predictions of the future and retrospections that are based on the past might be viewed as having similar impact on present actions. However, for many goals, what distinguishes anticipated future goal pursuit from actual past pursuit is a general optimism bias, which leads to an unrealistic expectation of greater success in the future than what a person actually achieved during a comparable period in the past (Taylor and Brown 1994). In general, people tend to underestimate the amount of time and effort that are involved in pursuing certain goals in the future (Buehler, Griffin, and Ross 1994, 2002). For example, people tend to underestimate the obstacles that might prevent them from working out as much as they plan, meeting their deadlines at work, and controlling their food consumption.

Because people are generally optimistic about the extent of future attainment, they expect more goal-congruent actions to be implemented in the future than in the past, and these favorable expectations should have a greater impact on monitoring goal pursuit in the present than retrospections on actual past pursuits. For instance, for a person who worked out moderately in the past but expects to work out significantly more often in the future, focusing on the future will lead to a greater sense of goal attainment. In turn, this sense of attainment would have a greater influence on the decision to pursue activities related to the health goal in the present. The impact of expectations of future goal pursuit depends on the level of optimism, such that less optimistic expectations should have smaller impact on immediate decisions.

However, what is the direction of the impact? In particular, does "impact" imply that future plans increase or decrease the immediate motivation to pursue other goal-congruent actions? Whereas evidence of impact in goal research usually has referred to an increase in goal pursuit, more recent research attests that the greater impact on self-regulation can result in either increased goal pursuit or more goal disengagement. For example, Fishbach and Dhar (2005) documented a tendency to temporarily disengage from a goal once a person indicated future positive expectation, whereas others found increased motivation (Bandura 1997). In general, when individuals hold multiple goals (e.g., saving and spending), self-regulation follows one of two possible dynamics: highlighting a single goal versus balancing among incongruent goals (Dhar and Simonson 1999). These dynamics and their implications for choice are illustrated in figure 1.

As illustrated, an initial goal-related choice can signal either goal commitment or goal progress to the individual. For example, the act of going to the gym can be interpreted as increasing one's commitment to the goal of being healthy or as contributing to the progress toward the goal of being healthy. The relative focus on goal commitment versus goal progress in turn has opposite implications for the direction

FIGURE 1
DYNAMICS OF GOAL-BASED CHOICE



of immediate self-regulation: if goal pursuit signals one's general high level of commitment to a goal, it is likely to increase the motivation for other immediate goal-related actions and inhibit competing goals to ensure goal attainment (Shah, Friedman, and Kruglanski 2002); if, however, the same goal pursuit signals one's high level of goal progress, it justifies moving temporarily away from the focal goal that has been progressed or partially attained and choosing actions that serve other conflicting goals (Fishbach and Dhar 2005; Fishbach, Dhar, and Zhang 2006).

We posit that these dynamics of goal-based choice—highlighting a single goal when actions signal commitment versus balancing among different goals when actions signal progress—are proportional to the amount of goal pursuit and therefore would be augmented by individuals' optimism when considering future plans. When people expect more goal pursuit, the greater amount of future goal attainment can be seen as signaling greater goal commitment or greater goal progress. Accordingly, when anticipated goal pursuit is interpreted in terms of goal commitment (i.e., one expects to express commitment to the goal), the person should be more likely to make immediate goal-congruent choices. Conversely, when anticipated goal pursuit is interpreted in terms of greater goal progress (i.e., one expects to make greater goal progress), it is more justifiable to make immediate goal-incongruent choices. Therefore, what determines the direction of the impact is the inferences made based on expected goal-related actions: expectation of future goal pursuit motivates more goal-congruent actions when goal pursuit signals goal commitment but elicits more goal-incongruent actions when goal pursuit signals goal progress.

These patterns of goal-based choice were documented in previous goal research (Fishbach and Dhar 2005), which explored the effect of successful past attainment on present goal pursuit. In one of their studies, Fishbach and Dhar (2005) further found a tendency to disengage with a goal after stating optimistic future plans (vs. recalling actual past pursuits). Notably, however, based on the current analysis, future expectations should lead to disengagement only when they signal goal progress, whereas the same level of ex-

pectation elicits more congruent actions in the present if it signals goal commitment. Building on Fishbach and Dhar's work, we therefore predict that when people are optimistic, inferences of commitment and progress that are based on expectations exert greater influence on immediate choice than inferences based on retrospections.

This research is further set to explore the factors that underlie inferences of goal progress and goal commitment. We predict that these inferences may vary across individuals, and they also depend on contextual variables that cue different interpretations. Specifically, one variable that influences the framing of goal pursuits is the presence of external cues for considering the commitment versus progress from one's actions or future expectations. For example, when a person is asked to assess the extent to which future expectations establish commitment to a health goal (vs. will enable progress on the health goal), this person is more likely to interpret expectations in terms of goal commitment (vs. progress). Another variable that determines the framing of future expectations is the temporal distance from the goal pursuit (Liberman and Trope 1998; Trope and Liberman 2003). Because goal commitment is an inference regarding the meaning of an action for holding an abstract, superordinate goal (i.e., the "why" aspect), there is a greater tendency to focus on the commitment when goal-related actions are distant. On the other hand, because goal progress is an inference regarding movement through specific, concrete actions (i.e., the "how" aspect), there is a greater tendency to focus on the progress from proximal goal-related actions. Overall then, the inference based on expectation depends on framing cues, varies among individuals, and also changes as a function of the temporal distance of these activities, with temporal proximity leading to progress framing and temporal distance leading to commitment framing.

Research Overview

Four studies examine immediate goal pursuit for participants who infer goal commitment or goal progress based on future expectations or retrospections of the past. Study

1 tests whether expectation based on future goal pursuits (vs. retrospection of actual past pursuits) has a greater influence on the choice of immediate actions related to the focal goal under the commitment and progress frames. Study 2 tests whether the extent of optimistic expectation of future goal pursuit moderates the influence on immediate choice as a function of framing. Study 3 tests how individual variations in the level of optimism in expectations and the orientation toward framing goal pursuit (commitment versus progress) jointly affect immediate preference for actions related to the goal. Finally, study 4 investigates whether the mental framing of goal pursuit in terms of commitment versus progress and the resulting immediate goal-based choice vary as a function of temporal distance of these activities.

STUDY 1: PAST ACTIONS VERSUS FUTURE EXPECTATIONS

Based on previous research attesting that the goal of pursuing a healthy lifestyle is achieved through multiple actions, including exercising and consuming healthy food (e.g., Fishbach, Shah, and Kruglanski 2004), this study explored whether estimates of exercising in the coming year, compared with recalling actual exercise regimen last year, would result in a greater preference for healthy food when they signal commitment but decrease the relative preference for healthy food when they signal progress. Participants in this study were asked to evaluate their past versus future workout before completing a framing manipulation of exercising and making a choice between healthy versus unhealthy drink (springwater vs. sugared soda).

Procedure

This study employed a 2 (time: past vs. future) \times 2 (framing: commitment vs. progress) between-subject design. One hundred and sixty-five undergraduate students (94 females, 71 males) from the University of Chicago were recruited to the study at the lobby of a large university gym, and they were all gym users. Gender of participants did not interact with any variable here and in subsequent studies and was therefore omitted from subsequent consideration.

The first part of the study manipulated the focus on past versus future workout. All participants completed a survey on workout habits that, depending on the experimental condition, referred to their workout last year (past) or this year (future; the experiment was conducted at the beginning of January). Participants in the past condition rated how often they worked out last year on a seven-point scale (1 = not at all, 7 = extremely often) and described the exact activities. Participants in the future condition rated how often they intended to work out this year on a similar scale as well as provided a description of the planned activities.

We then manipulated the framing of goal pursuit by asking participants to rate the extent to which they agreed with statements that either highlighted goal-related activities as progress toward the goal or as commitment to the goal of

keeping in shape. Specifically, participants were asked to think about their workout last year (vs. this year) and rate how much each of several statements described their feeling toward working out. Participants in the progress frame condition rated four statements such as "having worked out that much, I am closer to my workout objectives" (vs. "planning to work out that much, I will be closer to my workout objectives") and "having worked out that much, I must have really improved my health" (vs. "planning to work out that much, I will really improve my health"), whereas those in the commitment frame condition rated four statements such as "having worked out that much [vs. "planning to work out that much"], I am committed to my workout objectives" and "having worked out that much [vs. "planning to work out that much"], I must really care about my health." All ratings were made on seven-point scales (1 = strongly disagree, 7 = strongly agree). In order to reduce desirability concerns, these items were embedded among four other filler items (e.g., "I always work out in the same gym"), which were irrelevant to the study purpose.

The last part of the study measured participants' drink choice. Upon completion of the survey, the experimenter offered participants to take home with them a can of sugared soft drink or a bottle of springwater. Springwater is a calorie-free, healthy choice, whereas sugared soda is a high-calorie, unhealthy choice. After indicating their choice participants were debriefed and dismissed. In their debriefing, none of the participants was able to correctly identify the purpose of the study.

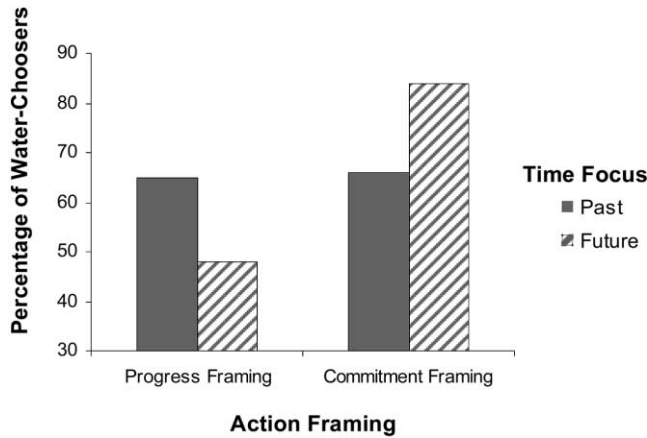
Results and Discussion

Manipulation Check. Consistent with previous findings, participants displayed the optimism bias when estimating their future goal pursuit and believed they would be working out more frequently in the coming year ($M = 5.16$) than they did in the past year ($M = 4.29$; $t(163) = 3.85$, $p < .01$).

Goal-Based Choice. To test our main hypothesis, we analyzed the percentage of participants who chose springwater over soda, an action that was more consistent with the health goal. The results are displayed in figure 2. There was first a main effect of framing: while 75% of the participants in the commitment frame chose water, only 56% of the participants in progress condition chose water ($\chi^2(1) = 6.25$, $p < .05$). Importantly, this main effect was qualified by the predicted framing \times time interaction ($\chi^2(1) = 6.22$, $p < .05$), indicating that the framing manipulation affected those who considered future workout ($\chi^2(1) = 12.09$, $p < .01$), but not those who considered past workout (NS). Further analysis revealed that under the commitment frame 84% of the participants who were considering future workout chose water, compared to 66% of those who were considering past workout ($\chi^2(1) = 3.75$, $p = .05$). Under the progress frame, however, 65% of those who considered past workout chose water, which is directionally more than 48% of the participants who considered future

FIGURE 2

CHOICE OF DRINKS (SPRINGWATER VS. SUGARED SODA)
AS A FUNCTION OF TIME AND ATTAINMENT FRAMING
(STUDY 1)



goal pursuit and chose water ($\chi^2(1) = 2.47, p = .12$). Taken together, these results demonstrate that optimistic plans for future workout (vs. unoptimistic retrospection on past workout) are more effective in motivating healthy as well as unhealthy drink choice, depending on their framing.

This study finds evidence for a greater impact of future goal pursuit than of past pursuit and that the direction of the influence depends on the framing of the pursuit. When participants infer goal commitment from workout, optimistic expectations lead to a higher motivation to pursue the goal and result in a greater interest in healthy drink than does retrospection on past workouts. Conversely, when participants inferred goal progress from workout, the optimistic expectations of more frequent workouts in the future, compared with those in the past, led to directionally lower interest in healthy drink. Notably, although not predicted, the impact of thinking about past workout on current choices did not vary as a function of the framing manipulation, suggesting that the focus on commitment versus progress does not have a consistent effect when there is insufficient achievement and not much can be framed.

In this study we assumed that the greater impact of future plans (vs. past actions) on immediate choice was due to optimistic expectations about goal pursuit in the future. However, there may be other differences between past and future focus; for instance, past pursuits (vs. future plans) may have negative and positive emotional consequences, depending on one's performance. To disentangle the effect of optimistic expectation from that of other potential processing differences, the next study directly manipulated the level of the optimism while keeping the time of goal pursuit constant. Specifically, based on previous optimism research (Taylor et al. 1998), we utilized a debiasing intervention that reduces the optimistic expectations through mental simulation of the processes of goal pursuit. We expected that compared with an optimistic expectation of future goal pur-

suit, an unoptimistic expectation would lead to less goal-congruent choice of actions under the commitment frame but more goal-congruent choices under the progress frame.

STUDY 2: LEVELS OF OPTIMISM

Study 2 directly manipulated the magnitude of optimism in expectations of future workout and examined the subsequent motivation to choose healthy food as a function of action framing. Based on research showing that a mental simulation of the processes of goal pursuit attenuates optimistic bias (Taylor et al. 1998), we manipulated participants' level of optimism by asking them to mentally simulate the process of a workout session (low optimism), as opposed to the completion of a workout session (high optimism).

Procedure

The study employed a 2 (optimism level: high vs. low) \times 2 (frame: commitment vs. progress) between-subject design. We recruited seventy-nine gym users (47 females, 32 males) who were undergraduate students at the University of Chicago to participate in the study in return for \$2 each.

Participants first completed a workout survey. In the low-optimism condition we asked participants to simulate the process of a gym session. Specifically, the instructions read "visualize yourself working out in the gym and try to mentally construct a gym session, thinking about what you are doing and your feelings at that moment." In the high-optimism condition, we asked participants to simulate the accomplishment of a gym session. The instructions read "visualize yourself having completed a session of workout in the gym and try to mentally construct your successful workout, thinking about what you are doing and your feelings at that moment." Participants in both conditions wrote a detailed description of the content of their mental simulation, and a sample paragraph (about 200 words) was provided to assist the mental simulation. Typical descriptions from participants in the low-optimism condition concerned how hard they were trying to finish the exhausting workout (e.g., "I walk into the gym and go upstairs to the cardio room. . . . I do a quick stretch near the elliptical quickly before starting. I stretch out my quads, calves and shins. . . . I then start the treadmill and jog steadily for 10 minutes"), while those in the high-optimism condition wrote about how refreshed they felt when finishing the workout (e.g., "I finish doing a full workout with three sets of each exercise. . . . I slowly walk to the locker room and drink some water. . . . I take off my sweaty clothes and change into street clothes"). After the mental simulation task, all participants indicated the estimated duration of their next workout session in hours, among other filler questions, and completed a framing manipulation (commitment vs. progress) similar to the one used in study 1.

In order to measure interest in healthy eating, upon completion of the workout survey, participants received a second survey, which was supposedly part of an unrelated study conducted by a different researcher and designed to measure

the eating habits of college students. Participants rated on seven-point scales how healthy are (1 = extremely unhealthy, 7 = extremely healthy) three healthy food items (salad, vegetable, and fruits) and three unhealthy food items (pizza, burger, and French fries) and the extent to which they would like to have each food today (1 = not at all, 7 = strongly). A debriefing procedure at the end of the experiment indicated that no participants suspected the connection between the two “unrelated” studies.

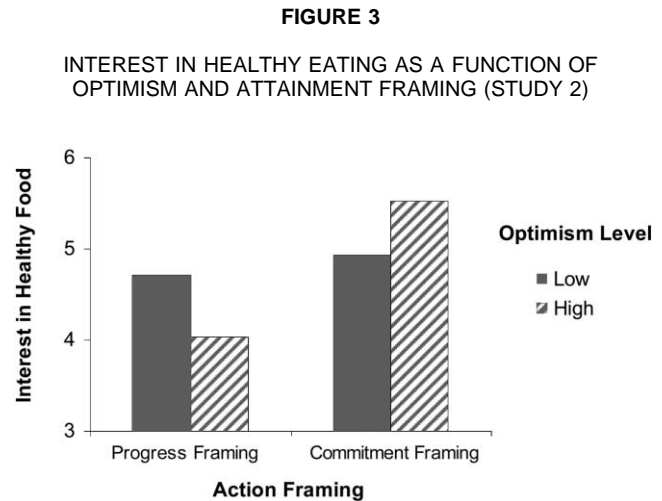
Results and Discussion

Manipulation Check. First, in order to demonstrate that the optimism manipulation had not impacted participants' mood state, another group of 66 undergraduate students (recruited at the same location and drawn from the same population) completed the mental simulation in one of the two conditions and rated how they felt at that time (1 = very bad, 7 = very good). As expected, there was no difference in mood state between participants who described the process of a workout session ($M = 4.59$) and those who described the outcome of a workout session ($M = 4.88$; $t(64) = -1.02$, NS).

Second, consistent with previous research, our optimism debiasing manipulation changed participants' optimistic expectations of future goal pursuit: participants who mentally simulated the completion of a workout session planned to exercise longer ($M = 1.30$ hours) than those who simulated the process of a workout session ($M = 1.03$ hours; $t(77) = 2.32$, $p < .05$). Third, also consistent with our manipulation, participants rated the healthy food items ($M = 5.72$) in the food preference survey to be indeed healthier than the unhealthy food items ($M = 3.29$; $t(78) = 8.75$, $p < .01$).

Interest in Healthy Food. Participants' reported interest in consuming healthy food was collapsed across different items (with reverse coding for unhealthy items) to create a composite measure of their interest in healthy food. This variable's ANOVA indicated that participants in the commitment frame were more interested in healthy food ($M = 5.23$) than those in the progress frame ($M = 4.38$; $F(1, 75) = 18.81$, $p < .001$). This main effect was qualified by the predicted interaction between optimism and framing of goal pursuit ($F(1, 75) = 10.50$, $p < .01$). As shown in figure 3, high optimism about future goal pursuit resulted in greater interest in healthy food than did low optimism ($M = 5.53$ vs. 4.93) under commitment frame ($t(38) = 2.58$, $p < .05$). However, high optimism about future goal pursuit led to lower interest in healthy food than did low optimism ($M = 4.03$ vs. 4.71) under progress frame ($t(37) = -2.12$, $p < .05$).

Consistent with our previous results, optimistic (vs. unoptimistic) expectations to pursue a goal in the future influenced the immediate decision to choose another goal-related action and the direction of the influence was determined by the framing of expectations. As noted before (for study 1 retrospection condition), the framing manipu-



lation had no effect on participants who held unoptimistic expectations. Importantly, since the time frame of future goal pursuit was held constant, we were able to disentangle the effect of optimistic expectations from that of potential processing differences due to a temporal focus (future vs. past).

While the previous studies experimentally manipulated participants' interpretation of goal pursuit in terms of progress or commitment, relatively little is known about the determinants of this inference based on expected acts of self-regulation. It is possible that the framing of goal pursuit as a signal for commitment or progress varies across individuals. For example, some people naturally perceive their actions as indicating goal commitment whereas others perceive the same actions as indicating goal progress. In addition, individuals vary in the extent to which they are optimistic (Myers and Brewin 1996), and some are more optimistic than others and are thus more likely to exaggerate their future goal attainment. The next study addresses these issues by measuring individual differences in optimism and framing of goal pursuit. Although a within-person change in behavior is often tested using a between-subject design, by assigning individuals to different levels of the variable, we assumed that the two variables manipulated in previous studies are also likely to vary across individuals. We predict that, compared with less optimistic individuals, more optimistic individuals are more likely to pursue the focal goal in the present if they are “commitment oriented” but are more likely to disengage with goal-related actions if they are “progress oriented.”

The next study further addresses possible experimental demands, which may have been aroused when we manipulated commitment and progress frames in earlier studies. Specifically, asking participants to rate their agreements with either commitment-framing statements or progress statements might have produced external demand to select similar goal-related activities versus disengage with the goal. Although these concerns could not account for the observed interaction between framing and optimism level and were minimized by embedding the framing statements among

other filler statements, we nevertheless thought to eliminate such concerns by employing a fully within-subject design.

STUDY 3: INDIVIDUAL VARIATIONS IN OPTIMISM AND ATTAINMENT FRAMING

Participants in this study assessed the frequency of their past and future workout, and the extent to which they agreed with commitment- and progress-framing statements of their workouts. We expected that these measures would interact in predicting immediate choice of healthy food.

Procedure

This study employed an optimism \times attainment framing within-subject design. We recruited 43 gym users (24 females, 19 males) who were undergraduate students at the University of Chicago and participated in the study in return for \$2 each.

Participants first received a “workout survey.” In this survey, participants first rated their frequency of working out the previous term and the next term, on seven-point scales (1 = not at all, 7 = extremely often). Following each rating question participants described the exact activities they engaged in (for the previous term) and planned to engage in (for the next term). Consistent with our theorizing, the discrepancy between past and future exercise operationally defined the level of optimism.

The second part of the survey measured individual variations in framing goal-congruent activities as commitment versus progress. In this part of the survey, participants rated the extent to which they agreed with all eight framing statements used in previous studies, four of which focused on commitment and four on progress. Whereas previous studies used these statements to manipulate attainment framing, we hypothesized that by administering all these statements we could reliably measure individual differences in whether they interpret attainment primarily in terms of commitment versus progress. The order of the framing statements was mixed to avoid possible ordering effect.

Next, participants received an ostensibly unrelated “food preference survey,” similar to the one used in the previous study. The critical items in this survey referred to participants’ interest in having three healthy and three unhealthy food items (e.g., salad vs. pizza). They provided their ratings on seven-point scales (1 = not at all interested, 7 = extremely interested). Upon completing the second survey, all participants were debriefed, and none of them suspected the connection between the two “unrelated” studies.

Results and Discussion

Manipulation Check. Participants displayed the general optimism, expecting to work out more often in the future ($M = 4.73$) than they had in the past ($M = 3.78$; $t(40) = 4.90, p < .001$). Also in line with our expectations, participants did not differ in their overall likelihood to frame workout as commitment ($M = 4.29$) and progress ($M =$

4.34; $t(40) = .30, NS$; medians = 4.40 for commitment and for progress).

Interest in Healthy Food. In order to test for the effect of optimism and attainment framing on food choice, we first calculated the extent of optimism bias and attainment framing. Because optimism bias can be viewed as the discrepancy between anticipated future goal pursuit and retrospection of past pursuit, we operationally defined optimism as the difference between future and past workout frequency. A larger value corresponded to higher optimism. For attainment framing, we calculated participants’ tendency to frame workout as commitment rather than as progress, which was operationally defined as the difference in their ratings between the commitment- and the progress-framing items. Higher values on this composite measure correspond to commitment (vs. progress) orientation. We calculated a composite measure of interest in healthy food by collapsing ratings of interest in all food items (with reverse coding for unhealthy foods).

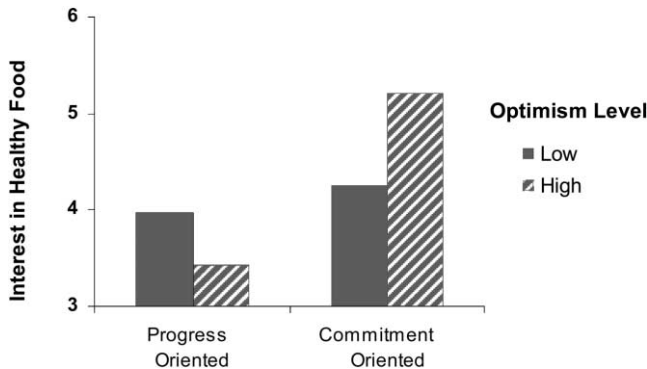
We conducted a regression analysis on interest in healthy food using two predictors, optimism bias and attainment framing, as well as their interaction ($R^2 = .626, SD = .660$). This analysis yielded a marginal effect of framing ($\beta = .33$; $t(37) = 1.67, p = .10$), indicating that commitment (vs. progress) framing directionally increased interest in healthy food and showed no effect for optimism ($\beta = .14$; $t(37) = 1.29, NS$). Most importantly, in support of our hypothesis, this analysis yielded a framing \times optimism interaction ($\beta = .47$; $t(37) = 2.35, p < .05$), indicating that greater optimism increased interest in healthy food among commitment-oriented participants but decreased interest in healthy food among progress-oriented participants. No other effects emerged in this analysis.

An alternative way to look at the data involves comparing the effect of optimism among commitment- and progress-oriented individuals, respectively. A median split of the framing variable allowed us to categorize participants as commitment oriented and progress oriented. We then found that for those who framed workout as commitment, optimism increased interest in healthy food ($r = .65, p < .01$); however, for those who framed workout as progress, optimism decreased their interest in healthy food ($r = -.45, p < .05$). For the sake of clarity, figure 4 displays the interest in healthy food based on median splits of the two independent variables: the optimism level and the framing tendency.

The results of the present study extend our previous results by suggesting that optimistic expectations and goal frame are not only subject to situational manipulations but may also reflect individual differences that have direct implications for pursuing long-term goals. So far we have demonstrated that optimistic expectations affect immediate choices and that the direction of the influence depends on the framing of goal attainment. Our previous studies experimentally manipulated attainment framing as well as measured individual differences in the framing of goal attainment. In the next study we manipulate another determinant of attainment framing, namely, the temporal distance

FIGURE 4

INTEREST IN HEALTHY EATING AS A FUNCTION OF INDIVIDUAL DIFFERENCES IN OPTIMISM LEVEL AND FRAMING TENDENCY (MEDIAN SPLITS; STUDY 3)



from goal pursuit. Based on construal level research (Trope and Liberman 2003), we assumed that temporal distance can determine the type of inference based on past or expected goal attainment. Specifically, when people consider goal-related activities that are temporally proximal, they focus on the concrete actions, that is, the “how” aspect of the activities, which corresponds to progress focus. In contrast, when they consider goal-related actions that are temporally distant, they focus on their abstract goal, that is, the “why” aspect or the essence of the activities, which corresponds to commitment focus. Moreover, because commitment and progress are inferred based on attainment and people expect to achieve more in the future than in the past, the inferred levels of commitment and progress should be greater when people make such inferences based on planned actions for the future (vs. actual actions in the past).

STUDY 4: TEMPORAL DISTANCE, ATTAINMENT FRAMING, AND CHOICE

Study 4 manipulated temporal distance as a cue for mental framing of goal attainment. We assumed that goal pursuit that is temporally distant signals commitment to a goal and increases motivation for congruent immediate actions, whereas pursuit that is temporally proximal signals progress toward this goal and decreases motivation for congruent actions. Also, because people are optimistic, the inferred level of commitment or progress should be higher for expected future goal pursuit than actual goal pursuit in the past. In two self-regulatory domains (saving money and studying), participants in the distant condition considered goal pursuits in the distant future or past, whereas those in the proximal condition considered goal pursuits in the proximal future or past. They then indicated their agreement with attainment framing (commitment vs. progress) and interest in additional goal-congruent choices in the present.

Procedure

This study used a 2 (domain: saving money vs. studying) \times 2 (time focus: past vs. future) \times 2 (temporal distance: distant vs. proximal) between-subjects design. One hundred and sixty-four undergraduate students (77 females, 87 males) from the University of Chicago participated in this study for \$2 each. Depending on experimental condition, we informed participants that the study concerned their saving or studying habits.

Saving Habits. The saving survey, titled “saving habits of college students,” instructed participants to think about their saving effort either in the past or in the future, focusing on a month that was either temporally distant (the previous year or the next year), or temporally close (the immediately adjacent month). Specifically, in the distant future conditions participants estimated how much, by their own standard, they expected to save in a month that was in a year from then or the next month. Participants in the past conditions estimated how much, by their own standards, they managed to save in a month that was a year ago or last month. All answers were provided on a seven-point scale (1 = not at all, 7 = a lot).

The next part of the survey measured participants’ mental framing of their saving effort. It asked participants to think about their saving effort for the period of time referred to in the previous question and to rate the extent to which they agreed with eight framing statements. Four of the eight statements described saving as commitment to a higher level goal (e.g., “I was devoted to my saving objectives” and “I cared about saving”). The other four statements described saving as progress toward the same higher level goal (e.g., “I was getting closer to my saving objectives” and “I was making progress on saving”). (Appropriate tense was used for future conditions.) All ratings were given on seven-point scales (1 = strongly disagree, 7 = strongly agree), and the order of statements was mixed. After rating the extent to which they agreed with all the framing statements, participants indicated the amount of money they planned to spend on a Saturday night when going out with friends, among answers to other filler questions.

Study Habits. The survey on studying habits was very similar to the survey on saving habits described previously, except that it referred to participants’ studying efforts instead of saving money. In the future conditions, participants indicated how much, by their own standard, they expected to study in a week that was next term or next week. Participants in the past conditions evaluated how much they had studied in a week that was last term or last week. They provided their answers on seven-point scales (1 = not at all, 7 = a lot).

Similar to the survey on saving efforts, this survey then measured participants’ mental framing of studying efforts by assessing the extent to which participants agreed with eight framing statements. Half of the statements described studying as commitment to doing well at school (e.g., “I

was devoted to my academic objectives” and “I cared about doing well in school”), and the other half described studying as progress toward doing well at school (e.g., “I was getting closer to my academic objectives” and “I was making progress on doing well in school”). (Appropriate tense was used for future conditions.) All ratings were marked on seven-point scales, and order of statements was mixed. After rating the extent to which they agreed with all the framing statements, participants further indicated the number of hours they planned to spend in the library studying in the current week, among other filler questions. Upon completion of the surveys, participants were debriefed and dismissed.

Results and Discussion

Manipulation Check. Consistent with previous studies, participants displayed the optimism bias, expecting to engage in more goal-congruent activities in the future ($M = 4.57$) than they did in the past ($M = 3.84$; $t(162) = 3.04$, $p < .01$). Similar patterns emerged for reported saving efforts (M 's = 4.02 and 3.31; $t(77) = 1.92$, $p < .06$) and studying (M 's = 5.12 and 4.29; $t(83) = 3.00$, $p < .01$), respectively. Also, similar patterns emerged for predictions in proximal and distant conditions.

Attainment Framing. Action framing was again operationally defined as the difference between ratings of agreement with commitment- and progress-oriented statements; thus, higher numbers indicate more commitment (vs. progress) framing of the actions. An ANOVA of the attainment framing by time focus \times temporal distance \times domain yielded the predicted main effect for temporal distance ($F(1, 156) = 8.45$, $p < .01$), indicating that overall, distant goal pursuit signals commitment more than proximal goal pursuit. In addition, this analysis yielded the predicted time focus \times temporal distance interaction ($F(1, 156) = 20.98$, $p < .01$), suggesting that when participants considered goal pursuit that was temporally close, planned pursuit for the proximal future signaled more progress than achieved pursuit in the proximal past ($M = -.32$ vs. $M = .59$; $t(83) = -3.99$, $p < .01$). Conversely, when considering goal pursuit that was temporally distant, planned pursuit in the distant future indicated higher goal commitment compared with achieved pursuit in the distant past ($M = .85$ vs. $M = .31$; $t(77) = 2.48$, $p < .05$).

Notably, consistent with previous studies, there was no effect for past attainment, which was framed in a similarly neutral way regardless of temporal distance. No other effects emerged in this analysis, and, in particular, there was no effect for goal domain or interaction involving this variable. Similar patterns emerged in each goal domain ($F(1, 75) = 6.71$, $p < .05$, for the goal of saving and $F(1, 81) = 15.38$, $p < .01$, for the goal of studying).

Interest in Goal-Congruent Actions. For the purpose of analysis, we transformed participants' indicated amount of money they would like to spend on leisure activities and the number of hours they intended to study to z-scores, with

reversed coding for indicated spending. These scores indicate participants' immediate interest in goal-congruent activities.

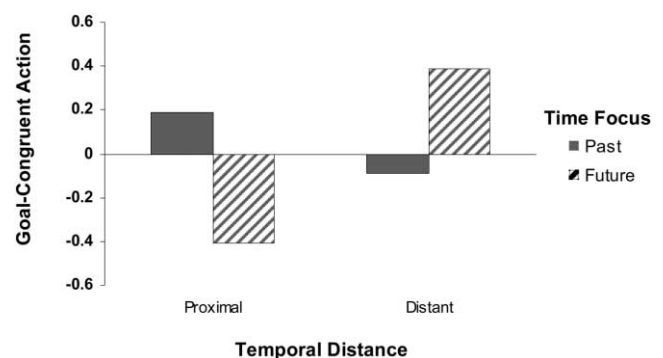
A time focus \times temporal distance \times domain ANOVA of participants' interest in goal-congruent actions yielded the predicted time focus \times temporal distance interaction ($F(1, 156) = 12.71$, $p < .01$). As shown in figure 5, when participants elaborated on goal pursuit that was temporally close, they were less interested in goal-congruent actions when they considered activities planned for the proximal future ($M = -.41$) than activities achieved in the proximal past ($M = .19$); $t(83) = -2.75$, $p < .05$). However, when elaborating on goal pursuit that was temporally distant, participants were more interested in goal-congruent actions when they considered activities planned for the distant future ($M = .39$) than those achieved in the distant past ($M = -.09$); $t(77) = 2.38$, $p < .05$). No other effect emerged in this analysis, and, in particular, there was no effect for goal domain or interaction involving this variable (similar patterns were obtained in each goal domain ($F(1, 75) = 7.22$, $p < .01$), for the goal of saving and $F(1, 81) = 5.94$, $p < .05$, for the goal of studying).

To further test the relationship between participants' focus on commitment versus progress and their interest in goal-congruent choices, we regressed participants' interest ratings on their attainment-framing scores. Consistent with our hypothesis, the tendency to frame goal pursuit as goal commitment (vs. goal progress) predicted the immediate interest in goal-congruent actions ($\beta = .18$, $p < .05$).

Overall, study 4 demonstrates how temporal distance cues attainment framing and determines subsequent choice of actions. We found that expected goal pursuit that is temporally distant signals more goal commitment, whereas expected pursuit that is temporally proximal signals more goal progress, and such inferences systematically influence the subsequent motivation to pursue other goal-congruent activities. Consistent with our previous studies, there were no similar effects for recalling temporally close and distant past pursuits, which

FIGURE 5

INTEREST IN GOAL-CONGRUENT ACTION AS A FUNCTION OF TIME FOCUS AND TEMPORAL DISTANCE (STUDY 4)



were less likely to be framed or affect the subsequent motivation for goal pursuit.

GENERAL DISCUSSION

Summary

This research explores the processes of monitoring ongoing goals, and it examines the impact of optimistic expectations for future goal pursuits (vs. retrospection on past pursuits or less optimistic expectations) on immediate choice of actions. Building on previous goal research, which demonstrated the effect of accomplished actions (e.g., Carver and Scheier 1998), we find a greater impact of optimistic expectations on immediate actions that pursue the same goal. Our first contribution is thus to show that the impact of expected goal pursuit on immediate choices depends on the amount of goal pursuit being considered. We find that because individuals are generally optimistic (Buehler et al. 2002; Newby-Clark et al. 2000), future plans have a greater impact on the decision to pursue a goal in the present than retrospection of past actions, and the effect of expectations on immediate actions is moderated by the degree of optimism in expectations.

Our second contribution refers to the direction of the influence. Optimistic expectations do not universally increase or decrease the preference for goal-congruent actions. Rather, the direction of influence depends on how one mentally frames the favorable expectation of future goal pursuit. We find consistent support for our proposed model (illustrated in fig. 1), which states that expected goal-related actions can either signal commitment to a goal or progress on a goal. These inferences in turn determine the immediate intention to pursue similar goal-congruent actions under commitment frame versus disengage with the goal under progress frame (see also Fishbach and Dhar 2005).

A third contribution of the current research refers to the variables that affect framing goal-congruent activities as goal progress versus commitment. We find that the tendency to frame goal-congruent activities as goal progress or goal commitment depends on framing cues, varies among individuals, and also changes as a function of the temporal distance of these activities, with temporal proximity leading to progress framing and temporal distance leading to commitment framing.

Specifically, with respect to the goal of pursuing a healthy lifestyle and the related activities of working out regularly and consuming healthy drink, study 1 finds that optimistic expectations of future workouts (vs. retrospection of past workouts) lead to higher interest in healthy drink (vs. unhealthy drink) when the expected workouts signal commitment but lower interest in healthy drink when they signal goal progress. This pattern was observed using real consumption data, namely, a choice between healthy spring-water and unhealthy sugared soda. Study 2 demonstrates the direct effect of optimism by holding the time focus of stating expectations constant. It finds that the higher level of optimism induced by a mental simulation of success in self-

regulation (vs. the process of self-regulation) leads to greater impact on choice of goal-congruent (vs. goal-incongruent) actions, and the direction of impact again varies as a function of framing expectations. Study 3 explores individual differences in optimistic expectations and framing. It finds that optimistic (vs. less optimistic) future expectations encourage choice of congruent actions among commitment-oriented individuals but discourage choice of these actions among progress-oriented individuals. Finally, study 4 manipulated the framing of goal pursuit through temporal distance. With regard to the goals of pursuing academic success and saving, this study finds that when goal pursuit is expected (vs. recalled), temporal distance promotes framing of goal commitment and choice of congruent actions, whereas temporal proximity promotes framing of goal progress and choice of incongruent actions.

Interestingly, across all studies, when the goal pursuit being considered was minimal, as is the case when considering past pursuits or thinking conservatively about the future, the framing manipulations did not affect respondents' current choices, presumably because there was insufficient goal pursuit to support either inference. We proposed that commitment and progress inferences are made based on successful attainment; therefore, in the event that people do not feel that they have pursued or do not expect to pursue their goals with reasonable success, these thoughts are irrelevant for immediate actions. For example, to the extent that consumers feel that in the past they have inadequately met their savings goals, framing past saving as commitment versus progress should have minimal impact on the immediate decision to save.

Implications

While most consumer research looks at choice in isolation, the goal-driven nature of choice makes them sensitive to the sequence (see Novemsky and Dhar 2005). Accordingly, this research suggests that marketers should consider not only the trade-offs among the alternatives when making a choice but also the relationship of this choice to past or future choices. Thus, for example, the preference for a tasty but unhealthy dinner may vary when it is viewed in the context of a sequence of (un)healthy choices. More generally, market research into consumer preferences within a consumption context will benefit from the understanding of the underlying goals and self-regulation motives that jointly determine consumer choices.

The existence of an optimistic bias about future self-regulation also has implications for marketers' communications strategies. Previous research made a major distinction between options that are pleasurable but relative vices (guilty pleasures) and options that are relative virtues but underconsumed (grim necessities; e.g., Wertenbroch 1998). Because the optimistic bias is likely to predict more consumption of virtues in the future, marketers of vices or indulgent items could frame the communication in the context of virtues consumed in the future in order to enhance the preference for their product. Marketers of these products

could specifically persuade consumers using communication that highlights their future progress on such goals; thus, activating a specific sequence (e.g., “you should have a vacation now because of all the hard work you are going to do next year”) would be a way to enhance the likelihood of choosing an indulgent item even more than referring to the past (e.g., “you deserve a vacation for all the hard work you did this year”). More interestingly, by focusing on the underlying goals, our theory suggests that these dynamics do not require future actions that are substitutable to current choice (e.g., under progress framing planning to have fat-free ice cream in the future means one can have a regular ice cream now), but they could simply be related by a common goal (e.g., planning to go to the gym allows one to have a fat-containing ice cream now).

Finally, the current research also has implication for marketers’ attempt to make accurate predictions of their own behavior and of others’ behavior based on accomplished versus anticipated actions. Whereas past research on cheap talk (e.g., Farrell and Rabin 1996), as well as people’s lay assumption that “actions speak louder than words,” both attest that stated plans are less reliable than accomplished actions in predicting other people’s behavior, we find that plans are often a more powerful predictor of actual choice than past actions (although the direction of the influence depends on the framing of an action). Possibly, then, external observers rely too heavily on people’s accomplished actions and ignore the valuable information that is in one’s stated plans and aspirations, while self-predictions are often more accurate since they take this information into account. For future research, it would be interesting to investigate this possible source of discrepancy between self- and other predictions, both in terms of the information that is used as an input and the accuracy of the behavioral predictions.

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