

## Climbing the Goal Ladder: How Upcoming Actions Increase Level of Aspiration

Minjung Koo  
Sungkyunkwan University

Ayelet Fishbach  
University of Chicago

Pursuing a series of progressive (e.g., professional) goals that form a goal ladder often leads to a trade-off between moving up to a more advanced level and repeating the same goal level. This article investigates how monitoring one's current goal in terms of remaining actions versus completed actions influences the desire to move up the goal ladder. The authors propose that a focus on remaining (vs. completed) actions increases the motivation to move up to a more advanced level, whereas the focus on completed (vs. remaining) actions increases the satisfaction derived from the present level. They find support for these predictions across several goal ladders, ranging from academic and professional ladders to simple, experimental tasks. They further find that individuals strategically attend to information about remaining (vs. completed) actions to prepare to move up the goal ladder.

*Keywords:* goals, aspiration, commitment, progress

People's goals, whether they constitute central life objectives or mundane everyday pursuits, often follow a "goal ladder" in which each goal is a step toward another, more challenging goal. For example, people's career paths often follow a goal ladder in which an entry-level position is a step toward a more advanced position in the organization. Even more mundane goals, such as playing a computer game, often include different levels in which a person can move up, for example, by advancing from Level 3 to Level 4. In addition, goal ladders characterize learning goals, such as when people move from a beginner to an intermediate level when they acquire a new skill. The goal ladder can be highly structured, for example, when moving up the military ranks (from private to corporal) or the academic ranks (from assistant to associate). However, at other times, goal ladders are less structured, for example, when people seek to move to a position with more challenges and responsibilities than their current one, sometimes without being aware of their desire to advance.

Regardless of the specific features of the goal ladder, individuals face a dilemma between moving up to a more advanced level versus repeating the current level for their next pursuit. Choosing a more advanced level often requires the individual to invest more effort, yet it can offer certain benefits (e.g., greater interest). As such, we explore whether the way individuals monitor their current goal—either in terms of remaining actions or completed actions— influences their aspiration level for their next goal level. We

examine, for example, whether the focus on remaining (vs. completed) courses in college increases the desire to seek a postgraduate job and whether the focus on topics yet to be learned (vs. already learned) in a beginner's language course increases the ultimate level of proficiency beginners aspire to achieve.

We position our theory in previous goal research, which explores the impact of discrepancies (i.e., remaining actions; e.g., Carver & Scheier, 1998; Higgins, 1987; Hull, 1932; Locke & Latham, 2002), as well as successful past pursuits (Bandura, 1991; Feather, 1982; Heckhausen, 1977) on motivation to pursue a focal goal. In departure from previous research, we compare these foci against each other and explore their relative impact on the choice of what to do once the focal goal is achieved. Building on research by Fishbach and colleagues (Fishbach, Dhar, & Zhang, 2006; Koo & Fishbach, 2008), we predict that an emphasis on remaining actions focuses individuals on making progress, leading to a desire to move up, whereas an emphasis on completed actions focuses individuals on their commitment to the current goal, leading to a desire to repeat the present goal level. In exploring these hypotheses, we shed new light on the classic problem of what determines people's levels of aspiration (Dembo, 1931/1976; Kruglanski, 1975; Lewin, 1926; Lewin, Dembo, Festinger, & Sears, 1944; Locke & Latham, 1990).

### Expressing Commitment Versus Making Progress

Two types of incentives exist for pursuing a goal. The first are incentives to engage in a goal, including the experience of enjoyment, involvement, or importance while pursuing a goal. The second are incentives to make progress on a goal and move up the goal ladder. For example, for a student pursuing an academic goal, the incentive can be based on the joy of learning or the pleasure of mastering a topic and moving up to a more advanced topic; for the person playing a computer game, the incentive can be based on the

We thank Yaacov Trope for helpful discussions and insights.

Correspondence concerning this article should be addressed to Minjung Koo, Sungkyunkwan University, SKK Graduate School of Business, 53 Myungryun-dong 3-ga, Jongro-gu, Seoul, Korea 110-745, or Ayelet Fishbach, The University of Chicago, Booth School of Business, 5807 South Woodlawn Avenue, Chicago IL 60637. E-mail: min.koo@skku.edu or ayelet.fishbach@chicagobooth.edu

joy of playing at the present level or the sense of progress when completing this level and moving up to the next level.

This distinction between the two incentives of goal pursuit echoes the distinction between process- and outcome-derived motivations. That is, individuals can either perform a goal activity for its own sake or as a means to reach an outcome or an end state (Harackiewicz & Sansone, 1991; Sansone & Harackiewicz, 1996; Sansone & Smith, 2000). The two types of incentives are also grounded in research on consummatory versus instrumental goals (Miller & Tesser, 1992), endogenous versus exogenous behaviors (Kruglanski, 1975), autotelic versus teleologic goals (Csikszentmihalyi, 1975), and intrinsic versus extrinsic motivation (Deci & Ryan, 1985; Higgins & Trope, 1990). Although these various frameworks differ in many aspects, they share the assumption that the incentive for pursuing a goal comes from engaging in a goal or from attaining a goal and moving on.

For many goals, both types of incentives are possible, such that whether a person values engagement or movement depends on how he or she perceives pursuing the goal. In particular, people can perceive pursuing a goal in terms of either expressing commitment to a desired state or making progress toward this state (Fishbach et al., 2006; Koo & Fishbach, 2008). In a commitment frame, people interpret their goal pursuit as expressing their positive evaluation of the goal and their perception that pursuing the goal is enjoyable, important, or both. This representation of goals pertains less to achieving an end state and more to assessing whether goal engagement is valuable (Higgins & Trope, 1990; Sansone, Weir, Harpster, Morgan, 1992). For example, a student may derive value from expanding his knowledge through a reading assignment, and a chef may enjoy the process of cooking a masterpiece dinner. When people frame their goal actions as expressing commitment, the incentive is to engage in the goal.

Conversely, in a progress frame, people perceive pursuing a goal as moving toward a desired end state or reducing the discrepancy between their current state and this end state. Discrepancy theories, which suggest people intend for their actions to reduce the distance to goal completion, assume this framing of goals (Carver & Scheier, 1990, 1998; Higgins, 1987; Locke & Latham, 1990; Miller, Galanter, & Pribram, 1960). According to this frame, failure to make progress leads to conscious deliberation about increasing effort (Martin & Tesser, 1996; Martin, Tesser, & McIntosh, 1993), because individuals tie the benefits from the goal to attainment rather than engagement (Kivetz, Urminsky, & Zheng, 2006; Locke & Latham, 1990). For example, a student can value making progress on a reading assignment, and a chef can value completing a masterpiece dinner and serving it to the guests. According to Kruglanski et al. (2000), the desire to make progress is particularly strong among people characterized by strong locomotion; for such people, the perception of moving forward is rewarding even beyond the benefits from completing the goal. Thus, when people frame their goal actions as making progress, the incentive to pursue a goal is to move forward.

These distinct goal frames influence individuals' motivation to pursue their focal goal, either because they feel highly committed or because they wish to make progress (Fishbach et al., 2006; Koo & Fishbach, 2008). In addition, these goal frames—commitment versus progress—can influence people's levels of aspiration for their next goal. In a goal ladder, completion of a current goal level is a precondition for moving to the next level. In a commitment

frame, the current level of goal engagement appears optimally rewarding and satisfactory, and individuals have less desire to move to something more advanced on the next opportunity. In this goal frame, completing the current goal increases the motivation to repeat a similar level. In contrast, in a progress frame, people desire to move to the next level after successfully attaining a current goal, because they value the movement and making progress on the goal ladder.

Classic goal research finds that goal completion can often increase the level of aspiration on a subsequent task (Festinger, 1942; Jucknat, 1937; Lewin et al., 1944). For example, Jucknat (1937) found that children spontaneously choose more difficult mazes after successfully completing a maze—a pattern consistent with a progress frame. However, whereas previous studies tested for the impact of actual goal achievement, we propose that the focus on making progress is sufficient to increase people's motivation to move to the next level, even in mid pursuit of the present goal. A goal ladder further contains an imbedded trade-off between repeating the current level and moving on to the next level. An increase in the level of aspiration (in a progress frame) would thus be associated with a lower valuation of the current goal level, and an increase in valuation of the current goal level (in a commitment frame) would imply that a person expresses a lower level of aspiration for the next goal.

It is notable that stronger goal involvement could potentially increase the satisfaction from the present goal level as well as the motivation to move up to the next goal level. For example, a passionate employee will express greater satisfaction from the present role and greater desire to move to something more advanced than will a less passionate employee. However, within any given level of goal involvement, a trade-off should exist between how satisfied people are with their present goal level and how much they desire to move up the goal ladder. The framing of self-regulation as expressing commitment versus making progress could then influence whether they value the present level or wish to advance. For example, relative to the employee who frames his or her goal in terms of commitment, the employee who wishes to progress might be more motivated to move up the organization hierarchy while enjoying his or her present role less.

### Remaining Actions Increase Level of Aspiration

We propose that the focus on completed versus remaining actions on a present goal can impact whether people focus on their commitment to versus progress toward a goal. When the focus is on completed actions, the actions increase the sense of personal commitment to the goal, including the perception that the goal is important and expectancy of attainment is high (Atkinson, 1957; Feather, 1982; Fishbein & Ajzen, 1974; Lewin et al., 1944; Liberman & Förster, 2008; Vroom, 1964). Because the goal appears more valuable and feasible, people wish to adhere to this goal at the next opportunity (Arkes & Ayton, 1999; Aronson, 1997; Bandura, 1991; Bem, 1972; Cialdini, Trost, & Newsom, 1995; Cooper & Fazio, 1984; Freedman & Fraser, 1966). In contrast, when the focus is on remaining actions, people consider their progress and wish to decrease the discrepancy between their current position and the state of goal completion; that is, people wish to move forward (Carver & Scheier, 1990, 1998; Higgins, 1987). In a goal ladder, a desire to move forward translates into not only greater

motivation to complete the present goal level but into a greater level of aspiration, such that a person wishes to move up to the next level.

Thus, whereas previous research documents that completed actions increase motivation by increasing perceived self-efficacy, which promotes commitment (Bandura, 1991), and remaining actions increase motivation by emphasizing discrepancies and lack of action (Carver & Scheier, 1998; Higgins, 1987), we compare the motivational impact of these foci. We predict that an emphasis on completed actions increases the sense of commitment to the present level and encourages the individual to choose a similar level subsequently, whereas an emphasis on remaining actions increases the sense that progress is required and encourages the individual to choose a more advanced goal level after completion of the present goal. For example, a college student could enjoy college more and choose to take more courses if she considers what she has accomplished to date, whereas she will express a greater desire to finish college and start her future career if she considers her remaining coursework.

These foci should have similar motivational impacts in the absence of a clear end state for the current goal level. For example, although the workplace often does not offer goals with a clear end state, we would expect employees to enjoy their current roles more and to wish to maintain them for another year if they consider what they have already accomplished. In contrast, if employees consider what they must still accomplish this year, they will feel more motivated to move up the hierarchy to a more challenging role for the next year.

There are important boundary conditions to the effect on level of aspiration. First, the desire to move forward will translate into a higher level of aspiration only when a goal ladder (i.e., a trajectory) exists and when forming a higher level of aspiration fits within that ladder. If no higher level exists, the focus on remaining (vs. completed) actions might be associated with a desire to disengage. Second, the focus on remaining actions will increase the level of aspiration only if people do not construe the actions as failed. Individuals might associate more negative experiences with remaining actions than with completed actions (Carver & Scheier, 1990), but those remaining actions do not usually represent failed actions. For example, remaining actions are the remaining trials on the task, which provide information on one's level of progress, and failed actions are the failed trials on a task, which provide information on one's lack of ability to successfully pursue this task. Whereas failed actions reduce outcome expectation (Atkinson, 1957; Vroom, 1964) and a person's sense of self-efficacy (Bandura, 1991; also see Brunstein & Gollwitzer, 1996), we predict remaining actions increase the level of aspiration.

### **Strategic Focus on Completed Versus Remaining Actions**

Although individuals might not be aware that the focus on remaining versus completed actions influences their levels of aspiration, they can nevertheless strategically focus on information that fits their aspiration. In particular, we predict that those who want to move up the goal ladder will attend to remaining actions that fit with their desire to evaluate progress, whereas those with lower levels of aspiration will attend to completed actions that fit with their desire to assess commitment.

People can monitor goals by considering either what they have completed or what they still need to do to attain the goal. For example, a student might perceive that he or she is halfway through a reading assignment or that there is half left. Thus, the student can strategically (although not necessarily consciously) attend to information that increases either the incentive to carry out the present goal level or the incentive to move up to a more advanced reading assignment. Then, because we assume people seek feedback that is motivating (Ashford & Cummings, 1983; Kruglanski, 1990; Morrison, 1993; Trope & Neter, 1994), the higher the level of aspiration, the more likely an individual should be to attend remaining actions. For example, when someone engages in a practice task in preparation for the "main" part of the task, he or she will attend to remaining actions, but when the level of aspiration is low—for example, when he or she already believes that he or she is pursuing the final part of the task—he or she will attend to completed actions.

Then to the extent that individuals' attention corresponds to how they choose to report their progress, someone who holds a higher level of aspiration will tend to report remaining actions more than someone who holds a lower level of aspiration (and vice versa for completed actions). This pattern suggests that not only do remaining actions increase the level of aspiration, but those who hold higher levels of aspiration can strategically focus on remaining actions to improve their self-regulation success.

### **Overview of Research**

Five studies test the hypothesis that in a goal ladder, a focus on remaining (vs. completed) actions increases the desire to move up the goal ladder after completing the present goal while it decreases the value from repeating the current goal level. Study 1 examines whether the focus on remaining (vs. completed) academic tasks increases college students' eagerness to begin their careers but decreases their satisfaction with college life. Study 2 tests for students' levels of aspiration when taking a foreign language class. We predict that regardless of whether students consider past or future coursework, a consideration of what topics they did not or will not cover in the current class (remaining actions) increases the ultimate level to which they aspire, compared with a consideration of what topics they did or will cover in current class (completed actions).

Study 3 extends these effects to an experimental task in which participants can move up and down the goal ladder or repeat the same level. It further assesses inferences of progress versus commitment that underlie the effect on level of aspiration. Study 4 extends the results to a field experiment involving employees at the workplace. It tests whether employees listing the tasks they have yet to complete (vs. completed tasks) will seek to move to more challenging roles and be less satisfied with their current roles. Finally, Study 5 investigates whether people attend to remaining (vs. completed) actions when they expect to move to a more advanced level.

### **Study 1: Climbing the Academic Ladder**

Study 1 assesses college students' academic experience. For most college students, career goals are progressive; that is, students go to college after high school and before they begin their

careers. Thus, they can pursue their college education in preparation to move to a more advanced level of their career goal and exhibit a high level of aspiration, or they can pursue their college experience as an end in itself and exhibit a lower desire to move onward.

To test whether the emphasis on remaining (vs. completed) tasks in college increases the level of aspiration (i.e., desire to move up to a more challenging level) while decreasing satisfaction from pursuing tasks that repeat the current goal level, we asked undergraduate students to elaborate on their remaining versus completed academic tasks. Then they rated their eagerness to graduate and begin a career and their satisfaction with their current academic life. We predicted that when college students focused on the remaining academic tasks, they would be more eager to finish their degrees and begin their careers but less satisfied with their current academic life than when they focused on completed tasks.

## Method

**Participants.** Eighty-six undergraduate students (37 men, 49 women) participated in the experiment for monetary compensation. We recruited 41 freshmen, 26 sophomores, 14 juniors, and 5 seniors. We randomly assigned participants in each year to one of the two experimental conditions. We conducted the study at the beginning of the spring quarter (two thirds of the way into the academic year). There was no effect for participants' year in school; therefore, we omit this factor from further analysis.

**Procedure.** This study employed a 2 (focus: completed vs. remaining actions) between-subjects design, with two dependent variables: value of current college experience and level of aspiration. Participants completed an "Academic Life Survey." The first part of the survey manipulated the focus on completed versus remaining academic tasks. Participants in the completed-actions condition reported how many years they had been enrolled in college and were asked to "take a moment to think about what you have achieved in school so far (i.e., courses that you have completed or papers you have written) and write down at least three things that you have achieved." Participants in the remaining-actions condition reported how many years they had left in college and were asked to "take a moment to think about what is left for you to achieve in school (i.e., courses yet to be completed or paper left to be done) and write down at least three things that are left for you to achieve." Participants in both conditions listed similar tasks, such as "junior paper for fundamentals," "language requirement," and "econ core requirement." All participants could easily list three completed or remaining achievements.

The second part of the survey included the main dependent variables. To measure value of pursuing current goal level, participants indicated how satisfied they were with their undergraduate academic life (7-point scale: 1 = *not at all*, 7 = *very satisfied*). As a measure of participants' level of aspiration, participants indicated (a) how eager they were to earn a degree from school and (b) how eager they were to begin their careers (7-point scale: 1 = *not at all*, 7 = *very eager*). These two items correspond to the two different aspects of a high level of aspiration: a desire to complete the present goal level and to move to a more advanced goal. We counterbalanced the order of value and level of aspiration questions. Upon completion of the survey, an experimenter debriefed and dismissed the participants.

## Results and Discussion

In support of our prediction, participants who considered completed actions were more satisfied with their current academic life ( $M = 5.26$ ,  $SD = 1.35$ ) than those who considered their remaining actions ( $M = 4.63$ ,  $SD = 1.49$ ),  $t(84) = 2.05$ ,  $p < .05$ . This result suggests that emphasizing completed actions increased the value participants derived from pursuing the academic goal (e.g., taking more classes in college) more than emphasizing remaining actions.

We created an index of aspiration level by collapsing the two measures of participants' eagerness to graduate and begin their careers ( $r = .44$ ,  $p < .001$ ). In support of the hypothesis, participants who considered their remaining actions indicated a higher level of aspiration ( $M = 5.09$ ,  $SD = 1.55$ ) than those who considered their completed actions ( $M = 4.14$ ,  $SD = 1.31$ ),  $t(84) = -3.07$ ,  $p < .01$ . These results suggest that emphasizing remaining actions increased motivation to complete the current goal level and move to the next level more than emphasizing completed actions. Similar effects emerged for each item separately: eagerness to graduate,  $t(84) = -3.10$ ,  $p < .01$ , and eagerness to begin a career,  $t(84) = -2.05$ ,  $p < .05$ .

Also in support of the hypothesis, participants' satisfaction with continuing their academic life was negatively correlated with their aspiration level ( $r = -.26$ ,  $p < .05$ ). When we controlled for the focus manipulation (completed vs. remaining actions), the partial correlation was still marginally significant ( $r = -.21$ ,  $p = .058$ ). This finding implies that a preexisting trade-off exists between pursuing the goal for the sake of engagement and for the sake of moving up, which the focus manipulation did not produce.

Study 1 provides initial evidence that the focus on completed (vs. remaining) actions increases the value of the current goal level (academic life), but the focus on remaining (vs. completed) actions increases the motivation to move up to the next level (i.e., graduate and begin a career). Furthermore, we find that satisfaction from the current goal pursuit is negatively related to the desire to move to a more advanced level. In this study, we operationalized a higher level of aspiration as eagerness to begin a career, which is presumably more challenging than the students' current activities. In line with previous research, we infer a higher level of aspiration when people want to move up to a more challenging goal (e.g., a more difficult maze; Jucknat, 1937). However, beginning a career would not reflect a higher level of aspiration if pursuing that career poses less challenge than pursuing a college degree. Although our undergraduate student sample likely considered challenging careers (e.g., going to graduate school, getting a job at a prestigious firm), envisioned careers could vary by the degree of challenge relative to pursuing a college degree. Thus, in our subsequent study, we wanted to demonstrate more clearly that a focus on remaining (vs. completed) actions would increase not only the desire to move to something else but specifically the desire to move up to a more advanced goal. For this purpose, in Study 2, we assessed level of aspiration by the ultimate level of mastery students in a foreign language class wished to achieve. We predicted that a focus on remaining actions would increase the desired ultimate level of mastery more than a focus on completed actions.

Another objective of our next study is to separate the effect of time frame from the focus on completed versus remaining actions. The focus on completed versus remaining actions often has a temporal dimension (Bandura & Schunk, 1981; Miller & Brick-

man, 2004; Trope & Liberman, 2000), as actions completed to date tend to occur in the past, whereas remaining actions are planned for the future. However, people might also get a sense of accomplishment and therefore infer commitment from considering actions they will complete (Oettingen & Mayer, 2002; Zhang, Fishbach, & Dhar, 2007). Similarly, people can perceive lack of progress from considering actions they did not pursue in the past (e.g., missed opportunities). Regardless of whether people consider past or future actions, representing these actions as “completed” should decrease the motivation to move up to the next goal level compared with considering these actions as “remaining.” To more clearly demonstrate the unique effect of the focus on remaining actions, in our subsequent study, we disassociated the focus on completed versus remaining actions from the time frame.

### Study 2: Learning a Foreign Language

Participants in Study 2 were enrolled in beginner-level foreign language courses. These courses were part of a language program that offers five progressive courses, up to an advanced level; hence, it presented a goal ladder. To test whether the emphasis on remaining (vs. completed) actions increases level of aspiration independently of the time frame, we asked participants to first consider what materials they had covered (in the past) versus what materials they would cover (in the future) in their current class. We then asked those in the remaining-actions conditions to consider either the topics they did not or would not cover in this class. Those in the completed-actions conditions considered either the topics they had covered or would cover in this class. Using this procedure, we were able to separate the time frame from the focus manipulation: Participants considered what remained for them to learn on the basis of what topics they had not covered or would not cover in the course, or they considered what they had accomplished on the basis of what topics they had covered or would cover in their class.

We predicted that regardless of the past and future frame, when participants focused on remaining actions, they would aim for a higher level as their ultimate goal for learning the foreign language than when they focused on completed actions.

### Method

**Participants.** Ninety-five undergraduate students (42 men, 53 women) enrolled in the beginning-elementary level of foreign language classes (either French or Spanish) participated in the study around the midpoint of the course (Week 5 out of 10) in return for a small prize.

**Procedure.** This study employed a 2 (time: past vs. future)  $\times$  2 (focus: completed vs. remaining actions) between-subjects design. The dependent variable was participants’ levels of aspiration for their language education, out of five progressive levels.

Participants completed a “Language Class Survey” at the end of class. The first part of the survey directed participants to consider their past versus future coursework. Depending on the experimental condition, they thought about materials they had covered (past) or would cover (future) in their beginner’s class. The next part of the survey manipulated the focus on completed versus remaining actions. For the past conditions, the survey asked those in the completed-actions condition to list two topics they had mastered in this class. Those in the remaining-actions condition listed two topics they had

not mastered in this class. For the future conditions, participants in the completed-actions condition listed two topics that they expected to master in this class. Those in the remaining-actions condition listed two topics they did not expect to master in this class. It is notable that the instructions in the remaining-actions conditions referred to topics participants had not or would not cover in the present class, rather than topics they had covered but failed to master. Participants in the four conditions provided similar responses (e.g., “pronoun placement and usage,” “past/present/future tense,” and “oral verb conjunctions”). All participants could easily complete this task.

As a measure of level of aspiration, participants selected the skill level they ultimately hoped to achieve in their language: (a) beginning elementary, (b) continuing elementary, (c) intermediate, (d) intermediate/advanced, or (e) advanced. Upon completion of the survey, an experimenter debriefed and dismissed the participants. Unlike our previous and later studies, this study did not assess participants’ evaluation of their present language classes.

### Results and Discussion

A Time  $\times$  Focus analysis of variance yielded the predicted main effect for focus,  $F(1, 91) = 5.60, p < .05$  (see Figure 1). In support of the hypothesis, regardless of the time frame (past vs. future), when participants listed remaining topics, they selected a higher level as their ultimate goal ( $M = 3.77, SD = 1.15$ ) than they selected when they listed completed topics ( $M = 3.12, SD = 1.44$ ). Neither a main effect of time,  $F(1, 94) = 1.21, p > .27$ , nor an interaction ( $F < 1$ ) was significant.

These findings extend the results of Study 1 to a more structured goal ladder and with respect to another goal domain. We find that considering remaining actions, including topics participants had not covered and would not cover in their current level, increased the level of aspiration compared with considering completed actions, including the topics participants had covered or would cover in their current level. The focus on remaining versus completed actions drives the increased level of aspiration. Moreover, we find that people need not be aware of the goal ladder to demonstrate these effects: The focus on remaining (vs. completed) actions influenced the level of aspiration, even when participants were

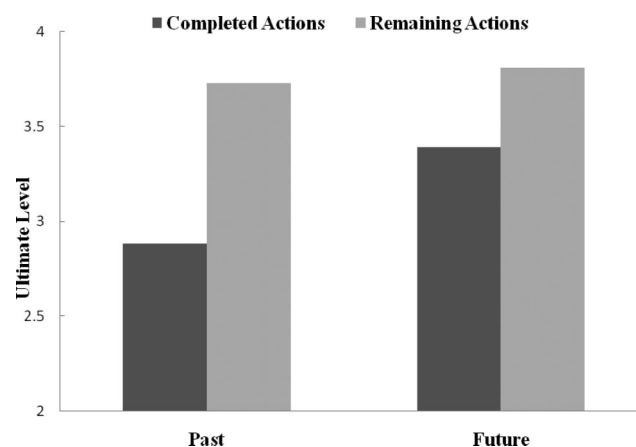


Figure 1. Choice of an ultimate level for language class as a function of time (past vs. future) and focus (completed vs. remaining actions; Study 2).

unaware of the goal ladder while we solicited their response. In addition, we find that differences in goal proximity do not drive the effect of remaining (vs. completed) actions (Bandura & Schunk, 1981; Manderlink & Harackiewicz, 1984), as we have no reason to assume remaining actions were more proximate than completed actions, and if anything, the completed actions could have been closer in time (for both past and future).

We attribute the results of Studies 1 and 2 to participants' different goal frames. We assume a focus on remaining actions activates a progress goal frame; that is, it increases the desire to make progress toward goal completion and beyond. We also assume a focus on completed actions activates a commitment goal frame; that is, it increases the tendency to perceive present goal level as expressing commitment (see also Koo & Fishbach, 2008). In our next study, we tested these underlying inferences. In addition, we included a control condition to demonstrate unique effects for the focus on completed and remaining actions.

### Study 3: Advancing as a Music Reviewer

Participants in Study 3 received continuous progress feedback while working on a task. The feedback either emphasized their completed progress; emphasized their remaining progress; or noted their current, specific trial (control condition). Specifically, participants assumed the role of a music reviewer and evaluated several unfamiliar instrumental musical pieces. Their evaluation of each musical piece was followed by information on the portion they had completed, the portion of the task that remained, or the number of the next piece to be evaluated (control). After completing the initial task, participants could choose a lower, a higher, or a similar task level for their next reviewing task. Thus, we experimentally created a goal ladder in which one could move up, move down, or repeat the same level. We predicted that monitoring remaining (vs. completed) actions would decrease participants' enjoyment of their initial task but increase their level of aspiration, as reflected in their choice of a higher level review task. We further expected the control-condition participants would fall in the middle on these measures.

### Method

**Participants.** One hundred seventy-nine undergraduate students (85 men, 94 women) participated in the experiment for monetary compensation.

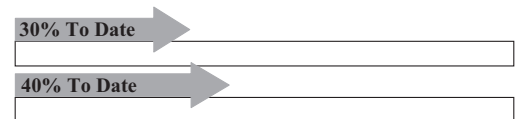
**Procedure.** This study employed a 3 (feedback: completed progress vs. control vs. remaining progress)  $\times$  2 (measure: task enjoyment vs. level of aspiration) between-subjects design. In a departure from Study 1, we manipulated which measure participants completed between subjects, thus ruling out the effect of one measurement on the other (e.g., that stating a higher level of aspiration would influence ratings of present task enjoyment).

We recruited participants for a study entitled "Music Rating." They completed the entire procedure on desktop computers. Their task was to evaluate 10 unfamiliar musical pieces. These pieces were instrumental songs, approximately 2 min long, produced in South Korea. Participants (all Americans) first listened to each musical piece and then provided their evaluations on five 7-point scales (1 = *do not like it at all, bad, quiet, boring, simple*; 7 = *like it a lot, good, loud, interesting, complex*).

After participants evaluated each piece, they received feedback regarding their progress on the task. Participants in the completed-progress condition received feedback on the portion of the task they completed (e.g., "You have completed 10% of the task"), whereas those in the remaining-progress condition received feedback on the portion of the task that remained (e.g., "You have 90% left to finish the task"). A chart that consisted of a bar containing an arrow accompanied the verbal descriptions. The bar represented the amount of work to goal attainment (100%), and the arrow represented the portion of the task that was completed or remained (10%–90%). Specifically, in the completed-progress condition, the arrow was colored from the starting point (0%) to the portion of the task completed (i.e., 10%, 20%, 30%, . . . , 90%). In the remaining-progress condition, the arrow was colored from the present portion to the end point (i.e., 90%, 80%, 70%, . . . , 10%). Those in the control condition received feedback that indicated their position in the sequence (i.e., "Now, you are here"). These verbal descriptions pointed at a horizontal line that contained 10 tick marks indicating the position of 10 musical pieces. A vertical arrow indicated the position of the next piece the participants were about to rate (see Figure 2).

After participants completed the rating task, those in the enjoyment condition indicated how much they enjoyed the task (7-point scale: 1 = *not at all*, 7 = *very much*). The rest of the participants in the level-of-aspiration condition chose a second (and last) music-rating task from among three task levels: Level 1 (lower), Level 2 (same level as the initial task), and Level 3 (higher). Before making a choice, they read that these tasks varied in the number of dimensions of evaluation, which would influence the amount of time and effort they would need to invest. That is, Level 1 was described as a lower level with two dimensions, which required less time and effort, and Level 2 was described as a level

(a) Completed progress feedback



(b) Remaining progress feedback



(c) Control progress feedback

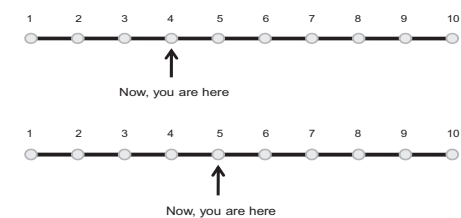


Figure 2. Examples of feedback on the portion of the task completed, remaining, and control in the music-rating task (Study 3).

similar to the initial task with five dimensions. Level 3 was described as a higher level with 10 dimensions, which required more time and effort. To minimize the perceived social desirability of choosing a more advanced level, participants read that the researchers currently needed participants in all three levels. They then completed another similar task before an experimenter debriefed and dismissed them.

## Results and Discussion

An analysis of participants' ratings of task enjoyment yielded the predicted effect for feedback,  $F(2, 86) = 3.67, p < .05$  (see Figure 3). Participants who monitored their completed progress enjoyed the task more ( $M = 5.47, SD = 1.33$ ) than those who monitored their remaining progress ( $M = 4.38, SD = 1.77$ ),  $t(54) = 2.61, p < .05$ . In addition, task enjoyment those in the control condition reported fell between completed- and remaining-progress conditions ( $M = 5.00, SD = 1.39$ ) and did not statistically differ from the completed-progress condition,  $t(61) = 1.36, p = .18$ , or from the remaining-progress condition,  $t(57) = -1.50, p = .14$ . These results support the hypothesis that monitoring completed (vs. remaining) actions increases task enjoyment.

We conducted another analysis of participants' choice of level for their subsequent task. In support of the hypothesis, this analysis revealed the effect of the feedback type,  $\chi^2(4, N = 90) = 10.65, p < .05$  (see Figure 4). Subsequent tests of proportion showed that participants who monitored their remaining progress (83%) were more likely to choose the higher level task (Level 3) than those who monitored their completed progress (48%),  $\chi^2(2, N = 57) = 8.42, p < .05$ . The proportion of the higher level choice by those in the control condition (64%) fell in the middle of remaining- and completed-progress conditions and did not statistically differ from the remaining-progress condition,  $\chi^2(2, N = 61) = 2.58, p = .27$ , or from the completed-progress condition,  $\chi^2(2, N = 62) = 4.25, p = .12$ . These results support the hypothesis that monitoring remaining (vs. completed) actions increases the level of aspiration. Finally, we found no systematic difference in the evaluations of the 10 musical pieces in the initial task across three feedback conditions ( $F_s < 1$ ).

It is interesting to note that few participants chose to stay on the same level as the initial task (Level 2). As a result, those who chose not to go up ended up going down the goal ladder (rather than repeating the same level). We attribute this result to partici-

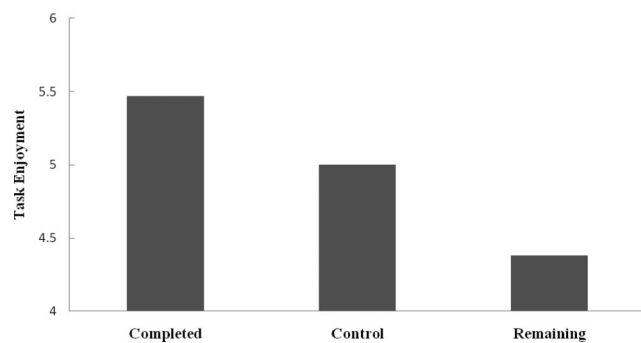


Figure 3. Task enjoyment as a function of completed progress, control, and remaining progress feedback (Study 3).

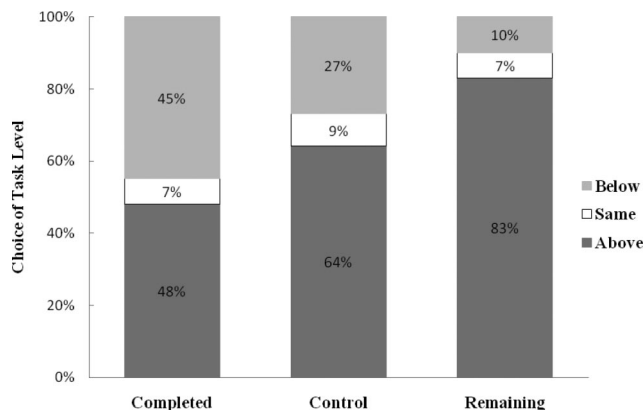


Figure 4. Choice of a subsequent task level as a function of completed progress, control, and remaining progress feedback (Study 3).

pants' desire to try something new at the next opportunity. The desire to try something new is orthogonal to an individual's level of aspiration. Thus, an emphasis on remaining actions increased the desire to move up to a more advanced task, whereas across all conditions, we observe a similarly strong desire to complete a different variation of the previous task.

## A Follow-Up Study: Completed and Remaining Actions Induce Different Goal Frames

To assess the effect of the emphasis on completed versus remaining actions on how people frame their goal pursuits, another group of participants indicated the degree to which they inferred task value and need for progress from monitoring their actions. We predicted that participants would infer a greater task value (hence commitment) when we had them monitor completed (vs. remaining) actions and a greater need for progress when we had them monitor remaining (vs. completed) actions.

Participants in the follow-up study (49 undergraduate students: 23 men, 26 women, sampled from the same population) completed the same music-rating task as did the main-study participants in one of two conditions (completed vs. remaining progress). After completing 50% of the task (five musical pieces) and receiving five pieces of progress feedback, participants completed two measures of underlying inferences. First, they indicated the extent to which completing half of the task (or having half of the task left, in the remaining-progress condition) told them something about the value of engaging in the task (7-point scale: 1 = *strongly disagree*, 7 = *strongly agree*). Second, they indicated the extent to which completing half of the task (or having half of the task left, in the remaining-progress condition) made them satisfied with their rate of progress on the task (7-point scale: 1 = *strongly disagree*, 7 = *strongly agree*). Lower scores on this second item indicate a greater desire to make progress. We counterbalanced the order of the measures.

An analysis of participants' responses revealed they more likely inferred task value when they monitored completed actions ( $M = 3.61, SD = 1.70$ ) than when they monitored remaining actions ( $M = 2.57, SD = 1.36$ ),  $t(47) = 2.29, p < .05$ . In addition, they were less satisfied with their rate of progress when they monitored remaining actions ( $M = 4.81, SD = 1.21$ ) than when they moni-

tored completed actions ( $M = 5.54$ ,  $SD = 1.07$ ),  $t(47) = 2.22$ ,  $p < .05$  (we infer perceived need for progress by lower satisfaction; e.g., Carver & Scheier, 1998). These findings suggest that continuous feedback on completed actions induces a commitment goal frame, whereas continuous feedback on remaining actions induces a progress goal frame.

Taken together, the results of the main part of Study 3 extend our previous results by showing that feedback emphasizing remaining actions (vs. completed actions) increases people's motivation to move to a more advanced task but decreases the value from engaging in the present task. The findings from the follow-up study further provide evidence for the underlying inferences from monitoring completed versus remaining actions; that is, an emphasis on completed actions signaled the current goal was more valuable, which posed a commitment frame of goals, whereas the emphasis on remaining actions signaled a need for progress, which posed a progress frame of goals.

Our findings have implications for level of aspiration in the workplace: The degree of challenge employees seek. Level of aspiration and satisfaction with a current role are two sources of motivation in the workplace (e.g., Locke, Shaw, Saari, & Latham, 1981; Staw, 1984). Research typically assumes that aspiration levels and satisfaction are positively related and jointly contribute to better performance; however, this assumption has not been tested. In contrast, we predict a trade-off between level of aspiration and satisfaction from a present role, resulting from the trade-off between valuing moving up versus repeating a similar level. Thus, when employees view their roles in terms of making progress and value climbing up the career ladder (e.g., "I work on this project to move up to do something better"), they will be less satisfied with their current roles but will express a high aspiration level. However, when employees view their roles in terms of expressing their commitment, and their incentive is to maintain their present goal engagement (e.g., "I work on this project because I like it"), they will be more satisfied with their current roles and find their current level of aspiration sufficient. We test these predictions in our next study.

#### Study 4: Climbing the Professional Ladder

We conducted Study 4 as a field experiment at an advertising agency. Participants were employees at the agency. They listed either what they had achieved in their role since they joined the firm (completed actions) or what they had yet to achieve at the firm (remaining actions). Then they indicated their motivation to move on to more challenging roles (aspiration level) and their level of satisfaction with their current roles. We predicted that when employees focused on remaining actions, they would be less satisfied with their current roles and more interested in moving on to more challenging roles than when they focused on what they had achieved.

#### Method

**Participants.** Sixty-six current employees (39 men, 27 women) who had worked for over a year at a South Korean advertising agency (Publicis Welcomm) participated in the study (average age = 31 years). They constituted approximately 90% of the total number of employees in the agency. We did not include

new employees because they would have difficulty listing completed or remaining accomplishments. The average duration of employment at the agency was 4.21 years ( $SD = 3.34$  years) and was similar in both conditions ( $t < 1$ ).

Participants' professions were as follows: 28 account executives, 19 art directors/copywriters/producers, 13 media buyers/planners, and 6 marketers/human resources managers. Their positions were as follows: 3 managers, 12 senior officers, 12 junior officers, and 39 associates. We randomly assigned participants to the two experimental conditions within each profession and each position to reduce the variance due to these variables.

**Procedure.** This study employed a 2 (focus: completed vs. remaining actions) between-subjects design. The main dependent variables were participants' levels of aspiration and satisfaction with current roles. Participants completed a survey titled "Welcomm Work Motivation Survey" (translated from Korean) during the first week of January. To minimize any demand effect, participants were assured that their responses were anonymous and would not be shared with anyone in their organization.

The first part of the survey asked participants in both conditions to describe their roles in one sentence. Their responses included, for example, "day-to-day client correspondence" and "advertising production planning." The next open-ended question manipulated the focus on completed actions versus remaining actions. Participants in the completed-actions condition took a moment to think about what they had achieved in their roles since joining Publicis Welcomm (e.g., projects or campaigns they had completed) and to write down, in detail, three things. Participants in the remaining-actions condition took a moment to think about what they planned to achieve but had not yet accomplished since joining Publicis Welcomm (e.g., projects or campaigns yet to be completed) and to write down three things. Participants in both conditions listed similar things, such as "HP PSG campaign: print and online ad production," "KTF Drama campaign and promotion," and "launching of a new brand of Samsung car (QM5)." All participants could list three tasks.

Next, to measure satisfaction with present tasks, participants rated their agreement with (a) "In general, I am satisfied with my current tasks/projects"; (b) "I enjoy my current tasks/projects"; and (c) "Considering every aspect (from my current tasks to firm culture), I am satisfied with the overall work experiences at Publicis Welcomm." To measure level of aspiration, participants also rated their agreement with (a) "I desire to move on to more challenging tasks/projects"; (b) "I want to move to a different team with more challenging task/projects"; and (c) "Compared with the task/projects in the last year, next year, I feel I should choose and achieve more challenging goals or tasks." All ratings were made on 7-point scales (1 = *strongly disagree*, 7 = *strongly agree*). We counterbalanced the order of six questions on aspiration and satisfaction.

We assume a trade-off exists between the amount of challenge a project offers and the ease with which an employee could handle it. To assess how participants resolve this trade-off, the survey also asked them to indicate "what projects or tasks they would rather work on in the upcoming year" (1 = *less challenging and easier than my current ones*, 7 = *more challenging and difficult than my current ones*).

## Results and Discussion

First, we collapsed participants' satisfaction ratings ( $\alpha = .79$ ) and aspiration level ratings ( $\alpha = .64$ ) into separate indexes. In support of the hypothesis, participants who focused on completed tasks were more satisfied with their current roles ( $M = 4.84$ ,  $SD = 1.21$ ) than were those who focused on their remaining tasks ( $M = 4.28$ ,  $SD = 0.95$ ),  $t(64) = 2.02$ ,  $p < .05$ . In contrast, participants who focused on their remaining tasks indicated a higher level of aspiration ( $M = 5.47$ ,  $SD = 0.99$ ) than did those who focused on completed tasks ( $M = 4.88$ ,  $SD = 0.85$ ),  $t(64) = -2.58$ ,  $p < .01$ .

The satisfaction index was further negatively correlated with the aspiration index ( $r = -.30$ ,  $p < .05$ ). When we controlled for the focus manipulation (completed vs. remaining actions), the partial correlation was marginally significant ( $r = -.24$ ,  $p = .05$ ). This reverse relationship between satisfaction with current roles and level of aspiration is consistent with the results of Study 1. We assume the focus on completed actions, which increases satisfaction from the present role, increases the desire to repeat this role next year, whereas the focus on remaining actions increases the desire to move up to a different (more challenging) role next year.

We also analyzed participants' ratings of how they resolve the conflict between challenge and comfort. In support of the hypothesis, those who focused on remaining tasks indicated they would rather—in spite of the increased difficulty—work on more challenging tasks next year ( $M = 5.86$ ,  $SD = 1.04$ ) than those who focused on completed tasks ( $M = 5.03$ ,  $SD = 1.19$ ),  $t(64) = -2.87$ ,  $p < .01$ .

Overall, these results extend the previous findings to a real-world setting and with respect to actual employees' aspiration level toward more challenging roles and satisfaction level with their current roles. We find that emphasizing remaining actions increases employees' motivation to move up, whereas emphasizing completed actions increases their satisfaction with their present roles, which accounts for a low desire to move up.

Thus far, our studies examine whether the focus on completed versus remaining actions influences whether people value (and wish to repeat) the current goal level versus moving up to a higher level of aspiration. We assume that these foci play an instrumental role in promoting self-regulation toward repeating the same goal versus advancing to a more advanced goal. In the final study, we examine whether people attend to remaining (vs. completed) actions to motivate themselves to advance to the next goal.

### Study 5: Strategic Progress Monitoring

Study 5 examines whether people monitor their progress in terms of remaining (vs. completed) actions when they prepare to advance to the next level. We assume that attending to the portion of actions remaining is functional for moving up the goal ladder, and therefore, people will strategically monitor their progress in terms of remaining actions when they expect to advance. Specifically, participants completed a lexical task, which we framed as either a practice for the main task (high aspiration level) or the main task itself (low aspiration level). After participants completed half of the task, they reported their progress. We predicted that when the aspiration level was high (vs. low), participants would

prefer to report their progress in terms of remaining actions (e.g., "I have three more trials") than completed actions (e.g., "I have completed three trials").

## Method

**Participants.** Sixty-eight undergraduate students (30 men, 38 women) participated in the experiment for monetary compensation.

**Procedure.** This study employed a 2 (task type: practice vs. main) between-subjects design. The dependent variable was participants' reports of their progress. We conducted the experiment in individual sessions in a quiet room in which the experimenter could watch the participant unobtrusively through a glass window. Participants completed a study titled "twist text task," and they received the instructions on a desktop computer. The instructions read that as part of the twist text task, participants would rearrange the letters in several letter strings to form four different words of three or more letters each. For each word, they should not repeat letters or include any letter not in the set of letters. To help participants understand the task, the instructions included an example: "If the set of letters was 'E I U D L T,' then 'TIE,' 'LIT' or 'DILUTE' would be some possible solutions, whereas 'DID' (repeat letters), 'IT' (too short), and 'DOLT' ('O' is not in the set of letters) would not."

To manipulate participants' aspiration level, in the high-aspiration-level condition, the task was defined as a "practice," which would be followed up by the main task. The written instruction was to work on six practice trials printed on paper before moving to the real part of the twist text task on the desktop computer. In contrast, in the low-aspiration-level condition, the task was to complete six trials of the text twist task printed on paper. When the task was framed as practice, participants expected to move to a more advanced level (main part) after completing their practice trials. However, when the task was framed as a main task, participants did not expect to move to the next level. Experimenters placed the paper-and-pencil task beside the computer. Each trial was printed on a separate page, so participants had to turn over a page to move to the next trial. The letter strings on each trial were identical across "practice" and "main" tasks.

To measure whether participants spontaneously attended to completed versus remaining actions, when participants completed half the trials (i.e., when they just finished the third trial), an experimenter, who was unobtrusively watching them, interrupted the study, asking, "Where are you now on the trials?" It is notable that we conducted the experiment using a self-explanatory computer program; thus, none of the participants expected the experimenter to interact with them to deliver the second, "main" part of the experiment. The experimenter recorded the progress reports the participants provided, and a coder (who was blind to the hypothesis) later coded and classified the reports into two categories: completed actions (e.g., "I've done three," "I'm halfway through") and remaining actions (e.g., "there're three more," "I've half left"). Upon the completion of the six trials, participants returned to the computer screen and provided demographic information. Then those in the practice condition learned there was no second part, and they were all debriefed and dismissed.

## Results and Discussion

Eight participants (five from the “practice” task and three from the “main” task) provided ambiguous progress reports (neither completed nor remaining actions; e.g., “I am with this one”), and we removed their data from further analysis, leaving us with 60 participants. Nine participants (four from the “practice” condition and five from the “main” condition) provided information on both completed and remaining actions. In these cases, we coded only their first response. The total number of correct solutions per trial was similar for the practice-task ( $M = 4.05$ ,  $SD = 0.94$ ) and main-task ( $M = 4.09$ ,  $SD = 1.33$ ) conditions, suggesting that participants in the practice task were not taking it less seriously. For most of the trials (85.7%), participants followed the instruction to generate at least four words per trial.

To test our hypotheses, we analyzed participants’ progress reports as a function of task type (practice vs. main). The dependent variable received a value of 1 if the report included completed actions and 0 otherwise. In support of the hypothesis, a logistic regression on the progress reports yielded the predicted effect of task type ( $\beta = -1.38$ , Wald’s  $\chi^2 = 6.29$ ,  $p < .05$ ). Subsequent tests of proportion showed that participants in the practice-task condition were more likely to report remaining (vs. completed) actions (65%) than were those in the main-task condition (31%),  $\chi^2(1, N = 60) = 6.55$ ,  $p < .01$ .

These results support the prediction that people spontaneously monitor their remaining (vs. completed) actions when they expect to move to a more advanced level. Participants who worked on practice trials were progressing toward the next goal level; they thought about the task as a stage they needed to complete to advance. Because their focus was on moving up, they attended to remaining actions, which increased the desire to progress. In contrast, those who worked on the main task tended to focus on completed trials, which increased their task commitment. We can conclude that in the course of self-regulation, people attend to information that is more relevant to the source of their motivation: making progress and moving on or engaging in the focal task.

## General Discussion

Previous goal research documents the importance of focusing on a goal end state to secure goal pursuit (Brehm & Self, 1989; Carver, Lawrence, & Scheier, 1999; Heath, Larrick, & Wu, 1999; Higgins, 1987; Locke & Latham, 1990), an idea best captured in the saying “keep the eye on the prize.” But whereas previous literature explored how emphasizing remaining distance to a goal increases motivation to reach that goal, the current article investigates whether the focus on remaining actions and goal progress can further increase people’s levels of aspiration beyond their present goal. In addition, we explore the motivational cost of the focus on making progress on a goal: It lowers the intrinsic value from engaging in a present goal.

We explore these effects in a series of progressive goals that form a goal ladder. In a goal ladder, the incentive to pursue a present goal can come from the possibility of moving up to the next level, and then people express a high level of aspiration (Kruglanski, 1975; Lewin et al., 1944). Alternatively, the incentive to pursue a present goal can come from engaging in it, regardless of whether it allows one to move to something more advanced

(Harackiewicz & Sansone, 1991). These different incentives pose a trade-off, such that the more the present goal serves to move ahead, the less it serves as a source of value in itself. We predicted that how people resolve the trade-off would depend on how they monitor progress. Monitoring remaining actions signals a need for progress, such that people value moving forward and express a high level of aspiration. In contrast, monitoring completed actions signals that the current goal is valuable, such that people feel committed to engage in the goal and express a lower interest in advancing to a higher level of goal pursuit.

Our results across five studies support these predictions. In Study 1, we found that elaborating on remaining (vs. completed) academic tasks increased undergraduate participants’ eagerness to begin their careers but decreased their satisfaction with their present college academic life. In Study 2, we found that students in a foreign language course who elaborated on topics they had not covered or would not cover in their current course level (remaining topics) expressed higher levels of aspiration compared with those who elaborated on topics they had covered or would cover in that course (completed topics). In Study 3, in the context of evaluating novel musical pieces, we found that feedback on the remaining (vs. completed) portion of a task increased the likelihood of choosing to work on a more advanced task subsequently but decreased the enjoyment from the initial rating task. Participants’ interest in moving up, rather than switching to a somewhat different task, drove this effect. Study 4 was a field experiment involving employees at an advertising company. We found that when employees considered what they had yet to achieve (vs. what they had already achieved), they were motivated to move on to new, more challenging roles but experienced decreased satisfaction from their current roles. Finally, participants in Study 5 strategically sought information on the remaining (vs. completed) portion of the task when they expected to move to a more advanced level. Individuals appear to attend to information that matches their level of aspiration and that can best help them maintain their motivation to progress or not on a goal ladder.

Across these studies, we find further evidence for the negative relationship between level of aspiration and the value of a present goal level. Thus, in the trade-off between moving up and repeating the present level for the next task, remaining actions signal a need for progress, and people pursue a present goal to complete it and progress to the next one. Conversely, completed actions signal goal commitment, and people wish to repeat the present goal, which is rewarding in itself.

Our previous research finds that when a goal action signals commitment, people tend to pursue additional congruent actions that highlight pursuit of this goal. In contrast, when the same action signals goal progress, people balance for the progress on the goal by pursuing incongruent actions that promote other goals (Fishbach et al., 2006; Koo & Fishbach, 2008). The current findings have several important implications for that framework. First, we identify one factor that activates these distinct goal frames: Monitoring completed actions signals commitment and monitoring upcoming actions signals a need for progress. Second, our research identifies behavioral patterns of highlighting and balancing in a series of goals that forms a goal ladder. Previous research shows these patterns when a person holds multiple goals that compete with one another (e.g., saving and spending; Dhar & Simonson, 1999). When multiple goals are at stake, highlighting implies

staying on the same focal goal, and balancing implies switching to a different goal. In contrast, in the context of a goal ladder, highlighting implies staying on the same level of goal pursuit (or even stepping down, as in Study 3), and balancing implies completing the present level and moving up the goal ladder. Thus, balancing is associated with a higher level of aspiration.

### Implications for Motivation Theory

We arrived at our hypotheses and interpreted our findings within the framework put forth by research on the dynamics of self-regulation and, in particular, the notion that goal pursuits signal either commitment to or progress on that goal (Fishbach & Dhar, 2005; Fishbach et al., 2006; Koo & Fishbach, 2008). However, these findings have further implications for other theories on motivation and, to promote cumulative progress in research on goals and motivation beyond any single theoretical framework, we specify these implications here.

**Discrepancy theory.** A major conclusion from motivation research is that discrepancies increase motivation (e.g., Carver & Scheier, 1998; Higgins, 1987; Klinger, 1975; Locke & Latham, 1990; Miller, Galanter, & Pribram, 1960; Oettingen, 1996). For example, research on the goal gradient effect attests that humans (and animals) expend more effort as they approach a salient goal end state (Förster, Higgins, & Idson, 1998; Hull, 1932; Kivetz et al., 2005), and research on the energization model attests that people mobilize effort in proportion to the perceived difficulty of meeting the upcoming goal (Brehm & Self, 1989; Wright & Brehm, 1989). Related to this point, research on symbolic self-completion theory suggests that discrepancies (or lack of accomplishments) increase motivation mainly when the task is relevant to self-definition (Wicklund & Gollwitzer, 1982). Other research further addresses the function of discrepancies, suggesting that people strategically consider discrepancies to motivate goal pursuit. Specifically, research on mental contrasting finds that people compare expectations of a positive future with negative aspects of present reality to increase their motivation to act (Oettingen, Pak, & Schnetter, 2001). In addition, research on implementation intentions (Gollwitzer, 1999) and current concerns (Klinger, 1987) demonstrate that holding a goal end state will increase motivation to form specific plans to meet that goal. According to these models, awareness of the discrepancy elicits planning processes that allow smooth self-regulation toward the goal.

But it is notable that whereas discrepancies increase motivation, the focus on the amount of progress individuals have achieved was also shown to increase motivation. Specifically, the focus on completed actions increases a person's sense of self-efficacy (Bandura, 1991) and expectancy of goal attainment (Atkinson, 1957; Heckhausen, 1977; Vroom, 1964), which in turn increases goal pursuit. Accordingly, research that compares these two foci—on completed versus remaining actions—identified variables that determine when each focus is more motivating (Koo & Fishbach, 2008).

In contrast with previous research, we ask how monitoring a present goal in terms of completed versus remaining actions (i.e., discrepancies) influences what a person aspires to subsequently. For example, whereas research on implementation intentions (Gollwitzer, 1999) and the energization model (Brehm & Self, 1989) explored how the focus on discrepancies motivates self-regulation toward meeting these goals, we ask which goal a person

will choose after the original goal is met. We find that the focus on remaining (vs. completed) actions leads people to choose a more challenging level for their next goal. In a way, this effect is ironic, because people are more willing to commit to a higher challenge when they reflect on actions that are still missing to meet the present challenge than if they consider what they have already achieved. We attribute this pattern to individuals' focus on making progress beyond the present goal.

**Goal setting.** Our findings have implications for research on goal setting. Two distinct stages for self-regulation exist: goal setting and goal striving (e.g., Bagozzi, 1992; Heckhausen & Gollwitzer, 1987; Oettingen et al., 2001). Goal striving is set into motion once goal setting is completed, that is, once a person identifies a goal he or she would like to pursue (Austin & Vancouver, 1996; Carver & Scheier, 1998; Higgins, 1997; Oettingen & Gollwitzer, 2001). The effectiveness of goal striving would then depend on several factors, for example, the person's affective monitoring system (Carver & Scheier, 1998) and whether he or she is able to identify subgoals to spur movement (Anderson & Douglass, 2001; Bandura & Schunk, 1981; Locke & Latham, 1990). But prior to goal striving, people need to choose certain goals, and several variables affect which goals they are more likely to set for themselves. For example, a person may choose goals implicitly associated with positive affect (Custers & Aarts, 2005), goals that fulfill some basic needs (e.g., the need to belong; Baumeister & Leary, 1995), goals close family members hold for the individual (Fitzsimons & Bargh, 2003), and contagious goals the person infers from observing others (Aarts, Gollwitzer, & Hassin, 2004).

This research on goal setting has seen little formal attempt to study people's level of aspiration. In a goal ladder, when each goal enables a person to move to a more advanced goal, we ask which goal levels people set for themselves. This question is separate from why the individual chose a certain goal domain in the first place. For example, rather than asking why some individuals decide to learn a new language, we ask what level of mastery they aspire to achieve (e.g., conversational vs. fluent); or rather than asking why some individuals play an instrument, we wish to shed light on the level of expertise these individuals wish to achieve (e.g., amateur vs. professional). In this research, we thus wish to explore the variables that influence the level of goal pursuit individuals set for themselves.

**Intrinsic versus extrinsic motivation.** Finally, our findings have implications for research on extrinsic versus intrinsic motivation (Deci & Ryan, 1985; Kruglanski, 1975; Ryan, Sheldon, Kasser, & Deci, 1996; Shah & Kruglanski, 2000). Research and theory on intrinsic motivation address the reward systems for pursuing different actions. They suggest that for some actions, the reward is external and contingent on successful completion of the action, whereas for other actions, the reward is internal and an inherent part of engaging in the action. For example, whereas some people pursue their jobs only to receive social and monetary rewards, they pursue their hobbies because they enjoy them. Whereas the former, job-related tasks are extrinsically motivating, the latter, hobby-related tasks are intrinsically motivating (Shah & Kruglanski, 2000).

In a similar manner, we argue that individuals in a progress frame are oriented toward completing the goal and moving up the goal ladder more than those in a commitment frame; thus, their interest in the goal can be viewed as more extrinsic, as it is a necessary step to move up. In contrast, those in a commitment

frame are less concerned with goal completion and monitoring their progress; thus, their interest in the goal can be seen as more intrinsic. However, the effects of goal frames are distinct from extrinsic versus intrinsic motivations. In particular, progress-oriented individuals wish to move up and increase the level of challenge rather than receive the external rewards and disengage from the goal; hence, their motivation is not purely extrinsic. Although these individuals may be extrinsically motivated to pursue the present step in the goal ladder, which only serves to move them to the next step, they might still have an intrinsic interest in the goal domain in general. Indeed, consistent with our analysis, research by Dweck and colleagues (Dweck & Leggett, 1988; Elliott & Dweck, 1988) finds that when people hold learning goals (to increase their competence), they seek more challenges than when they hold performance goals (to master their performance on a particular topic). In general, then, whereas a higher level of aspiration can create effects similar to extrinsic motivation, those who exhibit higher levels of aspiration are intrinsically motivated to climb the goal ladder and seek value from making progress and increasing the level of challenge in a particular goal domain.

### References

- Aarts, H., Gollwitzer, P. M., & Hassin, R. R. (2004). Goal contagion: Perceiving is for pursuing. *Journal of Personality and Social Psychology, 87*, 23–37.
- Anderson, J. R., & Douglass, S. (2001). Tower of Hanoi: Evidence for the cost of goal retrieval. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 27*, 1331–1346.
- Arkes, H. R., & Ayton, P. (1999). The sunk cost and Concorde effects: Are humans less rational than lower animals? *Psychological Bulletin, 125*, 591–600.
- Aronson, E. (1997). The theory of cognitive dissonance: The evolution and vicissitudes of an idea. In C. McGarty & S. A. Haslam (Eds.), *The message of social psychology: Perspectives on mind in society* (pp. 20–35). Malden, MA: Blackwell.
- Ashford, S. J., & Cummings, L. L. (1983). Feedback as an individual resource: Personal strategies of creating information. *Organizational Behavior and Human Performance, 32*, 370–398.
- Atkinson, J. W. (1957). Motivational determinants of risk-taking behavior. *Psychological Review, 64*, 359–372.
- Austin, J. T., & Vancouver, J. B. (1996). Goal constructs in psychology: Structure, process, and content. *Psychological Bulletin, 120*, 338–375.
- Bagozzi, R. P. (1992). The self-regulation of attitudes, intentions, and behavior. *Social Psychology Quarterly, 55*, 178–204.
- Bandura, A. (1991). Self-regulation of motivation through anticipatory and self-reactive mechanisms. In R. A. Dienstbier (Ed.), *Nebraska Symposium on Motivation, 1990* (pp. 69–164). Lincoln, NE: University of Nebraska Press.
- Bandura, A., & Schunk, D. (1981). Cultivating competence, self-efficacy, and intrinsic interest through proximal self-motivation. *Journal of Personality and Social Psychology, 41*, 586–598.
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin, 117*, 497–529.
- Bem, D. J. (1972). Self-perception theory. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 6, pp. 1–62). New York, NY: Academic Press.
- Brehm, J. W., & Self, E. A. (1989). The intensity of motivation. *Annual Review of Psychology, 45*, 560–570.
- Brunstein, J. C., & Gollwitzer, P. M. (1996). Effects of failure on subsequent performance: The importance of self-defining goals. *Journal of Personality and Social Psychology, 70*, 395–407.
- Carver, C. S., Lawrence, J. W., & Scheier, M. F. (1999). Self-discrepancies and affect: Introducing the role of feared selves. *Personality and Social Psychology Bulletin, 25*, 783–792.
- Carver, C. S., & Scheier, M. F. (1990). Origins and functions of positive and negative affect: A control process view. *Psychological Review, 97*, 19–35.
- Carver, C. S., & Scheier, M. F. (1998). *On the self-regulation of behavior*. New York, NY: Cambridge University Press.
- Cialdini, R. B., Trost, M. R., & Newsom, J. T. (1995). Preference for consistency: The development of a valid measure and the discovery of surprising behavioral implications. *Journal of Personality and Social Psychology, 69*, 318–328.
- Cooper, J., & Fazio, R. H. (1984). A new look at dissonance theory. *Advances in Experimental Social Psychology, 17*, 229–266.
- Csikszentmihalyi, M. (1975). *Beyond boredom and anxiety*. San Francisco, CA: Jossey-Bass.
- Custers, R., & Aarts, H. (2003). Positive affect as implicit motivator: On the nonconscious operation of behavioral goals. *Journal of Personality and Social Psychology, 89*, 129–142.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York, NY: Plenum Press.
- Dembo, T. (1976). The dynamics of anger. In J. De Rivera (Ed.), *Field theory as human-science* (pp. 324–422). New York, NY: Gardner Press. (Original work published 1931)
- Dhar, R., & Simonson, I. (1999). Making complementary choices in consumption episodes: Highlighting versus balancing. *Journal of Marketing Research, 36*, 29–44.
- Dweck, C. S., & Leggett, E. L. (1988). A social-cognitive approach to motivation and personality. *Psychological Review, 95*, 256–273.
- Elliott, E. S., & Dweck, C. S. (1988). Goals: An approach to motivation and achievement. *Journal of Personality and Social Psychology, 54*, 5–12.
- Förster, J., Higgins, E. T., & Idson, L. C. (1998). Approach and avoidance strength during goal attainment: Regulatory focus and the “goal looms larger” effect. *Journal of Personality and Social Psychology, 75*, 1115–1131.
- Feather, N. T. (1982). Actions in relation to expected consequences: An overview of a research program. In N. T. Feather (Ed.), *Expectations and actions: Expectancy-value models in psychology* (pp. 53–95). Hillsdale, NJ: Erlbaum.
- Festinger, L. A. (1942). Wish, expectation, and group standards as factors influencing level of aspiration. *Journal of Abnormal and Social Psychology, 37*, 184–200.
- Fishbach, A., & Dhar, R. (2005). Goals as excuses or guides: The liberating effect of perceived goal progress on choice. *Journal of Consumer Research, 32*, 370–377.
- Fishbach, A., Dhar, R., & Zhang, Y. (2006). Subgoals as substitutes or complements: The role of goal accessibility. *Journal of Personality and Social Psychology, 91*, 232–242.
- Fishbein, M., & Ajzen, I. (1974). Attitudes towards objects as predictors of single and multiple behavioral criteria. *Psychological Review, 81*, 59–74.
- Fitzsimons, G. M., & Bargh, J. A. (2003). Thinking of you: Nonconscious pursuit of interpersonal goals associated with relationship partners. *Journal of Personality and Social Psychology, 84*, 148–164.
- Freedman, J. L., & Fraser, S. C. (1966). Compliance without pressure: The foot-in-the door technique. *Journal of Personality and Social Psychology, 4*, 195–202.
- Gollwitzer, P. M. (1999). Implementation intentions: Strong effects of simple plans. *American Psychologist, 54*, 493–503.
- Harackiewicz, J. M., & Sansone, C. (1991). Goals and intrinsic motivation: You can get there from here. *Advances in Motivation and Achievement, 7*, 21–49.

- Heath, C., Larrick, R., & Wu, G. (1999). Goals as reference points. *Cognitive Psychology*, 38, 129–166.
- Heckhausen, H. (1977). Achievement motivation and its constructs: A cognitive model. *Motivation and Emotion*, 1, 283–329.
- Heckhausen, H., & Gollwitzer, P. M. (1987). Thought contents and cognitive functioning in motivational versus volitional states of mind. *Motivation and Emotion*, 11, 101–120.
- Higgins, E. T. (1987). Self-discrepancy: A theory relating self and affect. *Psychological Review*, 94, 319–340.
- Higgins, E. T. (1997). Beyond pleasure and pain. *American Psychologist*, 52, 1280–1300.
- Higgins, E. T., & Trope, Y. (1990). Activity engagement theory: Implications of multiple identifications for intrinsic motivation. In E. T. Higgins & R. M. Sorrentino (Eds.), *Handbook of motivation and cognition: Foundations of social behavior* (Vol. 2, pp. 229–264). New York, NY: Guilford Press.
- Hull, C. L. (1932). The goal gradient hypothesis and maze learning. *Psychological Review*, 39, 25–43.
- Jucknat, M. (1937). Performance, level of aspiration and self-consciousness. *Psychological Research*, 22, 89–179.
- Kivetz, R., Urminsky, O., & Zheng, Y. (2006). The goal-gradient hypothesis resurrected: Purchase acceleration, illusionary goal progress, and customer retention. *Journal of Marketing Research*, 43, 39–58.
- Klinger, E. (1975). Consequences of commitment to and disengagement from incentives. *Psychological Review*, 82, 1–25.
- Klinger, E. (1987). Current concerns and disengagement from incentives. In F. Halisch & J. Kuhl (Eds.), *Motivation, intention and volition* (pp. 337–347). Berlin, Germany: Springer.
- Koo, M., & Fishbach, A. (2008). Dynamics of self-regulation: How (un)accomplished goal actions affect motivation. *Journal of Personality and Social Psychology*, 94, 183–195.
- Kruglanski, A. W. (1975). The endogenous–exogenous partition in attribution theory. *Psychological Review*, 82, 387–406.
- Kruglanski, A. W. (1990). Motivations for judging and knowing: Implications for causal attribution. In E. T. Higgins & R. M. Sorrentino (Eds.), *Handbook of motivation and cognition: Foundations of social behavior* (Vol. 2, pp. 53–92). New York, NY: Guilford Press.
- Kruglanski, A. W., Thompson, E. P., Higgins, E. T., Atash, N. M., Pierro, A., Shah, J. Y., & Spiegel, S. (2000). To “do the right thing” or to “just do it”: Locomotion and assessment as distinct self-regulatory imperatives. *Journal of Personality and Social Psychology*, 79, 793–815.
- Lewin, K. (1926). Intention, will and need. *Psychologische Forschungen*, 7, 95–121.
- Lewin, K., Dembo, T., Festinger, L., & Sears, P. S. (1944). Level of aspiration. In J. M. Hunt (Ed.), *Personality and the behavioral disorders* (pp. 333–371). New York, NY: Roland Press.
- Lieberman, N., & Förster, J. (2008). Expectancy, value and psychological distance: A new look at goal gradients. *Social Cognition*, 26, 515–533.
- Locke, E. A., & Latham, G. P. (1990). *A theory of goal setting & task performance*. Upper Saddle River, NJ: Prentice Hall.
- Locke, E. A., & Latham, G. P. (2002). Building a practically useful theory of goal setting and task motivation. *American Psychologist*, 57, 705–715.
- Locke, E. A., Shaw, K. N., Saari, L. M., & Latham, G. P. (1981). Goal setting and task performance: 1969–1980. *Psychological Bulletin*, 90, 125–152.
- Manderlink, G., & Harackiewicz, J. M. (1984). Proximal versus distal goal setting and intrinsic motivation. *Journal of Personality and Social Psychology*, 47, 918–928.
- Martin, L., & Tesser, A. (1996). Some ruminative thoughts. In R. S. Wyer (Ed.), *Advances in social cognition* (pp. 1–48). Hillsdale, NJ: Erlbaum.
- Martin, L., Tesser, A., & McIntosh (1993). Wanting but not having: The effects of unattained goals on thoughts and feelings. In D. M. Wegner & J. W. Pennebaker (Eds.), *Handbook of mental control* (pp. 552–572). Englewood Cliffs, NJ: Prentice Hall.
- Miller, G. A., Galanter, E., & Pribram, K. H. (1960). *Plans and the structure of behavior*. New York, NY: Henry Holt.
- Miller, M. G., & Tesser, A. (1992). The role of beliefs and feelings in guiding behavior: The mismatch model. In L. L. Martin & A. Tesser (Eds.), *The construction of social judgments* (pp. 277–300). Hillsdale, NJ: Erlbaum.
- Miller, R. B., & Brickman, S. J. (2004). A model of future-oriented motivation and self-regulation. *Educational Psychology Review*, 16, 9–33.
- Morrison, E. W. (1993). Newcomer information seeking: Exploring types, modes, sources and outcomes. *Academy of Management Journal*, 36, 557–589.
- Oettingen, G. (1996). Positive fantasy and motivation. In P. M. Gollwitzer & J. A. Bargh (Eds.), *The psychology of action: Linking cognition and motivation to behavior* (pp. 236–259). New York, NY: Guilford Press.
- Oettingen, G., & Gollwitzer, P. M. (2001). Goal setting and goal striving. In A. Tesser & N. Schwarz (Vol. Eds.), M. Hewstone, & M. Brewer (Series Eds.), *Intraindividual processes: Volume 1 of the Blackwell handbook in social psychology* (pp. 329–347). Oxford, England: Blackwell.
- Oettingen, G., & Mayer, D. (2002). The motivating function of thinking about the future: Expectations versus fantasies. *Journal of Personality and Social Psychology*, 83, 1198–1212.
- Oettingen, G., Pak, H. J., & Schnetter, K. (2001). Self-regulation of goal setting: Turning free fantasies about the future into binding goals. *Journal of Personality and Social Psychology*, 80, 736–753.
- Ryan, R. M., Sheldon, K. M., Kasser, T., & Deci, E. L. (1996). All goals are not created equal. In P. M. Gollwitzer & J. A. Bargh (Eds.), *The psychology of action: Linking cognition and motivation to behavior* (pp. 7–26). New York, NY: Guilford Press.
- Sansone, C., & Harackiewicz, J. M. (1996). “I don’t feel like it”: The function of interest in self-regulation. In L. Martin & A. Tesser (Eds.), *Striving and feeling: Interactions among goals, affect, and self-regulation* (pp. 203–228). Mahwah, NJ: Erlbaum.
- Sansone, C., & Smith, J. L. (2000). The “how” of goal pursuit: Interest and self-regulation. *Psychological Inquiry*, 11, 306–309.
- Sansone, C., Weir, C., Harpster, L., & Morgan, C. (1992). Once a boring task always a boring task? Interest as a self-regulatory mechanism. *Journal of Personality and Social Psychology*, 63, 379–390.
- Shah, J. Y., & Kruglanski, A. W. (2000). The structure and substance of intrinsic motivation. In C. Sansone & J. M. Harackiewicz (Eds.), *Intrinsic and extrinsic motivation: The search for optimal motivation and performance* (pp. 106–130). New York, NY: Academic Press.
- Staw, B. M. (1984). Organizational behavior: A review and reformulation of the field’s outcome variables. *Annual Review of Psychology*, 35, 627–718.
- Trope, Y., & Liberman, N. (2000). Temporal construal and time-dependent changes in preference. *Journal of Personality and Social Psychology*, 79, 876–889.
- Trope, Y., & Neter, E. (1994). Reconciling competing motives in self-evaluation: The role of self-control in feedback seeking. *Journal of Personality and Social Psychology*, 66, 646–657.
- Vroom, V. H. (1964). *Work and motivation*. New York, NY: Wiley.
- Wicklund, R. A., & Gollwitzer, P. M. (1982). *Symbolic self-completion*. Hillsdale, NJ: Erlbaum.
- Wright, R. A., & Brehm, J. W. (1989). Energization and goal attractiveness. In P. A. Lawrence (Ed.), *Goal concepts in personality and social psychology* (pp. 169–210). Hillsdale, NJ: Erlbaum.
- Zhang, Y., Fishbach, A., & Dhar, R. (2007). When thinking beats doing: The role of optimistic expectations in goal-based choice. *Journal of Consumer Research*, 34, 567–578.

Received June 28, 2008

Revision received February 11, 2010

Accepted February 15, 2010 ■