
Seeing Future Success: Does Imagery Perspective Influence Achievement Motivation?

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Imagining future success can sometimes enhance people's motivation to achieve it. This article examines a phenomenological aspect of positive mental imagery—the visual perspective adopted—that may moderate its motivational impact. The authors hypothesize that people feel more motivated to succeed on a future task when they visualize its successful completion from a third-person rather than a first-person perspective. Actions viewed from the third-person perspective are generally construed at a relatively high level of abstraction—in a manner that highlights their larger meaning and significance—which should heighten their motivational impact. Three studies in the domain of academic motivation support this reasoning. Students experience a greater increase in achievement motivation when they imagine their successful task completion from a third-rather than a first-person perspective. Moreover, mediational analyses reveal that third-person imagery boosts motivation by prompting students to construe their success abstractly and to perceive it as important.

Keywords: *mental imagery; visual perspective; possible selves; mental simulation; achievement motivation; construal*

People's personal thoughts about the future can influence their current feelings, motives, and behavior, and thus, social psychologists have a long-standing interest in how people imagine upcoming events (Johnson & Sherman, 1990; Ross & Buehler, 2001). A particularly tantalizing idea that has guided decades of research is that imagining a desired future might increase one's motivation and effort to attain it. Consider Sarah, an

aspiring academic contemplating her own first lecture: She may picture herself delivering an engaging presentation to an appreciative audience, and this mental image may prompt her to prepare thoroughly. Consistent with this example, there is considerable evidence that generating mental images of future success can sometimes increase achievement motivation, effort, and performance (Cantor, Markus, Niedenthal, & Nurius, 1986; Johnson & Sherman, 1990; Karniol & Ross, 1996; Taylor, Pham, Rivkin, & Armor, 1998). The present research extends the existing work by exploring a specific, phenomenological aspect of positive mental imagery—the visual perspective or point of view that people adopt—that may alter its motivational impact.

THE MOTIVATIONAL IMPACT OF IMAGINED FUTURE EVENTS

Broadly speaking, the present research can be situated within the body of work in social and personality

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psychology that has explored the links between people's conceptions of themselves in the future and their current motivational state (e.g., Cantor et al., 1986; Karniol & Ross, 1996). One important way in which people represent their future is by goals—conceptualized as people's desired future state or the outcomes to which they aspire—and a wealth of research indicates that goals serve to motivate and guide behavior (Austin & Vancouver, 1996; Elliot, Shell, Bouas Henry, & Maier, 2005; Gollwitzer & Moskowitz, 1996; Locke & Latham, 1990). For example, research inspired by goal-setting theory (Locke & Latham, 1990) indicates that specific, challenging goals can enhance performance in many tasks, particularly if the task performers are committed to the goal and have high expectations that they can attain it.

In addition to goals, people represent the future by imagining how it may unfold, and the present research focuses on the motivational effects of such mental imagery. A mental image of the future is an internally generated representation of some future state of affairs (Atance & O'Neill, 2001; Beach, 1990; Mook, 1987). People's mental images can, of course, be closely related to their goals; however, processes of goal formation and imagery are conceptually and functionally distinct (Austin & Vancouver, 1996; Cantor et al., 1986; Mook, 1987). People who share the very same goal (e.g., delivering an impressive lecture) may experience markedly different levels of motivation to attain it depending on the nature of their mental imagery. Indeed, several theorists have emphasized the unique role of future imagery in guiding people's goal-directed behavior and, as reviewed below, have illustrated the motivational benefits of positive future images.

Research examining possible selves (Markus & Nurius, 1986; Oyserman, Bybee, & Terry, 2006; Ruvolo & Markus, 1992) has explored people's self-generated images of what they could become. A positive image of oneself in the future can motivate action by helping people to articulate their goals clearly and develop behaviors that will allow them to fulfill those goals. In addition to global representations of future selves, people's images of discrete actions and events may affect motivation. A classic line of research in social cognition illustrates that the very act of imagining future events not only can make those events seem more likely (e.g., Anderson, 1983; Carroll, 1978; Sherman, Zehner, Johnson, & Hirt, 1983) but also can help to bring them about (e.g., Gregory, Cialdini, & Carpenter, 1982; Sherman, Skov, Hervitz, & Stock, 1981; for a review, see Johnson & Sherman, 1990). Sherman et al. (1981) asked participants to imagine and explain either their own success or failure on an upcoming anagram task and to explicitly predict their performance. Those who imagined success not only expected to perform better but also actually outperformed

those who imagined failure. Similar imagery techniques have been shown to enhance athletic performance (e.g., Hall, Rodgers, & Barr, 1990; Paivio, 1985) and have been used by practitioners to alter behavior of impulsive school children, to reduce relapse rates among alcoholics, and to reduce premature termination of therapy (Johnson & Sherman, 1990).

More recent research on mental simulation—the cognitive construction and rehearsal of hypothetical scenarios—sheds further light on how and why imagining a desired event aids in goal attainment (Pham & Taylor, 1999; Taylor et al., 1998). Mental simulation appears to facilitate goal-directed behavior by increasing people's expectations of success, increasing their motivation and emotional involvement, and prompting concrete plans and problem-solving activities (Taylor et al., 1998). Within the domain of academic achievement, for example, students who simulated their successful performance on a midterm exam began studying earlier, studied longer, and received higher grades than those who did not (Pham & Taylor, 1999).

Of course, not every wish or fantasy one has about oneself in the future is likely to have motivational benefits, and researchers have identified several factors that moderate the impact of positive mental imagery. Some individuals, such as defensive pessimists (Showers, 1992; Spencer & Norem, 1996), actually become less motivated when induced to focus on their future success. Also, differences in the content of mental imagery can alter its effectiveness. For example, positive mental images are more beneficial when they focus on precisely how the individual will attain the desired outcome (process focus) rather than exclusively on the outcome itself (outcome focus; Pham & Taylor, 1999; Taylor et al., 1998).

Some emerging research suggests that the motivational effects of imagining success depend not only on the content of a mental image but also on how it is subjectively experienced. Positive images have stronger effects on motivation and subjective confidence to the extent that they are perceived as controllable, are easily imagined, and are highly accessible (Norman & Aron, 2003; Sanna & Schwarz, 2004). In addition, Oettingen and colleagues (Oettingen & Mayer, 2002; Oettingen & Thorpe, 2006) have distinguished two qualitatively distinct forms of thinking about desired future events—expectations versus fantasies—each having very different effects on motivation. Positive expectations refer to people's beliefs, based on careful consideration of available evidence, that the imagined future event is attainable, and this form of thinking serves to heighten motivation and task performance. Positive fantasies refer to idealized images of desired events that are experienced positively regardless of their likelihood of occurrence. This form of thinking can undermine motivation

by tempting a person to mentally enjoy the desired future in the here and now, thereby yielding little motivation to act, and also can conceal the likelihood of obstacles and the need to prepare accordingly (Oettingen & Thorpe, 2006). The present research extends the emerging work on phenomenological aspects of positive mental imagery by exploring the role of a basic perceptual factor—visual perspective.

THE ROLE OF IMAGERY PERSPECTIVE

When people imagine future events, they often generate visual imagery (Atance & O'Neill, 2001; Mook, 1987), and there are two perspectives that they can adopt (Libby & Eibach, 2002; Nigro & Neisser, 1983; Pronin & Ross, 2006). From a first-person perspective, individuals see the event from the same visual perspective that they would if it was actually occurring; in their mental image, they are looking out at their surroundings through their own eyes. From a third-person perspective, individuals see the event from an observer's visual perspective; in their mental image, they can actually see themselves as well as their surroundings. For example, as Sarah envisions her lecturing debut, she could picture the faces of her attentive students looking back at her, just as if she were giving the lecture (first-person perspective). Alternatively, she could see herself standing at the front of a crowded lecture hall with her arm resting on the podium as she eloquently delivers her talk just as she would be seen by her audience (third-person perspective).

How might these differences in visual perspective affect Sarah's motivation to pursue her goal of delivering an impressive lecture? Surprisingly, there is very little research that addresses this question directly. Although there is an extensive literature examining the role of visual perspective for remembered events (e.g., Libby & Eibach, 2002; Libby, Eibach, & Gilovich, 2005; Lorenz & Neisser, 1985; McIsaac & Eich, 2002; Nigro & Neisser, 1983; Robinson & Swanson, 1993), very little research has examined the psychological consequences of imagery perspective for future events.

We propose that images of future success will enhance motivation to a greater degree when visualized from a third-person perspective rather than a first-person perspective. Our hypothesis derives from recent theory and research suggesting that a third-person perspective prompts people to construe events in a manner that heightens their personal meaning and significance (Libby et al., 2005). The construal hypothesis builds on action identification theory (Vallacher & Wegner, 1985) and temporal construal theory (Trope & Liberman, 2003). According to these theories, any event

(e.g., giving a lecture) can be construed at different levels of abstraction ranging from low-level or concrete (e.g., uttering words and sentences to students) to high-level or abstract (e.g., conveying knowledge, advancing one's academic career). Furthermore, increases in the psychological distance of an event, in various forms (e.g., temporal distance, spatial distance), lead people to construe it at a higher level of abstraction. Thus, given that the third-person perspective is a relatively distanced perspective on the self (Kross, Ayduk, & Mischel, 2005; Robinson & Swanson, 1993; Wilson & Ross, 2003), it should function much like other forms of psychological distance and lead people to construe events more abstractly (Libby et al., 2005). Recent findings support this theorizing: Individuals construed a wide range of events at a higher level of abstraction when they were induced to visualize them from a third-person as opposed to a first-person perspective (Libby & Eibach, 2003; Shaeffer & Libby, 2006).

Such differences in construal level are important in the present context because of their motivational implications. Whereas a low-level construal focuses on highly concrete, specific, and incidental features of an action, a high-level construal highlights the broader meanings and consequences of actions for the person who performs them (Fujita, Trope, Liberman, & Levin-Sagi, 2006; Libby et al., 2005). Thus, a high-level construal generally carries more meaning and importance (Vallacher & Wegner, 1985); for example, a recent study showed that people came to see goals as more important when they were induced to construe them at a higher level of abstraction (Liberman, Trope, McCrea, & Sherman, 2007, Study 2). Furthermore, in many contexts, goals that are construed as more important tend to be more motivating (e.g., Fujita et al., 2006; Sheldon & Elliot, 1998; Zirkel & Cantor, 1990); indeed, a central tenet of expectancy-value theories is that the motivation to achieve a goal is determined largely by the personal value or importance of that goal to the individual (for a review, see Eccles, 2005). In sum, construing a desired future event at a higher level should accentuate its personal importance and thus increase achievement motivation.

THE PRESENT RESEARCH

Our hypotheses follow from the recent theorizing on construal and extend it by connecting people's visual perspectives when imagining desired events, their construal of the meaning and personal significance of those events, and their subsequent motivational state. We chose to examine these processes within the academic domain, in part, because of the potential applied

benefits; in addition, this is a domain in which success imagery has shown a substantial motivational impact (e.g., Oettingen & Mayer, 2002; Taylor et al., 1998).

We conceptualized motivation quite broadly and assessed people's current motivational state with a self-report measure. Although motivation has been conceptualized in many ways in past research, and overlaps considerably with related constructs (e.g., intentions, plans, goals, effort, and commitment), by virtually all definitions motivation refers to the energizing and directing of behavior (Pittman, 1998). Consistent with this definition, our measure was developed to capture the extent to which participants were currently feeling energized to succeed (e.g., feeling motivated, feeling eager) and planning to take appropriate action (e.g., planning to put time and effort into the upcoming task). In short, we focused more on the quantity of motivation than on qualitative distinctions between different forms of motivation (Vansteenkiste, Lens, De Witte, & Feather, 2005). Also, the present investigation focused on approach motivation (wherein behavior is energized or directed by a desirable event or possibility) and did not address avoidance motivation (wherein behavior is energized or directed by an undesirable event or possibility; for a review of the approach-avoidance distinction, see Elliot, 1999; Elliot & Covington, 2001).

In three experiments, participants first identified an important upcoming task and then imagined themselves performing it extremely well. Using a guided imagery procedure, participants were randomly assigned to visualize their successful task performance from either a first- or third-person perspective and subsequently reported their motivation to succeed. Study 2 included a manipulation of imagined performance level (positive vs. neutral) to assess whether positive imagery did indeed heighten achievement motivation (and particularly from a third-person perspective). We also obtained indicators of the hypothesized mediating processes, including the perceived importance of the task (Study 2) and construal of the meaning and implications of the task (Study 3).

We expected that participants would report greater motivation when they visualized success from a third- rather than a first-person perspective. We also expected that relative to first-person imagery, third-person imagery would lead participants to perceive their successful task performance as more important (Study 2) and to construe it at a higher level of abstraction (Study 3). Finally, we expected that the effects of imagery perspective would be mediated by perceived importance and construal level, that is, third-person imagery should prompt individuals to construe their success in a manner that accentuates its larger meaning or significance, which in turn, should increase motivation.

STUDY 1

This study provided an initial test of the hypothesis that imagery perspective influences achievement motivation. Participants visualized their own highly successful performance on an academic task from either a first- or third-person perspective and then rated how motivated they felt to succeed.

METHOD

Participants

Participants were 47 university students (31 women) who participated in exchange for course credit in their introductory psychology class.

Procedure

Participants were recruited for a study examining how people imagine, think about, and plan for future events. After arriving, they were seated in individual cubicles and completed a questionnaire containing all instructions and measures. Participants first identified an important academic task (e.g., test, essay, presentation) that they would be performing in the next few weeks and indicated when it would take place.¹ Participants then completed a guided imagery procedure in which they were instructed to visualize the task going extremely well, as follows:

Please try to picture the upcoming task going extremely well, just as you hope it will actually go. For example, you could picture the steps you are taking to carry out the task effectively, the positive feedback that you receive, people's reactions to you, etc. Try to see the entire task unfolding successfully from beginning to end.

To manipulate visual perspective, participants were further instructed to visualize their successful task performance from either a first-person perspective ("You see events unfolding through your own eyes, just as you would see them if they were actually occurring. That is, you are looking out at your surroundings and seeing only what would be visible to you as the event takes place") or a third-person perspective ("You see yourself as well as your surroundings, just as if you were an observer to the situation. That is, you are looking at yourself and seeing what an observer would see as the event takes place"). As a manipulation check, participants described in writing what they had envisioned.

Next, participants completed the measure of achievement motivation. They were presented with five statements concerning their motivation to succeed at the task

(I plan to put a lot of time and energy into this task, I intend to do all that I can to ace this task, I feel very motivated to succeed on this task, I am eager to get working on this task, I plan to give this task my very best effort) and rated the extent to which each statement was true (1 = *not at all true*; 11 = *very true*).

RESULTS AND DISCUSSION

Manipulation Check

Two coders (blind to condition) rated the extent to which the imagery descriptions revealed a third-person versus a first-person perspective (1 = *completely first*, 2 = *mostly first*, 3 = *ambiguous*, 4 = *mostly third*, 5 = *completely third*). Third-person ratings were given to the extent that participants reported observing themselves (e.g., I see myself smiling as I leave the exam room). First-person ratings were given to the extent that participants described looking out at their surroundings as they would when the event occurred (e.g., I look around me and see other people flipping through the pages). There was high interrater reliability, $r(45) = .72$, $p < .001$, and ratings from the two coders were averaged. As expected, participants adopted a third-person perspective to a greater degree in the third-person condition ($M = 3.04$, $SD = 1.31$) than in the first-person condition ($M = 2.34$, $SD = .87$), $t(45) = 2.13$, $p < .05$.

Achievement Motivation

A composite index of motivation was calculated by averaging the five motivation items ($\alpha = .82$). As hypothesized, participants reported greater motivation when they imagined their success from a third-person ($M = 9.18$, $SD = 1.25$) rather than a first-person perspective ($M = 8.38$, $SD = 1.40$), $t(45) = 2.05$, $p < .05$.

Although the results supported the primary hypothesis, one limitation of the study was that it did not assess the motivational impact of imagining a highly successful performance. It seems plausible that participants' motivation was heightened by imagining a positive performance (e.g., Ruvolo & Markus, 1992; Taylor et al., 1998) and that visual perspective moderated this effect. However, in the absence of a comparison condition in which participants do not visualize a highly successful performance, we cannot determine whether success imagery, seen from either visual perspective, served to increase motivation. A second limitation of the study was that it did not include measures of the hypothesized mediating processes.

STUDY 2

The purpose of Study 2 was to replicate the effect of visual perspective on achievement motivation and to

address the two issues raised above. First, in addition to varying visual perspective, we varied the level of success that participants imagined. Participants imagined the task going either extremely well (positive condition) or just as they expected it would actually go (neutral condition). Note that using this neutral condition as the standard for comparison arguably provides a stringent test of the effects of imagining success because people generally expect to perform well on future tasks (Taylor & Brown, 1988). Nevertheless, on the basis of past research examining positive mental imagery (Ruvolo & Markus, 1992; Taylor et al., 1998), we expected that the participants induced to visualize a more successful performance would experience a stronger motivation to succeed. We also expected that the increase in achievement motivation would be moderated by visual perspective. Thus, we predicted an interaction between the imagined performance level (positive vs. neutral) and visual perspective (first-person vs. third-person) wherein the effect of success imagery would be strongest when it was visualized from a third-person perspective.

Second, the study included a measure of the perceived importance of the imagined event. According to our construal hypothesis, imagining a successful performance from a third-person as opposed to a first-person perspective prompts individuals to construe the performance in a manner that heightens its significance, which in turn increases motivation. Thus, we expected that participants who imagined a successful task performance would subsequently perceive the task as more important in the third-person than in the first-person condition. Furthermore, we expected that the motivational impact of imagining success from different perspectives would be mediated by the perceived importance of the task.

Note that our mediation hypotheses focus on success imagery. Although it was possible that third-person imagery could heighten perceived importance in both the success and neutral conditions, we reasoned that the effect would be limited to the success condition. People are generally more inclined to perceive domains in which they succeed as more important than those in which they do not (Steele, 1997; Tesser, Crepez, Collins, Cornell, & Beach, 2000) and thus would be predisposed to construe future success in a manner that maximizes its importance. Accordingly, future outcomes would begin to seem particularly important when they are both highly successful and perceived from a third-person perspective. Thus, our hypothesis was that the imagery manipulation would yield effects on perceived importance parallel to the effects on motivation.

Subsidiary measures were included to assess several possible alternative processes. One possibility is that first-person imagery elicits "positive fantasies" rather than "positive expectations" (Oettingen & Mayer, 2002;

Oettingen & Thorpe, 2006). Given that first-person imagery often increases the salience of internal states that accompany events (Libby & Eibach, 2002; McIsaac & Eich, 2002; Nigro & Neisser, 1983, Robinson & Swanson, 1993), it may heighten the salience of positive feelings associated with success (e.g., feelings of pride, excitement, joy). This may tempt people to enjoy the feelings that they are experiencing in the moment without preparing actively to achieve the goal. In contrast, because third-person imagery is relatively objective, dispassionate, and detached, it may elicit positive expectations that include realistic thoughts about possible obstacles, thereby increasing the motivation to act. To test this possibility, we assessed the extent to which participants' imagery descriptions focused on positive emotions evoked by the imagery and on task feasibility concerns.

Another possible mechanism is suggested by motivational theories emphasizing the role of expectancies (e.g., Bandura, 1991; Carver & Scheier, 1981): Imagery perspective may influence motivation by altering the level of success that people expect to attain. Finally, given the conceptual parallels between visual perspective and subjective temporal distance (Libby et al., 2005; Pronin & Ross, 2006; Wilson & Ross, 2003), it may be that third-person imagery increases people's confidence by making the tasks seem further in the future (Gilovich, Kerr, & Medvec, 1993). We obtained measures of performance expectancy and perceived temporal distance to test these possible alternative processes.

METHOD

Participants

Participants were 113 university students (75 women) who participated in exchange for course credit in their introductory psychology class.

Procedure

Participants completed a questionnaire in which they first identified an important academic task that they would be performing in the next few weeks and indicated when it would take place. Next, they were instructed to take a moment to form a clear visual image of how the task could unfold. To manipulate performance level, participants were asked to visualize the task going either extremely well (i.e., picture the upcoming task going extremely well, just as you hope it will actually go) or in a more neutral manner (i.e., picture the upcoming task going just as you think it will actually go). To manipulate visual perspective, participants were instructed, as in Study 1, to picture the task

unfolding from either the first- or third-person point of view.

After visualizing the upcoming task in the specified way, participants were asked to describe in writing what they had envisioned and then to complete the measure of achievement motivation. Next, participants completed items that assessed the perceived importance of the task (1 = *not at all important*, 11 = *extremely important*), how well they expected to perform (1 = *not at all well*, 11 = *extremely well*), and how far in the future the task seemed (1 = *almost like tomorrow*, 11 = *very distant future*).

RESULTS AND DISCUSSION

Manipulation Checks

Two coders (blind to experimental condition) rated the extent to which participants imagined a successful performance (1 = *extremely unsuccessful*, 7 = *extremely successful*) and adopted a third-person versus a first-person perspective (as in Study 1). There was high interrater reliability (success level $r = .76$, $p < .001$; visual perspective $r = .71$, $p < .001$) and ratings from the two coders were averaged.

A 2 (performance level: positive vs. neutral) \times 2 (perspective: first vs. third) analysis of variance (ANOVA) for ratings of imagined success revealed only a main effect of performance level, indicating that participants imagined greater success in the positive ($M = 5.58$, $SD = 1.00$) than in the neutral condition ($M = 4.28$, $SD = 1.23$), $F(1, 109) = 44.13$, $p < .001$. The analysis for perspective ratings revealed only a main effect of perspective, indicating that participants adopted third-person imagery to a greater degree in the third-person ($M = 3.51$, $SD = 1.15$) than in the first-person condition ($M = 2.34$, $SD = 1.21$), $F(1, 109) = 29.28$, $p < .001$.

Achievement Motivation

A 2 (performance level: positive vs. neutral) \times 2 (visual perspective: first vs. third) ANOVA performed on the index of achievement motivation ($\alpha = .80$) revealed a significant interaction, $F(1, 109) = 6.63$, $p < .05$, that supported the hypotheses (see Table 1). Within the positive condition, participants reported greater motivation in the third-person condition than in the first-person condition, $t(109) = 2.23$, $p < .05$. Within the neutral condition, this effect of visual perspective was not obtained, $t(109) = 1.39$, *ns*. In addition, within the third-person condition, participants were more motivated when they imagined a positive performance rather than a neutral performance, $t(109) = 2.05$,

TABLE 1: Achievement Motivation and Perceived Importance as a Function of Imagined Performance Level (positive vs. neutral) and Visual Perspective (first person vs. third person): Study 2

Measure	Positive		Neutral	
	First	Third	First	Third
Achievement motivation				
M	7.92 _a	8.76 _b	8.52 _{ab}	8.01 _a
SD	1.55	1.28	1.42	1.32
Perceived importance				
M	8.48 _a	9.87 _b	9.30 _{ab}	9.00 _a
SD	2.10	1.43	1.44	1.70

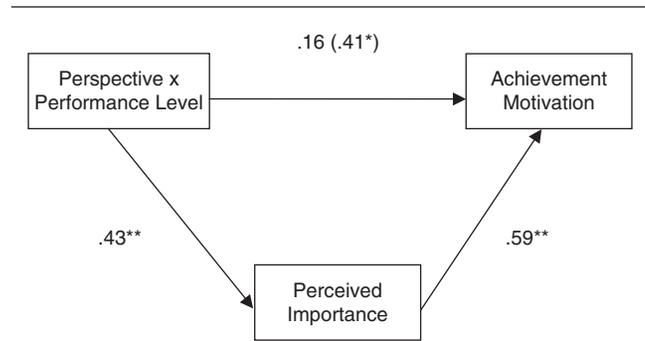
NOTE: For each measure, means that do not share a subscript differ significantly.

$p < .05$, whereas this effect of performance level was not obtained in the first-person condition, $t(109) = 1.59$, *ns*.

Perceived Importance

A 2 (performance level: positive vs. neutral) \times 2 (perspective: first vs. third) ANOVA for perceived importance also revealed the hypothesized interaction effect, $F(1, 109) = 7.16$, $p < .01$ (see Table 1). As expected, within the positive condition, participants perceived the task as more important in the third-person than in the first-person condition, $t(109) = 3.07$, $p < .01$. In the neutral condition, the importance ratings were not affected by perspective, $t(109) = .68$, *ns*. In addition, in the third-person condition, participants came to see the task as more important when they imagined a highly successful task performance rather than a more neutral performance, $t(109) = 1.99$, $p < .05$. In the first-person condition, this effect of imagined performance level was not obtained, $t(109) = 1.14$, *ns*.

Regression analyses were conducted to test our hypothesis that the joint effect of visual perspective and performance level on motivation would be mediated by the perceived importance of the task. First, in separate analyses, perceived importance and motivation were regressed on dummy variables representing visual perspective, performance level, and the Perspective \times Performance Level interaction. Consistent with the results presented above, these analyses revealed a significant interaction effect on perceived importance, $\beta = .43$, $t(109) = 2.68$, $p = .009$, and motivation, $\beta = .41$, $t(109) = 2.57$, $p = .01$. An additional regression revealed that the interaction effect on motivation was diminished when perceived importance (i.e., the mediator) was controlled, $\beta = .16$, $t(109) = 1.21$, $p = .23$, whereas the effect of perceived importance on motivation was significant, $\beta = .59$, $t(109) = 7.41$, $p < .001$. This pattern (see Figure 1) suggests that the interaction effect on

**Figure 1** Mediation of the joint effect of visual perspective and imagined performance level on achievement motivation in Study 2.

NOTE: Visual perspective was dummy-coded (0 = first person, 1 = third person); imagined performance level was dummy-coded (0 = neutral, 1 = positive). Path coefficients are standardized regression coefficients. The value in parentheses is the coefficient for the Perspective \times Performance Level interaction effect on achievement motivation without controlling for perceived importance.

* $p < .05$. ** $p < .01$.

motivation was mediated by the perceived importance of the task ($z = 2.54$, $p = .01$, by Sobel test).

Subsidiary Measures

Next, we tested the possibility that a first-person perspective increased processes involved in positive fantasy: imagining an idealized version of the task without concern to feasibility and savoring positive emotions associated with the imagery. Two raters coded the degree to which participants focused on potential obstacles to successful task completion (e.g., the other group members haven't fully prepared) and positive emotions they would experience (e.g., I leave the exam feeling happy; 1 = not at all, 5 = extremely). Interrater reliability was high (feasibility concerns $r = .85$, $p < .001$; positive emotions $r = .79$, $p < .001$) and we averaged across raters.

A 2 (performance level: positive vs. neutral) \times 2 (perspective: first vs. third) ANOVA performed on each of these measures yielded only a main effect of performance level. Not surprisingly, participants focused less on feasibility concerns, $F(1, 109) = 5.07$, $p < .05$, and more on their positive emotions, $F(1, 109) = 11.99$, $p < .001$, in the positive condition than in the neutral condition. Of importance, there were no significant effects involving perspective ($ps > .30$). Thus, the open-ended measures revealed no evidence that visual perspective affected achievement motivation by affecting people's inclination toward positive fantasy. Similarly, ANOVAs performed on the measures of expected performance and perceived temporal distance did not yield any significant effects involving perspective ($ps > .30$) or any other significant effects. Thus, the effects of imagery perspective on achievement motivation were not attributable to these factors.

In summary, the study replicated and extended the effect of imagery perspective on achievement motivation observed in Study 1. By varying the imagined performance level, the study revealed that success imagery can increase achievement motivation but the effect depends on the visual perspective that is adopted. As hypothesized, individuals experienced the strongest motivation after visualizing a highly successful performance from a third-person perspective. Indeed, it was only in this condition that success imagery enhanced motivation. The study also yielded support for the construal-based account, which suggests that third-person imagery accentuates the meaning and personal importance of the task. Mediation analyses indicated that participants who imagined their future success from a third-person perspective came to see the task as more important, which in turn, enhanced their motivation.

There are potential concerns, however, with the evidence supporting the mediating role of construal. Perceived importance was assessed after the measure of achievement motivation and thus may have been affected by it. Also, perceived importance provides a somewhat indirect measure of the hypothesized construal processes and may overlap considerably with the construct of achievement motivation itself. Evidence for the proposed mediating processes could be strengthened by measuring more directly participants' construal of the meaning and consequences of task success.

STUDY 3

Study 3 provided a more direct test of the hypothesized construal process. The study was very similar to Study 1, with the exception that we measured participants' construal of their imagined success before measuring their motivation. We expected that participants who adopted a third-person perspective would construe their performance at a higher level—in a manner that emphasized its larger personal meaning—than would participants who adopted a first-person perspective. These differences in construal were expected to mediate the impact of imagery perspective on subsequent achievement motivation.

METHOD

Participants

Participants were 63 university students (45 women) who were enrolled in introductory psychology and participated for course credit.

Procedure

As in Study 1, participants completed a questionnaire in which they first identified an important academic task they would be performing in the next few weeks and imagined it going extremely well from either a first- or third-person perspective. The main modification was that immediately after the guided imagery procedure, participants completed six items that assessed their construal of the meaning and implications of the imagined event (see Table 2). Each construal item asked participants to consider an aspect of their imagery (e.g., doing well on the task) and to rate its meaning on a 5-point scale anchored by a low-level construal (e.g., getting a good mark) and a high-level construal (e.g., demonstrating knowledge and ability). Participants then completed the measure of achievement motivation.

Another modification was that a closed-ended manipulation check was included to supplement the open-ended perspective ratings used previously. Following the measure of achievement motivation, participants were asked to think back to the imagery procedure and rate the extent to which they had seen events from a first-person versus a third-person perspective (1 = *completely through my own eyes*, 5 = *partially through my own eyes and partially as an observer*, 11 = *completely as an observer would see it*). Finally, participants rated their expected performance level and the perceived temporal distance of the task.

RESULTS AND DISCUSSION

Manipulation Checks

The perspective ratings from two coders (interrater reliability $r = .73$, $p < .001$) indicated that participants adopted a third-person perspective to a greater degree in the third-person ($M = 3.29$, $SD = 1.06$) than in the first-person condition ($M = 2.08$, $SD = 1.06$), $t(61) = 4.24$, $p < .001$. Similarly, on the closed-ended scales, participants reported adopting a third-person perspective to a greater degree in the third-person ($M = 7.19$, $SD = 1.87$) than in the first-person condition ($M = 4.38$, $SD = 2.83$), $t(61) = 4.65$, $p < .001$.

Achievement Motivation

A comparison of the achievement motivation index ($\alpha = .87$) across the visual perspective conditions supported the primary hypothesis (see Table 3). Participants reported greater achievement motivation when they imagined their successful performance from a third-person ($M = 8.89$, $SD = 1.44$) rather than a first-person perspective ($M = 7.88$, $SD = 1.65$), $t(61) = 2.58$, $p < .05$.

TABLE 2: Measure of Construal Level (Study 3)

Item	Low-Level	High-Level
1. As you pictured yourself carrying out the upcoming task, what did you see yourself doing?	Doing an assignment	Pursuing higher education
2. How would you describe the series of events you imagined?	A course requirement	A significant accomplishment
3. Doing well on the upcoming assignment means . . .	Getting a good mark	Demonstrating knowledge and ability
4. Doing well on the upcoming assignment will contribute to . . .	A good grade in the course	A successful university experience
5. What would success on the upcoming task mean to you?	Doing well on an assignment	Being a successful university student
6. Putting maximum effort into this task means . . .	Trying hard at a task	Being the best that I can be

NOTE: Participants rated the meaning that best applied to each item based on their visual image using a scale ranging from 1 (*low-level construal*) to 5 (*high-level construal*).

TABLE 3: Achievement Motivation and Construal Level as a Function of Visual Perspective (Study 3)

Measure	Visual Perspective	
	First Person	Third Person
Achievement motivation		
M	7.88 _a	8.89 _b
SD	1.65	1.44
Construal level		
M	3.09 _a	3.65 _b
SD	0.63	0.82

NOTE: For each measure, means that do not share a subscript differ significantly.

Construal Level

An index of construal level was formed by averaging across the six items ($\alpha = .69$). As hypothesized, participants reported a higher construal level in the third-person ($M = 3.65, SD = .82$) than in the first-person condition ($M = 3.09, SD = .63$), $t(61) = 2.98, p < .01$.

Regression analyses were conducted to determine whether the effect of perspective on achievement motivation was mediated by construal level. Construal level was regressed on the dummy-coded perspective variable, again yielding a significant effect, $\beta = .36, t(61) = 2.98, p = .004$. Achievement motivation was regressed first on perspective and then also on construal level. The effect of perspective on achievement motivation, $\beta = .31, t(61) = 2.58, p = .012$, was attenuated when construal level was entered, $\beta = .15, t(60) = 1.29, p = .20$. The effect of construal level on achievement motivation (controlling for perspective) was significant, $\beta = .46, t(60) = 3.91, p < .001$. This pattern (see Figure 2) suggests that

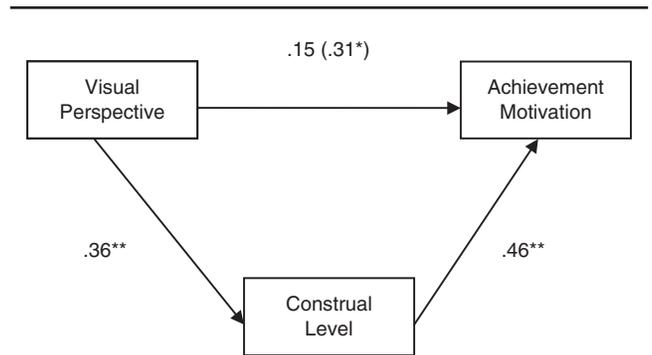


Figure 2 Mediation of the effect of imagining success from different visual perspectives on achievement motivation in Study 3.

NOTE: Visual perspective was dummy-coded (0 = *first person*, 1 = *third person*). Path coefficients are standardized regression coefficients. The value in parentheses is the coefficient for the effect of visual perspective on achievement motivation without controlling for construal level.

* $p < .05$. ** $p < .01$.

the effect of perspective on achievement motivation was mediated by the construal of the task ($z = 2.36, p = .02$, by Sobel test).

Further analyses address a possible interpretation suggested by research on achievement goals (Dweck, 1986; Dweck & Leggett, 1988; Elliot et al., 2005), which has distinguished between performance goals (i.e., goals focused on the demonstration of competence relative to others) and mastery goals (i.e., goals focused on the development of competence through task mastery). It appeared, in hindsight, that several items may have assessed construal level primarily with regard to performance goals, suggesting that the third-person perspective may have increased performance motivation primarily.

Thus, we examined whether the effects of imagery perspective on construal and motivation were attributable primarily to items involving performance goals.

A content analysis identified three construal items (items 3, 4, 5) with stems that pertained most clearly to performance goals (e.g., demonstrating knowledge and ability, a good grade in the course, doing well on an assignment). Although the remaining three items (items 1, 2, 6) did not appear to reflect mastery goals (in line with the performance-mastery distinction), they did place relatively little emphasis on performance goals. Instead, these latter items shared a common focus on the personal significance of carrying out the task (e.g., pursuing higher education, being the best that I can be, a significant accomplishment). Consistent with this conceptual analysis, a principle components analysis (varimax rotation) extracted two distinct factors with eigenvalues greater than 1.0, representing the items focused on performance (items 3, 4, 5; eigenvalue = 1.12) and the items focused on personal significance (items 1, 2, 6; eigenvalue = 2.39).

We next created separate indexes of construal level for the performance factor ($\alpha = .63$) and personal significance factor ($\alpha = .63$) and tested whether the effects of imagery perspective were attributable primarily to the performance factor. This did not appear to be the case. The third-person perspective increased construal level for both the performance factor, $t(61) = 2.18, p < .05$, and the personal significance factor, $t(61) = 2.67, p < .01$. Furthermore, participants' achievement motivation was less strongly correlated with their construal level for the performance factor, $r(61) = .29, p < .05$, than for the personal significance factor, $r(61) = .58, p < .001$, and there was a significant mediation effect only for the personal significance factor ($z = 2.34, p = .02$, by Sobel test). Thus, although a subset of the construal items did seem to pertain to performance goals, the effects of imagery perspective were not attributable primarily to those items.

Subsidiary Measures

As in the previous study, we assessed the degree to which participants focused on feasibility concerns and positive emotions. Visual perspective did not influence the rated focus on feasibility concerns, $t(61) = .44, ns$, or positive emotions, $t(61) = .86, ns$. Similarly, perspective did not affect the closed-ended ratings of expected performance level, $t(61) = 1.37, ns$, or perceived temporal distance, $t(61) = .46, ns$. Thus, there was again no evidence that the effects of visual perspective were attributable to these alternative processes.

The study provides convergent evidence for the role of construal processes in mediating the effects of visual perspective on achievement motivation. The findings

complement evidence obtained in Study 2 by providing a more direct measure of the differences in construal produced by visual perspective. Also, obtaining the construal measure prior to the dependent variable helps to allay concerns that it may have been influenced by the measure of achievement motivation. The study also offered convergent evidence using a closed-ended scale for the effectiveness of the visual perspective manipulation.

GENERAL DISCUSSION

Can people's motivation to succeed on upcoming tasks be enhanced by imagining a highly successful performance? The present results suggest that the answer to this question depends on how people subjectively experience their future imagery and, more specifically, on the visual perspective that they adopt. Three experiments found that images of success elicited higher levels of motivation when visualized from a third-person rather than a first-person perspective. Indeed, imagining a highly successful performance increased motivation, relative to those who imagined a more mundane performance, only if people adopted the third-person perspective. These findings suggest that if Sarah, our aspiring academic, needs a motivational boost to prepare her lecture, she may be well advised to envision herself from the perspective of her audience.

The studies also provided convergent evidence for the proposed cognitive mechanism underlying the effects of visual perspective. Consistent with recent theorizing (Libby et al., 2005), people who envisioned a successful performance from a third-person, rather than a first-person, perspective appeared to construe it in a manner that accentuates its broader meaning and significance. Evidence for the role of construal processes was obtained by assessing both the perceived significance of the upcoming performance (Study 2) and the level of abstraction in participants' construal of their performance (Study 3). Both measures were affected by visual perspective and mediated the effects of visual perspective on achievement motivation.

It is, of course, important to consider alternative processes—apart from the construal processes we documented—that could account for the effects of imagery perspective. Several possibilities were addressed empirically: We found no evidence that perspective influenced people's reliance on fantasies, their performance expectancies, or the perceived temporal distance of the imagined event. Also, the motivational impact of third-person imagery did not appear to be due primarily to increased performance goals, wherein people become focused on the demonstration of superior competence. Instead, the effect appeared to reflect the personal meaning or value that individuals ascribed to their successful completion of the task.

Two related processes merit consideration. First, it is possible that visual perspective affected people's motivation by altering their level of self-awareness or self-consciousness. Situational factors that focus people's attention on themselves (e.g., mirror manipulations, video surveillance), as well as high dispositional levels of self-consciousness, can sometimes enhance motivation and task performance, particularly when people expect to succeed (e.g., Carver, Blaney, & Scheier, 1979; Plant & Ryan, 1985; Scheier & Carver, 1982). Similarly, social-facilitation effects (wherein the presence of an audience improves performance on easy tasks but hinders performance on difficult tasks) appear to result, in part, from heightened self-awareness (Mullen & Baumeister, 1987). Conceivably, third-person imagery elicits a heightened level of self-awareness that approximates the state produced by mirrors, video surveillance, or the presence of an audience.

A second possibility is that third-person imagery increased motivation through attributional processes. Previous research indicates that the third-person perspective elicits relatively dispositional attributions for events (Frank & Gilovich, 1989; Pronin & Ross, 2006). Accordingly, third-person imagery may lead people to perceive their future success as being due to dispositional factors (e.g., effort and ability) rather than situational factors beyond their control (e.g., luck and task difficulty). Such attributions for future success could heighten people's motivation to attain it. We believe that these two alternative processes (self-awareness processes, attribution processes) could sometimes mediate effects of imagery perspective. However, neither of these accounts would predict a mediating role of construal level and thus we do not believe that they can fully explain the effects obtained in the present research.

Although the studies revealed that construal processes mediated the effects of visual perspective, further research will be needed to understand exactly how and why visual perspective influences construal. An effect on construal level was expected, in part, because third-person imagery provides a relatively "distanced" perspective on events (Kross et al., 2005; Libby et al., 2005; Wilson & Ross, 2003) and increases in other forms of psychological distance have been reliably linked to construal level (Liberman et al., 2007; Trope & Liberman, 2003). In this regard, it is intriguing that our perspective manipulation influenced construal level without affecting the perceived temporal distance of the task. Apparently, imagery perspective may sometimes yield effects on construal that are independent of temporal distance; further work is needed to understand fully the relations among visual perspective, psychological distance, and construal level. It is also interesting to consider the role that visualization plays in the effects of

imagery perspective. Although our manipulations heavily emphasized visualization (e.g., try to picture the upcoming task), images of future events are not necessarily visual in nature (Mook, 1987). Future research could explore whether visualization is an essential component of the perspective manipulation and determine whether other modes of perspective taking (e.g., first-person vs. third-person narration) produce similar effects on construal and motivation.

The second step in the mediational sequence, wherein success imagery construed at higher levels of abstraction had a greater impact on motivation, also merits comment. This effect is consistent with previous evidence that the level of abstraction at which a goal is represented is related to its value to an individual, with high-level goals typically representing more personal meaning and significance (Fujita et al., 2006; Vallacher & Wegner, 1985; Zirkel & Cantor, 1990). Similarly, there is considerable evidence that goals construed as more personally important are often more motivating (Eccles, 2005; Vansteenkiste et al., 2005). However, we do not wish to imply that an abstract construal of future success will always be more motivating than a concrete construal. Researchers examining the concreteness of goals (along a concrete-abstract dimension) also have documented motivational benefits of forming concrete representations of desired end states. For example, motivation and performance on tasks often is strengthened when people commit themselves to goals that are highly concrete and specific rather than abstract or vague (e.g., "do-your-best" goals; Locke & Latham, 1990). Also, according to action identification theory, although people generally prefer to construe their actions at higher levels of abstraction, when they encounter obstacles they may shift to more concrete construals to gain better control over the action (Vallacher & Wegner, 1985; Zirkel & Cantor, 1990). Thus, as previous theorists have noted (Mischel, Cantor, & Feldman, 1996), there is a potential trade-off between the meaningfulness of goals (afforded by high-level representations) and the manageability of goals (afforded by low-level representations), and a key moderator of this trade-off may be the individuals' perceived likelihood of goal attainment. An interesting avenue for future research would be to determine whether the relations among imagery perspective, construal, and motivation are altered when people face challenges or setbacks in goal pursuit.

As with most research on motivation, our conclusions are constrained by the operational definition of motivation. As noted previously, we conceptualized motivation quite broadly and focused on the quantity or strength of motivation. This is not an unusual approach. Although many motivational theories (e.g., self-determination theory) differentiate between qualitatively distinct forms of motivation, other theories (e.g., expectancy value

theories) have conceptualized motivation primarily in terms of quantity (Vansteenkiste et al., 2005). Note also that the present research targeted only a positive variant of motivation (i.e., approach motivation rather than avoidance motivation) and positive imagery (i.e., images of future success rather than images of failure). People can, of course, sometimes be motivated to avoid specific undesirable events (e.g., to avoid failure on an upcoming test) or to avoid undesirable possible selves (e.g., to avoid becoming overweight; Cantor et al., 1986; Elliot et al., 2005; Showers, 1992). However, we chose to limit this investigation to approach motivation because it has yielded more robust and reliable motivational benefits and fewer deleterious consequences than avoidance motivation within a wide range of achievement contexts (for reviews, see Elliot et al., 2005). It will be important for future research to examine whether, and how, imagery perspective may moderate the impact of mental imagery on avoidance motivation.

One noteworthy limitation of the present studies is that they did not assess achievement outcomes (e.g., actual task performance, effort, phenomenological experiences) and so we cannot conclude that the enhanced motivation produced by third-person imagery would yield parallel benefits for achievement. Indeed, previous research suggests that the likely benefits, and costs, of the increased motivation depend heavily on the type of motivation that was elicited. For example, studies have documented the advantages of autonomous motivation (intrinsic or well-internalized extrinsic motivation) relative to controlled motivation (poorly internalized extrinsic motivation) in terms of performance attainment and subjective well-being (Sheldon & Elliot, 1998). Also, research using an achievement goals framework indicates that differences in motivation along two basic dimensions (approach-avoidance, performance-mastery) can produce very different consequences for a range of achievement outcomes, including performance attainment (Elliot et al., 2005), efforts prior to task engagement (McGregor & Elliot, 2002), and achievement-relevant emotions (Pekrun, Elliot, & Maier, 2006). Thus, to assess the potential benefits and costs of third-person imagery, researchers will need to identify the type of motivation that is elicited and examine its relation to various achievement relevant outcomes.

In conclusion, we note that the present research integrates two separate research literatures and makes a theoretical contribution to each. First, the findings contribute to a tradition of research examining the impact of future representations (images, goals, expectations) on achievement motivation (e.g., Cantor et al., 1986; Karniol & Ross, 1996; Taylor et al., 1998). Although the previous research has identified many factors that influence whether positive mental imagery provides a motivational

boost, it had not yet explored the role of visual perspective. The present findings indicate that independent of the moderating factors identified previously, this basic perceptual factor plays an important role in determining people's drive to succeed. Second, the findings contribute to an emerging literature examining the role of visual perspective in various self-relevant phenomena (Cohen & Gunz, 2002; Frank & Gilovich, 1989; Kross et al., 2005; Libby & Eibach, 2002; Libby et al., 2005; Pronin & Ross, 2006). Although this literature draws on a long theoretical tradition that emphasizes how the self is constructed from different perspectives (e.g., the I vs. the me, James, 1890/1950; reflected appraisals, Mead, 1934), the empirical work has been much more limited and, to date, has focused primarily on remembered events. By examining imagery perspective for important, real-world, future events, we can gain a more complete understanding of how people's self-relevant thoughts, feelings, and actions are shaped by the perspectives they adopt.

NOTE

1. Preliminary descriptive analyses performed in this study, and subsequent studies, revealed that participants nominated similar types of tasks across studies: exams (54%), essays (23%), assignments (12%), and presentations (11%). Participants expected to complete their tasks, on average, about 2 weeks in the future ($M = 13.30$ days, $SD = 9.31$).

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