A Look Into Goal Pursuit Moderated By Imagery Perspective

A Senior Honors Thesis

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Abstract

Previous research suggests a link between visual perspective and goal-related behavior. The third-person perspective has been shown to facilitate goal pursuit after imagining a goal-related success, while the first-person perspective has been shown to facilitate goal pursuit after imagining a goal-related failure. The present study investigates whether these findings result from a change in perceived levels of commitment and progress toward a goal. Participants imagined a goal-related success or failure from a specified visual perspective (own first-person vs. observer's third-person), and then completed a series of goal pursuit measurements. Results suggest that imagining a failure while using the first-person perspective facilitates goal pursuit, as compared to an imagined success from the first-person perspective, because of a perceived lack of progress toward the goal. No clear results emerged between imagining a success or failure while using the third-person perspective. Implications for future research are discussed.

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CHAPTER 1

INTRODUCTION

Consider a person who has the desire to make money. They will likely try to pursue activities that will lead toward long-term financial gain, such as working at a job and investing in the stock market. They will also encounter activities that tempt them away from pursuing their goal, like buying a new sports car or having a few beers after a long day of work. These tempting activities may provide momentary satisfaction, but they inevitably detract from the more abstract goal of making money and require more work to make up for the monetary loss. This same person could also have the goal of maintaining a physically fit body. Do they spend money on a gym membership and forgo their desire to make money? In the face of all of these competing goals and temptations, what makes someone keep pursuing one goal in lieu of another, and what makes someone disengage from a current goal and pursue another?

One important factor is how someone goes about monitoring their progress toward a defined goal. Goals can be broken down into a hierarchy with abstract, superordinate goals at the top and concrete, subordinate goals at the bottom (Vallacher & Wegner, 1987). In many cases, the completion of a superordinate goal requires the completion of many other subordinate goals that are related to the superordinate goal. For example, achieving the superordinate goal of "maintaining physical fitness" requires the completion of the subordinate goals of "exercising three times a week" and "eating a low-calorie diet." To be successful, a person then has to perform actions, like actually exercising, that allow them to complete their goals. The overall goal level that a person is considering while performing these goal-relevant actions influences their future behavior toward that goal. A person can think about their current level of goal pursuit

by considering a subordinate goal on its own merit or by looking at how that subordinate goal fits in with a superordinate goal.

When people think about a goal-relevant action in isolation, as a subordinate goal in itself, people assess the amount of progress made toward that subordinate goal (Fishbach, Dhar, & Zhang, 2006). If the goal-relevant action is completed successfully, people are less likely to pursue other subordinate goals that are related to the superordinate goal because of a great sense of progress. Since only one goal is held in mind, the completion of it brings feelings of goal fulfillment, which leads to temporary motivation away from the goal (Dhar & Simonson, 1999). However, when the subordinate goal ends in failure, people sense a lack of progress and try to make up for it by pursuing similar subordinate goals related to the same superordinate goal.

When the relationship between a goal-relevant behavior and superordinate goal is brought to mind, people assess their current level of commitment towards that superordinate goal (Fishbach, Dhar, & Zhang, 2006). If the goal-relevant action is completed successfully, people are more likely to pursue similar subordinate goals related to the superordinate goal, because the completion of the subordinate goal reaffirms their high level of commitment toward the same superordinate goal. On the contrary, a failed subordinate goal leads to the assumption that the level of goal commitment is low and causes people to disengage from pursuing similar subordinate goals related to the superordinate goal.

For example, a person can see receiving a Christmas bonus from work as currently succeeding at the goal of making money in and of itself, or they can consider the bonus as one success in a long series of steps toward achieving that goal. The person who adopts the progress framing and only thinks about the bonus will see that all objectives have been met and be more likely to treat themselves to a nice dinner for their perceived progress. The person who adopts

the commitment framing and thinks about the relationship of the bonus to their overall goal of making money will be more likely to continue pursuing goal-related activities because of a renewed sense of commitment.

One potential way to test progress and commitment framing effects is through the use of visual imagery, picturing an event occurring in your mind. Some researchers suggest that imagery is a crucial part of goal representations (Conway, Meares, & Standart, 2004). Furthermore, imagining a behavior has been shown to increase the likelihood that it will be performed (e.g. Gregory, Cialdini, & Carpenter, 1982); so, imagination is not only a plausible way to test progress and commitment effects, but also an intervention that can help to facilitate goal pursuit. Mental imagery can take the form of two visual perspectives: the first-person perspective, seeing an event through your own eyes, and the third-person perspective, seeing yourself in an event from an observer's perspective (Nigro & Neisser, 1983).

Even though the imagery perspective used to imagine an event seems like a minor manipulation, it has caused noticeable effects on self-judgment and behavior (Libby, Eibach, & Gilovich 2005; Libby et al., 2007). For example, participants who pictured voting from a third-person perspective the night before the 2004 election were more likely to vote the next day than participants who imagined voting from a first-person perspective (Libby et al., 2007). The behavioral differences between the two perspectives appear to be the result of a shift in the way people make meaning of the events they picture. The third-person perspective induces a narrative mindset in which people understand the event in terms of its relation to other life events and general self-knowledge. The first-person perspective induces an experiential mindset in which people understand the event in terms of the details of the event itself (Libby & Eibach, 2008).

The third-person perspective has also been linked to dispositional attributions, while the first-person perspective has been linked to situational attributions (Frank & Gilovich, 1989).

The present study integrates the progress and commitment framework with imagery perspective research to ascertain the types of situations in which a specific imagery perspective can facilitate goal pursuit. Using the third-person perspective, which is integrative and reflective, should lead to a commitment framing; using the first-person perspective, which is concrete and experiential, should lead to a progress framing. For example, let's revisit the Christmas bonus scenario. If someone imagined receiving the bonus from the first-person perspective, they would likely only see the concrete features of the bonus, be happy with the money, and temporarily disengage from pursuing activities focused on making money. If someone imagined receiving the bonus from the third-person perspective, they would likely consider how the bonus fits into a broader context of their goals, sense greater commitment, and continue to pursue activities focused toward making money.

Previous research has confirmed that third-person imagery, as opposed to first-person imagery, causes greater motivation toward goal-relevant actions when a success is imagined (Libby et al., 2007; Vasquez & Buehler, 2007). There are also some initial findings that suggest third-person imagery, as opposed to first-person imagery, causes less motivation toward goal-relevant actions when a failure is imagined (Shaeffer & Libby, 2008). However, none of these studies have provided direct evidence that progress and commitment framing differences underlie the imagery perspective effects.

We designed the present study to compare the effects of imagined success and failure on both commitment and progress framing, which should follow from using third-person and first-person imagery, respectively. We decided to focus on the goal of making money, because previous

research has focused on goals such as exercising and dieting. The addition of a financial goal will help to add more converging evidence to previous theorizing and extend the relationship between imagery perspective and goal pursuit to a new domain.

CHAPTER 2

THE PRESENT STUDY

Method

Participants

One-Hundred and Eighty-Eight undergraduates (120 females) at The Ohio State University

participated in this experiment in exchange for course credit in an introductory psychology class.

The mean age of the participants was 19.3 years (SD = 2.4).

Procedure and Materials

Study Overview

Participants began completing experimental materials only after providing informed consent

and were randomly assigned to conditions in approximately equal numbers. The experiment

consisted of a 2 (imagery perspective: first-person vs. third-person) x 2 (goal outcome: success

vs. failure) x 2 (question order: commitment-first vs. progress-first) design and focused on the

goal of making money. Once participants signed up for the experiment, they received a link to an

online questionnaire that was administered through surveymonkey.com. The questionnaire

obtained participants' baseline ratings of commitment and progress toward the goal of making

money, as well as their rating of goal importance. Then, participants arrived at the lab in groups

of five to ten and were individually seated at computers. Imagery perspective and goal outcome

conditions were randomly programmed into the computers prior to participants' arrival. The

computer portion of the experiment consisted of an imagination scenario, a post-manipulation

measurement of commitment and progress, an implicit measure of goal pursuit, and an

advertisement rating assessing goal attractiveness. After the participants completed all portions

of the experiment, they were probed for suspicion and debriefed.

Pre-Test Measure of Commitment, Progress, and Goal Importance

An email message asked participants to complete an online questionnaire before coming to the experimental session and included a link to the survey. There were two versions of the survey, which differed only in the order of the progress and commitment questions. One version presented the questions about commitment first, followed by questions about progress, while the other version presented progress questions first, followed by commitment questions. The reason we used two different question orders is because we thought that the order in which questions were asked could serve as a framing manipulation in and of itself. For example, a participant could receive a progress question first and potentially think that all the remaining questions were asking about progress, even when they encountered questions assessing their commitment towards the goal. If this turned out to be the case, then we would expect the first question participants were asked to serve as the cleanest measure of their perceived commitment or progress, depending on the question order. Participants were randomly assigned to receive a link to one survey or the other when they signed up for a session time, with the stipulation that there be an approximately equal number of participants in each question order condition. The questionnaire began with instructions asking participants to rate statements regarding commitment (e.g. "I am committed to the goal of making money" followed by "I care about my financial stability") and progress (e.g. "I think I am improving my financial situation" followed by "I am getting closer to my economic dreams") on seven-point scales, ranging from *strongly disagree* (-3) to *strongly agree* (3). After the commitment and progress ratings, participants were asked to rate a goal importance question (e.g. "Making money is important to me") followed by a question to assess participants' financial resources ("I have enough money to pay for my expenses") on seven-point scales, ranging from *strongly disagree* (-3) to *strongly agree* (3). In

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addition, participants were asked whether or not they had a job and how many hours a week they worked. The survey concluded with the completion of Rosenberg's Self-Esteem Scale (Rosenberg, 1965) and reminded participants to come to the experimental lab session.

Imagination Scenario: Imagery perspective and Performance manipulations

The first task during the lab session involved the imagination scenario. The computer instructed the participants to put on headphones and administered one of two imagery instruction sets according to their assigned imagery perspective condition. The first-person condition instructions read:

> You should use a first-person visual perspective to picture the scenario that is described. With the first-person visual perspective, you see the event from the visual perspective you would have if the event were actually taking place. That is, you are looking out at your surroundings through your own eyes.

The third-person condition read:

> You should use a third-person visual perspective to picture the scenario that is described. With the third-person visual perspective, you see the event from the visual perspective an observer would have if the event were actually taking place. That is, you see yourself in the image, as well as your surroundings.

In both conditions participants were directed to take all the time they needed to form the image from the specified perspective and that if they didn't know exactly what some aspects of the situation would look like they should just imagine what they thought they would look like. The imagery perspective instructions ended with a reminder to use only the specified perspective to picture the scenario.

The computer then asked the participants to close their eyes while the imagination scenario was presented aurally through headphones (for a full script of the scenario see Appendix A). The scenario focused on the goal of making money in a job that required stuffing envelopes with advertisements. It was divided into two segments. The first segment was intended to serve as practice for using the specified perspective before the crucial outcome occurred in the second segment. Participants began the scenario by imagining a story in which they had a job that required them to stuff envelopes with advertisements. Then, the participants opened their eyes to answer an imagery perspective manipulation check that depended on condition ("As you're picturing it right now, do you see yourself in the scene from the visual perspective you (an observer) would have if this event were actually taking place?"). They also answered an imagery difficulty question ("How easy is it to picture the scene from the first-person (third-person) visual perspective?") on a seven-point scale ranging from *not easy at all* (-3) to *extremely easy* (3). Next, aural instructions directed participants to close their eyes once again and concluded the scenario in one of two ways depending on their assigned goal outcome condition. The success condition had participants imagine stuffing more envelopes with advertisements and receiving a bonus at the end of the day for their hard work. The failure condition had participants imagine stuffing more envelopes with advertisements but not receiving a bonus at the end of the day. At the end of the imagination scenario, instructions directed participants to open their eyes and answer two more imagery difficulty questions ("As your picturing it now, how vivid would you say your mental image is?" and "To what extent does it seem like the event you are picturing in your mind is really happening as you imagine it?"). Participants responded using five-point scales that ranged from *no image at all: the event does not seem real at all* (-2) to *perfectly clear*

and as vivid as normal vision: the event seems extremely real, just like it is actually happening
(2). The computer then instructed participants to take off the headphones.

Post-manipulation Measure of Commitment and Progress

The next part of the computer questionnaire appeared in a different font color and text style to reduce any possible association with the imagination scenario. Instructions explained that the purpose of the upcoming questionnaire was to "find out the current opinions of undergraduates on various issues" and mentioned that the answers would help us in designing a future study. The real purpose of the survey was to measure participants' perceptions of commitment and progress in order to test the effects of the imagery perspective and performance manipulations. The survey began by collecting demographic information including the participant's age, gender, class rank, and level of English fluency. Participants then rated the same commitment (e.g., "I am committed to the goal of making money") and progress (e.g. "I think I am improving my financial situation.") statements they received in the pre-manipulation survey. The questions were in the same order as the pre-manipulation survey, and participants used the same seven-point scales, ranging from *strongly disagree* (-3) to *strongly agree* (3) to record their responses. Finally, participants answered some politically-oriented questions (e.g. "How likely is it that the current U.S. economic crisis will be fixed soon?") in order for the survey to appear to be politically focused and not related to the other parts of the experimental session.

Implicit Measure of Goal Pursuit

After completing the commitment and progress rating questionnaire, participants read an instruction screen that stated:

> The experimental session is almost over with only one more task for you to
>
> complete. If any time remains after that, you will get a chance to earn some

money before you leave the lab. Please click [Continue] when you are ready to

begin the next task.

The computer measured the time from when this screen appeared to when participants advanced

to the next screen. This reaction time served as our implicit measure of goal pursuit, with shorter

reaction times corresponding to greater motivation to pursue the goal of making money (Aarts,

2004). The actual task, a "spatial perception task," required participants to trace the outline of

specified shapes that appeared on their computer screen before continuing onto a similar screen

with a different set of specified shapes. For instance, while a series of circles, rectangles,

triangles, pentagons, and octagons appeared on the screen, participants traced the outline of all of

the circles and clicked continue to get to the next screen once finished. The spatial perception

task set-up can be viewed in Appendix B. After five tracing sequences, the computer instructed

participants to rate statements ("It was hard to trace the shapes accurately.", "I feel like I was

rushing through tracing the shapes.", and "I could see all of the contents of the screen

accurately.") on seven-point scales, ranging from *strongly disagree* (-3) to *strongly agree* (-3).

Ad Rating Assessing Goal Attractiveness

The computer then instructed participants that enough time remained in the experimental

session for them to partake in an opportunity to earn money. They were invited to rate an

advertisement we were in the process of developing in exchange for being entered into a $20

cash raffle. The purpose of the advertisement was to attract people to become paid research

participants, and the full advertisement can be seen in Appendix C. Participants viewed the

advertisement at their own pace and then rated statements ("To what extent did you find the ad

convincing?", "To what extent are you interested in finding out more about the research

participation opportunity?", and "To what extent do you think this ad works for attracting

students?") on a five-point scales, ranging from *not at all* (-2) to *extremely*. These questions intended to measure another way in which participants could express their desire to make money: how favorable they rated a money-making opportunity. They were also asked if they actually wanted to sign-up become a paid research participant. Finally, participants were probed for suspicion and debriefed.

Results

   Progress and commitment framing are relevant only for only those people who endorse the superordinate goal (Fishbach et al., 2006). Since our predictions rely on such effects, we excluded participants who disagreed with the goal importance statement listed in the pre-test questionnaire from analyses (n = 40). Participants were also excluded from analyses if they failed the imagery perspective manipulation check during the imagination scenario (n= 7, four in the first-person condition and three in the third-person condition), leaving 141 participants that were included in the final analyses.

Imagery Difficulty

   One potential confound to the imagery perspective manipulation is how difficult participants perceived it to be. If someone had a hard time imagining the scenario, then they shouldn't necessarily show the same goal pursuit patterns as those who had an easier time picturing the scenario. To see if participants had trouble imagining the scenario, the three ratings of imagery difficulty obtained during the imagination scenario were combined into a composite imagery difficulty variable (Cronbach's alpha = .77). This measure was submitted to a 2 (imagery perspective: first-person vs. third-person) x 2 (goal outcome: success vs. failure) x 2 (question order: commitment-first vs. progress-first) ANOVA, which revealed a marginally significant main effect for question order, such that the participants in the commitment-first condition (*M* =

1.27, *SD* = .08) reported less difficulty in picturing the scenario than participants in the progress-first condition (*M* = 1.07, *SD* = .08) (*F*(1,133) = 2.77, *p* = .098). The ANOVA also revealed a marginally significant main effect for goal outcome, such that the participants in the failure condition (*M* = 1.27, *SD* = .08) reported less difficulty in picturing the scenario than participants in the success condition (*M* = 1.07, *SD* = .08) (*F*(1,133) = 3.64, *p* = .058). Since there were some significant main effects between conditions, the imagery difficulty variable was used as a covariate throughout the rest of the analyses.

Perceived Commitment and Progress

We expected that our manipulations would influence goal pursuit by means of influencing participants' framing of the imagined behavior as an indicator of their progress or commitment toward the goal of making money. Third-person imagery was predicted to induce a commitment mindset and first-person imagery was predicted to induce a progress mindset. Therefore, it was expected that imagined performance would have a stronger influence on commitment judgments among those in the third-person condition than among those in the first-person condition, and imagined performance would have a stronger influence on progress judgments among those in the first-person condition than among those in the third-person condition.

Commitment ratings. We predicted that participants in the third-person success condition would feel more committed to making money than those in the third-person failure condition. There were no clear predictions for the first-person conditions, since we expected them to adopt a progress mindset. The first commitment rating ("I am committed to the goal of making money.") was subjected to a 2 (imagery perspective: first-person vs. third-person) x 2 (goal outcome: success vs. failure) x 2 (question order: commitment-first vs. progress-first) ANCOVA. The same question on the pre-test goal strength survey was used as a covariate (*F*(1,131) =

107.23, $p < .01$). The imagery difficulty ratings were also used as a covariate ($F(1,131) = 3.10$, $p = .08$). The analysis revealed an unexpected question order effect, such that the commitment-first condition ($M = 2.20$, $SD = .09$) felt more committed to the goal than the progress-first condition ($M = 1.96$, $SD = .08$) ($F(1,131) = 3.89$, $p = .05$). There were no other significant main effects or interactions.

Progress ratings. We predicted that participants in the first-person success condition would sense more progress toward the goal of making money than the first-person failure condition. There were no clear predictions for the third-person conditions, since we expected them to adopt a commitment mindset. The first progress rating of the post-manipulation survey ("I think I am improving my financial situation.") was subjected to a 2 (imagery perspective: first-person vs. third-person) x 2 (goal outcome: success vs. failure) x 2 (question order: commitment-first vs. progress-first) ANCOVA. The same question on the pre-test goal strength survey was used as a covariate ($F(1,131) = 199.64$, $p < .01$). The imagery difficulty ratings were also used as a covariate ($F(1, 131) = 0.88$, $p = .35$). Analysis suggested a three-way interaction between goal outcome, question order, and imagery perspective ($F(1,131) = 2.22$, $p = .14$). Figure 1 displays the pattern of means.

When the first questions that participants encountered asked about progress (as opposed to commitment), picturing success ($M = 1.11$ $SD = .20$) caused participants to perceive greater progress than did picturing failure ($M = 0.76$, $SD = .21$), but only if they had used the first-person perspective ($F(1,131) = 1.42$, $p = .24$). If they used the third-person perspective, there was no effect of performance on progress judgments ($F(1,131) < 0.01$, $p = .99$). When the first questions that participants encountered asked about commitment (as opposed to progress), picturing success ($M = 1.22$, $SD = .22$) caused participants to perceive greater progress than did

picturing failure ($M = 0.70$, $SD = .22$), but only if they had used the third-person perspective ($F(1,133) = 2.74$, $p = .10$). If they used the first-person perspective there was no effect of performance on progress judgments ($F(1,131) < 0.01$, $p = .98$). These patterns make logical sense if both question order and imagery perspective are thought of as framing manipulations, where progress-first and first-person conditions induced progress mindsets while commitment-first and third-person conditions induced commitment mindsets. When the same mindset was induced by both framing manipulations (e.g. the progress-first condition paired with the first-person condition), the participants in the success conditions sensed more progress than participants in the failure conditions. When different mindsets were induced by the framing manipulations (e.g. the progress-first condition paired with the third-person condition), there was no effect of imagined performance (success vs. failure).

Implicit measure of Goal Pursuit

When participants adopted a third-person perspective, we predicted that those in the success condition would react faster to the instruction screen than those in the failure condition. When participants adopted a first-person perspective, we predicted that those in the failure condition would react faster to the instruction screen than those in the success conditions. A faster reaction time represented a higher desire to pursue the goal of making money. The means are reported in seconds.

Reaction times to the instruction screen were subjected to a 2 (imagery perspective: first-person vs. third-person) x 2 (goal outcome: success vs. failure) x 2 (question order: commitment-first vs. progress-first) ANCOVA with imagery difficulty as a covariate ($F(1,132) < 1$, $p = .857$). An analysis revealed main effects for question order ($F(1,132) = 3.25$, $p = .08$) and goal outcome ($F(1,132) = 5.22$, $p = .03$). A marginal two-way interaction between goal outcome and question

order qualified these effects ($F(1,132) = 3.15$, $p = .08$). Figure 2 displays the pattern of means. In the progress-first conditions, participants in the failure conditions ($M = 4.28$, $SD = .64$) reacted faster than participants in the success conditions ($M = 6.90$, $SD = .63$) ($F(1,132) = 8.54$, $p < .01$). There was no significant effect of success vs. failure among participants in the commitment-first conditions (failure: $M = 4.28$, $SD = .66$; success: $M = 4.59$, $SD = .67$; $F(1,132) = .11$, $p = .74$). This result provides supporting evidence for the hypothesis that question order may serve as a framing manipulation in and of itself.

Analysis also suggested two-way interaction between imagery perspective and goal outcome ($F(1,132) = 1.23$, $p = .27$). Figure 3 displays the pattern of means. As predicted in the first-person conditions, participants in the failure conditions ($M = 4.10$, $SD = .64$) reacted faster than participants in the success conditions ($M = 6.27$, $SD = .65$) ($F(1,132) = 5.81$, $p = .02$). However, in the third-person conditions, there was no support for the prediction that participants in the success condition would react faster than participants in the failure condition (failure: $M = 4.47$, $SD = .65$; success: $M = 5.20$, $SD = .65$; $F(1,132) = 0.64$, $p = .43$). The three-way interaction between imagery perspective, goal outcome, and question order was not significant ($F(1,132) < .01$, $p = .97$).

Advertisement Ratings Assessing Goal Attractiveness

Previous research suggests that current motivations affect how a person automatically evaluates an object (Ferguson & Bargh, 2004). If a person is actively pursuing a goal, then they will more positively evaluate useful objects for obtaining that goal then people who are not engaged in active goal pursuit. When participants adopted a third-person perspective, we predicted that those in the success condition would rate the ad more favorably than those in the failure condition. When participants adopted a first-person perspective, we predicted that those in

the failure condition would rate the ad more favorably than those in the success condition. A more favorable ad rating represented a higher desire to pursue the goal of making money.

The three ad rating questions were combined to create a composite ad rating score (Cronbach's alpha = .82). The ad ratings were subjected to a 2 (imagery perspective: first-person vs. third-person) x 2 (goal outcome: success vs. failure) x 2 (question order: commitment-first vs. progress-first) ANCOVA with imagery difficulty as a covariate ($F(1,131) = 3.38$, $p = .07$). The analysis revealed a main effect for imagery perspective ($F(1,131) = 5.27$, $p = .02$) and suggested a main effect for goal outcome ($F(1,131) = 2.77$, $p = .10$). A suggested two-way interaction between goal outcome and imagery perspective qualified these main effects ($F(1,131) = 2.16$, $p = .14$). Figure 4 displays the pattern of means. As predicted, in the first-person conditions, participants in the failure condition ($M = 0.29$, $SD = .15$) rated the ad more favorably than participants in the success condition ($M = -0.17$, $SD = .15$) ($F(1,131) = 5.10$, $p = .03$). There was no significant effect between success and failure among participants in the third-person conditions (failure: $M = -0.27$, $SD = .15$; success: $M = -0.30$, $SD = .15$; $F(1,131) = 0.02$, $p = .89$).

CHAPTER 3

GENERAL DISCUSSION

Can the use of visual imagery influence the motivation a person has toward a goal? The present study suggests that it depends on the type of visual perspective that is used. We predicted that third-person imagery would facilitate goal pursuit after imagining the successful completion of a goal-related action as opposed to imagining a goal-related failure. We also predicted that first-person imagery would facilitate goal pursuit after imagining the unsuccessful completion of a goal-related action as opposed to imagining a goal-related success. Although the third-person imagery predictions weren't supported, the first-person imagery effects achieved significance. After the use of first-person visual imagery, participants who imagined a goal-related failure sensed a lack of progress, reacted faster to a money-making opportunity, and more highly rated a money-making advertisement than participants who imagined a goal-related success. So, one important question is why the first-person imagery predictions were supported and the third-person imagery predictions failed to achieve significance. Another remaining question is the role that question order played as a framing manipulation.

Present Study's Relation to Previous Findings

Previous research has provided some evidence for a link between imagining an event from a specified perspective and subsequent goal-related behavior. In one study, participants who imagined voting the night before an election from a third-person perspective turned out to vote the next day at a higher rate than participants who imagined voting from the first-person perspective (Libby et al., 2007). In another study, participants who imagined overeating at an upcoming Thanksgiving dinner from the third-person perspective ate more food in a taste test than participants who imagined overeating from the first-person perspective (Shaeffer & Libby,

2008). Both of these studies compare the effects of first-person imagery against third-person imagery and suggest that an imagined success will facilitate goal pursuit when using the third-person perspective while an imagined failure will facilitate goal pursuit when using the first-person perspective.

The present findings add to the previous literature regarding imagery perspective and goal pursuit in two ways: the addition of questions assessing commitment and progress framing and more insight into the direct comparison of successful and unsuccessful imagery scenarios. Although previous research has supported the third-person imagery predictions discussed earlier in this paper, there was no way to tell if the results could be explained by participants' perceived level of commitment or progress toward the goal. In this study, we measured participants' feelings of commitment and progress toward the goal of making money before and after the imagery manipulation providing a clearer picture as to how these ratings supported or didn't support our hypothesis. Since the participants' perceived ratings of progress were in line with our predictions, there is more reason to believe that the difference in perceived progress may have caused the subsequent difference in goal-related behavior.

The present findings are also important when considering the lack of empirical testing for a direct comparison between successful and unsuccessful imagination scenarios. The aforementioned Thanksgiving and voting studies (Libby et al., 2007; Shaeffer & Libby, 2008) provide initial evidence that imagining a future event from the third-person perspective facilitates goal pursuit after imagining a success as opposed to a failure, if the results are combined; however, no direct comparison between success and failure conditions can be made when the studies are separated. The present study attempted to shed more light on this comparison by including an imagination scenario with a success and failure condition. The first-person

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perspective predictions between success and failure conditions were upheld; however, the third-person perspective conditions failed to emerge.

Absence of Commitment Framing Effects

There are several possible reasons as to why the third-person effects didn't appear in the results. One potential reason concerns the concept of psychological distance and time. Someone can imagine that an event is taking place in the present or sometime far off into the future. Events that seem to be in the distant future have greater psychological distance and are thought of in abstract terms, while events that seem to be in the proximal future have less psychological distance and are thought of in concrete terms (Trope & Liberman, 2003). For example, a person might consider the more concrete aspects of a current job offer (e.g. thinking about the salary) or the more abstract aspects of a job offer that will be available in a few years (e.g. thinking about how it relates to career goals). Fishbach and colleagues (2006) found that proximal events were more likely to be interpreted in terms of goal progress than goal commitment (study 4); in that study, participants who imagined exercising during the next week framed that action more in terms of progress than participants who imagined exercising three months from the present.

Our imagination scenario told participants that they were currently working at a job as opposed to imagining working at a job in the distant future (e.g. during the summer). We also emphasized a shortened time perspective during the implicit reaction time measurement and the advertisement rating. Embedded in the reaction time measurement instruction screen was the notion that participants had to hurry in order to get to the money-making opportunity. In the advertisement rating, there was a depiction of a clock and the phrase, "Time is wasting and participation space is limited, so don't delay." Since our study seemed to focus on the immediate future more than the distant future, participants could have been more inclined to adopt a

progress framing rather than a commitment framing, when interpreting the imagined event, and this inclination could be one reason why the commitment effects failed to emerge.

The fact that the dependant measurements were all more implicit than explicit might be another reason why commitment framing effects failed to emerge. Recent research suggests that explicit measures better predict someone's decision when using third-person imagery as opposed to first-person imagery, while implicit measures better predict someone's decision when using first-person imagery as opposed to third-person imagery (Hines & Libby, 2009). In the aforementioned Thanksgiving study (Shaeffer & Libby, 2008), the main dependent variable was posed as a snack taste test, and participants had no idea their consumption was going to be measured. Participants' also rated how important it was for them to avoid overeating. The contrast between imagery perspective and goal importance was more significant for the first-person condition than the third-person condition. Taken together, these findings support the idea that first-person imagery is more involved with implicit, unconscious processing while third-person imagery is more involved with explicit, conscious processing.

In the present study, the dependant variables measuring goal pursuit involved implicit processes. The reaction time measurement appeared in an instruction screen that simply asked participants to click "continue" when they were ready to begin the next task. A chance to earn money was briefly mentioned, but participants were not aware that their reaction time was being measured. Participants were also asked to evaluate an advertisement containing a money-making opportunity. Some research suggests that evaluative information is activated almost immediately when perceiving a new object (Ferguson & Bargh, 2004). If participants answered the advertisement rating statements using their gut reactions, then their responses should have been driven by unconscious processes. The predicted first-person perspective effects appeared in both

of these dependant measurements, and their unconscious nature might be a reason why no third-person perspective effects seemed to emerge.

Question Order Framing

The order in which progress and commitment questions were asked appeared to serve as a framing manipulation in addition to the imagery perspective manipulation. When the first question that participants saw was a progress question (e.g. "I think I am improving my financial situation."), only those in the first-person success condition sensed more progress than those in the first-person failure condition. Participants in the third-person conditions sensed an almost identical level of progress. If the third-person and first-person conditions had a similar pattern of means for this progress question, then there would be no reason to assume that the commitment and progress questions were tapping into different framing mindsets; however, only participants in the first-person condition sensed different amounts of progress.

Furthermore, when the same progress question appeared after two commitment questions, the pattern of means was reversed: participants in the third-person success condition sensed more progress than participants in the third-person failure condition, while participants in the first-person conditions reported similar means. If the question order failed to affect participants' ratings, then the same pattern of means should have emerged for this progress question in both question order conditions. The wording in the commitment and progress questions could have served to prime commitment and progress framing, respectively. We predicted that participants in the first-person perspective would interpret the imagined action in terms of progress. When the progress questions came first, the framings aligned and participants had no problem accessing their feeling of perceived progress; however, when commitment questions came first,

commitment and progress framings could have competed and diminished the effect of the progress framing.

The reaction time measurement also provided some support for the question order framing hypothesis. Analysis suggested the predicted interaction between imagery perspective and goal outcome, but only for the first-person conditions. The same analysis suggested an interaction between question order and goal outcome, but only for the progress-first conditions. Since the same pattern of means between success and failure conditions was found for both first-person and progress-first conditions, there is reason to believe that the progress-first question order might have induced a similar progress framing akin to the one predicted to result from first-person imagery.

Implications for Future Research

Further research on the connection between visual imagery and goal pursuit needs to be conducted in order for this relationship to be fully understood. The present study was able to provide some support for the notion that first-person imagery facilitates goal pursuit after imagining a goal-related failure, and previous research has supported the notion that third-person imagery facilitates goal pursuit after imagining a goal-related success (Libby et al., 2007; Vasquez & Buehler, 2007). One potential area for future research lies with combining these findings into a single study.

This goal can be achieved in several ways. The temporal distance of the imagined scenario is one factor that could potentially be manipulated. Distant events should lead to the same type of commitment framing as the use of third-person imagery; proximal events should lead to the same type of progress framing as the use of first-person imagery. It would be interesting to see if an interaction resulted from varying the temporal distance of the scenario (e.g. "having a job

tomorrow" vs. "having a job in three months") and the imagery perspective used to imagine the scenario. We would predict that the progress framing effects would appear the strongest in the first-person proximal time condition, and that the commitment framing effects would appear the strongest in the third-person distal time condition. The first-person distal time and third-person proximal time conditions effects should lie somewhere in between the aforementioned conditions, that is if temporal distance is a moderating factor in regards to imagery perspective and goal pursuit.

Another topic worth consideration is the use of implicit and explicit dependant measurements. The dependant measurements used in this study were more implicit than explicit in regards to the goal of making money. The reaction time measurement resided completely out of the awareness of the participants, and while the advertisement rating hinted at the idea of making money, the participants simply thought they were helping us to improve a prototypical advertisement. A potential future study could incorporate both implicit and explicit measurements into the experimental design. For instance, participants could first be asked to choose between a goal-congruent and goal-incongruent option (e.g. "choosing to save some acquired money" vs. "choosing to spend that money on a parting gift"), and then they could be subjected to the same reaction time measurement as employed in this study.

As mentioned previously, imagining a behavior has been shown to increase the likelihood that it will be performed (e.g. Gregory, Cialdini, & Carpenter, 1982). One study even found that imagining success caused a higher level of predicted and actual performance on an anagram task as opposed to imagining failure (Sherman et al., 1981). Visual imagery is also crucial in athletic performance: the higher the level of competition, the greater the chance that mental imagery is used before a competition (Hall, Rodgers, & Barr, 1990). Given the importance of mental

imagery in everyday life, there is ample reason for the current research concerning visual perspective to become incorporated into everyday goal pursuit strategies. Previous research has mainly focused on how an imagined success facilitates goal pursuit over an imagined failure; however, the current research calls for an addendum to this logic. It may not always be beneficial to imagine success if one wants to pursue a goal further, especially when the first-person perspective is used. If one has trouble imagining a success, then imagining a failure from the first-person perspective may provide enough motivation for continued goal pursuit.

Conclusion

Imagination is commonly used in everyday life for a variety of purposes, including imagining an upcoming event related to a specific goal. This imagined event can be thought of as ending up a success or a failure, and the specified perspective used while imagining this event has been theorized to change subsequent goal-related behavior. We designed the present study to explore the relationship between imagining a success or failure from a specified visual perspective and the effect this image had on the pursuit of goal-related activities. We also wanted to explore the relationship between perceived progress and commitment toward a goal and subsequent goal-related behavior. We found some initial support for the idea that first-person imagery facilitates goal pursuit after imagining a goal-related failure as opposed to a success, and this effect appeared to stem from sensing a lack of progress. Combined with the previous finding that third-person imagery facilitates goal pursuit after imagining a goal-related success (Libby et al., 2007; Vasquez & Buehler, 2007), there is ample reason for future research to integrate these findings into one conclusive study. The success of that future study design might just lie in how the potential researcher imagines it.

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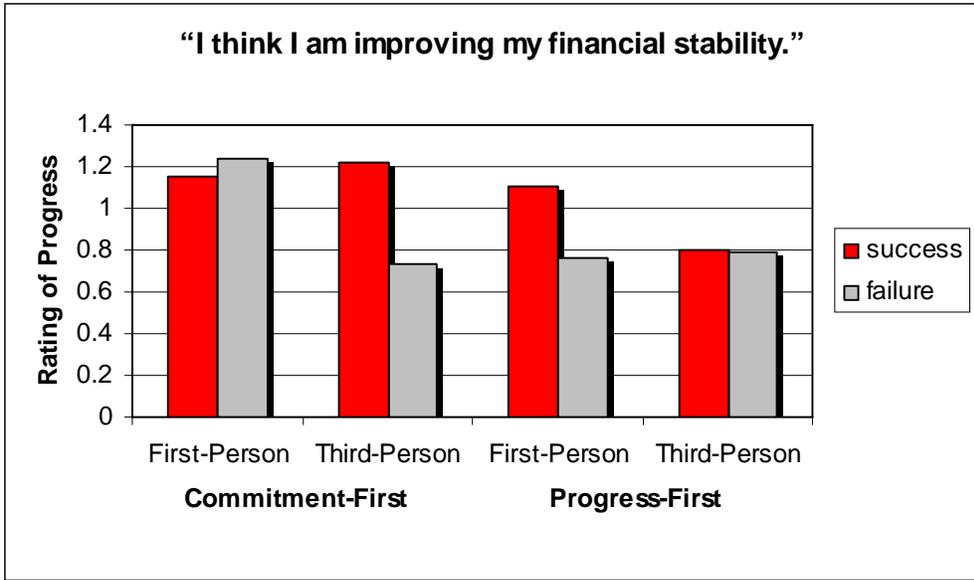
    1392-1405.

Figure 1. The three-way interaction between question order, goal outcome, and imagery perspective on the first progress statement rating obtained during the post-manipulation measurement of commitment and progress.
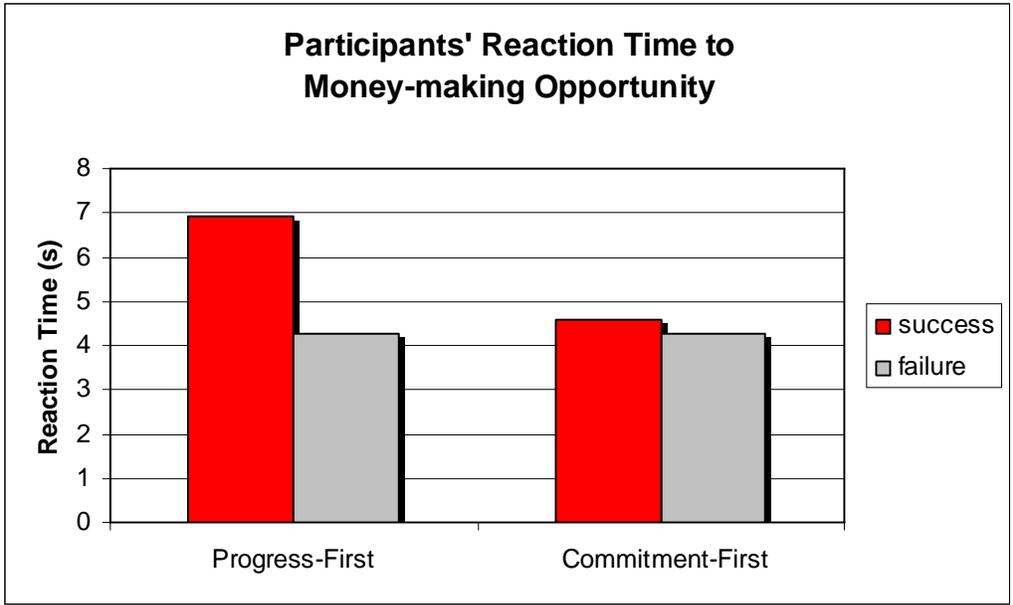
Participants' Reaction Time to Money-making Opportunity

Figure 2. The interaction between question order and goal outcome on the reaction time measurement.

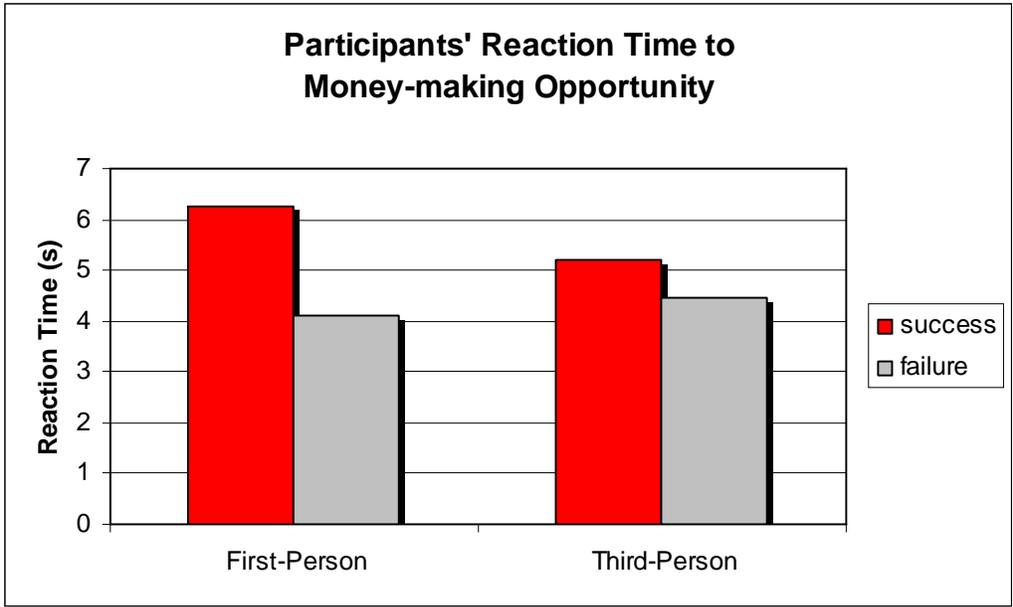**Participants' Reaction Time to Money-making Opportunity**

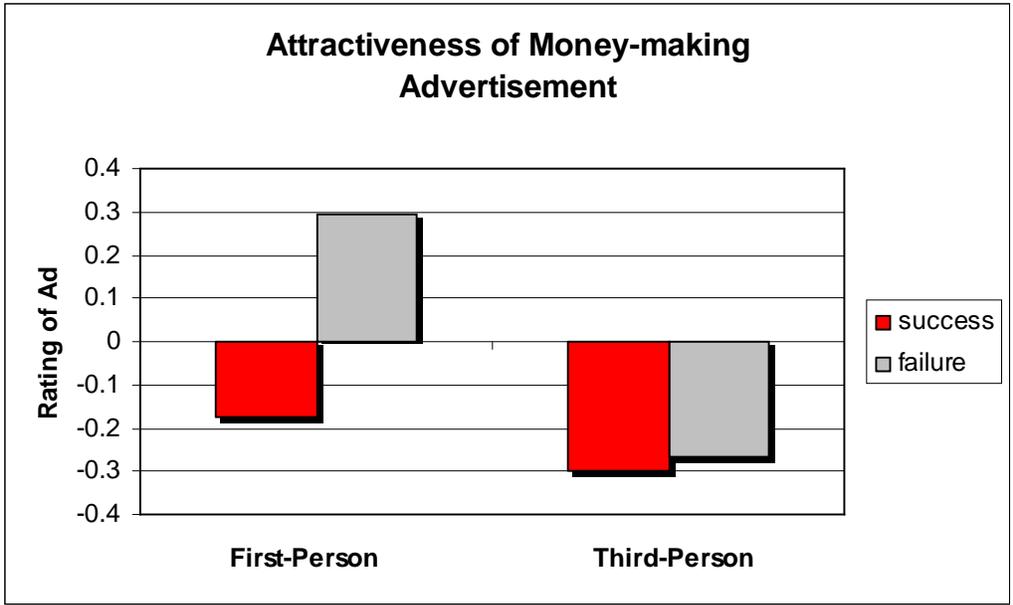Figure 3. The interaction between imagery perspective and goal outcome on the reaction time measurement.

Figure 4. The interaction between goal outcome and imagery perspective on participants' rating

of the advertisement.

APPENDIX A

IMAGINATION SCENARIO SCRIPT FOR SUCCESS AND FAILURE CONDITIONS

Success Condition:

"Imagine that you get a job to make some extra money in your free time. The job involves stuffing restaurant advertisements into envelopes for a marketing company. The job is tedious, but the more you work, the more you get paid. In fact, there is even a bonus every Wednesday for the worker who stuffs the most envelopes that day. Use the first-person/ third-person perspective to imagine settling into your cubicle Wednesday morning and starting to stuff envelopes. You fold your first advertisement into thirds neatly and place it in an envelope sealing the back with a wet sponge. You place the finished envelope to the side and begin working on another one. Hours go by as you stuff more and more advertisements into envelopes. Use all of your senses to create this first-person/ third-person image of yourself stuffing envelopes. By lunch, your desk is completely covered with envelopes and you take them to the mail room before eating. At lunch the foreman gives his usual mid-week pep talk ending with the current standings for the day's bonus. Your name comes up in the lead as you had worked harder than normal this morning. Use the first-person/ third-person perspective to imagine beginning your afternoon work. You fold another advertisement, stuff the envelope, and seal it with a wet sponge. Piles of envelopes start to surround your desk as the hours tick by. Once again your desk is completely full of envelopes and you must clear it off again. Use all of your senses to create a first-person/ third-person image of stuffing the day's last envelope. You listen again as the foreman announces the final standings for the Wednesday bonus. Your name comes up as the winner as you worked hard during the day."

Failure Condition:

"Imagine that you get a job to make some extra money in your free time. The job involves stuffing restaurant advertisements into envelopes for a marketing company. The job is tedious, but the more you work, the more you get paid. In fact, there is even a bonus every Wednesday for the worker who stuffs the most envelopes that day. Use the first-person/ third-person perspective to imagine settling into your cubicle Wednesday morning and starting to stuff envelopes. You fold your first advertisement into thirds neatly and place it in an envelope sealing the back with a wet sponge. You place the finished envelope to the side and begin working on another one. Hours go by as you stuff more and more advertisements into envelopes. Use all of your senses to create this first-person/ third-person image of yourself stuffing envelopes. By lunch, your desk is completely covered with envelopes and you take them to the mail room before eating. At lunch the foreman gives his usual mid-week pep talk ending with the current standings for the day's bonus. Your name comes up in the middle as you had worked at your normal pace during the morning. Use the first-person/ third-person perspective to imagine beginning your afternoon work. You fold another advertisement, stuff the envelope, and seal it with a wet sponge. Piles of envelopes start to surround your desk as the hours tick by. Once again your desk is completely full of envelopes and you must clear it off again. Use all of your senses to create a first-person/ third-person image of stuffing the day's last envelope. You listen again as the foreman announces the final standings for the Wednesday bonus. Your name sits in the middle as you worked at your normal pace during the day."

APPENDIX B

EXAMPLE SCREEN FROM SPATIAL PERCEPTION TASK

Please trace all of the RECTANGLES on the screen and click [Continue] when finished.
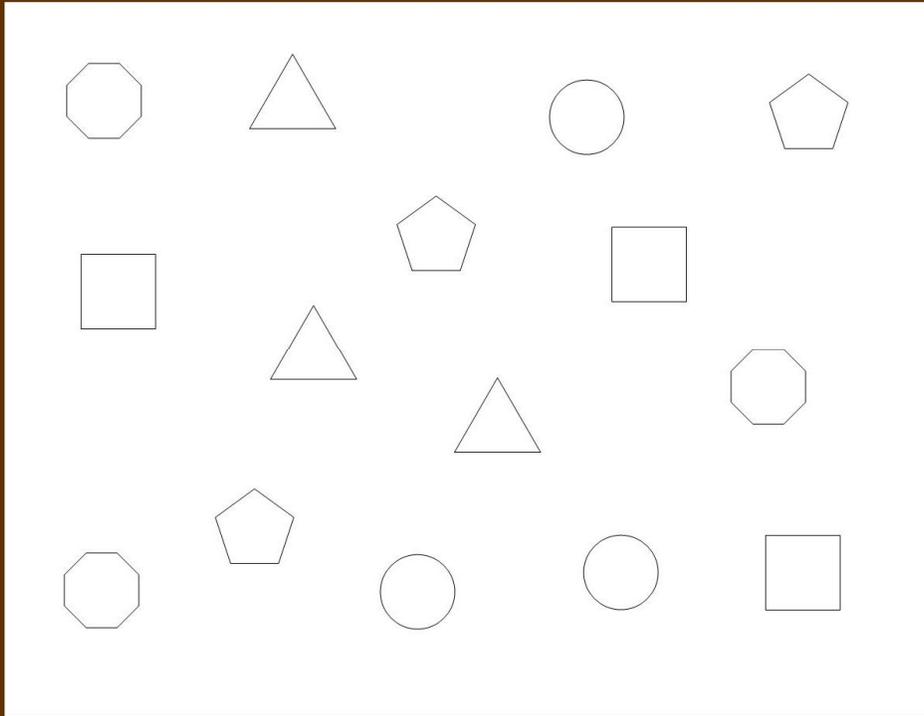
Continue ▶

APPENDIX C

MONEY-MAKING ADVERTISEMENT

Be PAID for your !!

Earn $5 for each 30 minute session you participate in.

The Psychology Department is looking for motivated undergraduates who want to help out with conducting psychological research at The Ohio State University and be paid for their time. Interested students need only to follow this link:

www.researchpays.com/notlong.htm

Time is wasting and participation space is limited, so don't delay!

O-H…$-$