Motiv Emot (2009) 33:150–160
DOI 10.1007/s11031-008-9118-9

ORIGINAL PAPER

Keeping it dull or making it fun: Task variation as a function of promotion versus prevention focus

Jessi L. Smith · Jill Wagaman · Ian M. Handley

Published online: 6 January 2009

Abstract The self-regulation of motivation model suggests that under certain circumstances, people will strategically vary a boring task to enhance their motivational experience. In three experiments we tested whether the likelihood of this task variation depends on a person's orientation to promote success or prevent failure. Across studies, all participants engaged in a boring letter-copying task which was coded for task variation. Results showed that a promotion focus led to greater task variation, whereas a prevention focus led to lesser task variation. Furthermore, for those people who varied the task under a promotion focus, greater intrinsic motivation (defined as intent for future task-related behavior and as self-reported immediate task interest) was observed. Results were evident when the foci were induced below conscious awareness (Experiment 1), subtly (Experiment 2), and overtly (Experiment 3). Implications for academic and work-related tasks are discussed.

Keywords Intrinsic motivation · Self-regulation · Promotion and prevention focus

Introduction

People often "persist at activities for no clear reason except that they seem to find them interesting" (Deci 1992, p. 49). Thus, "interest is a powerful motivator" (p. 43) and is at the heart of intrinsic motivation. Certainly, however, many activities in which people engage on a daily basis are not inherently interesting. What happens when the task at hand is boring? One option is for people to adopt strategies to make the dull task seem more interesting. For example, a student may find putting together a PowerPoint presentation on a topic outside her major very boring. However, by locating and using eye-catching images and pictures for her presentation, the task may become more interesting. As this example illustrates, people can strategically regulate their experience of interest, and, therefore, motivation may be considered both a *process* as well as an *outcome* (e.g., Elliot and Harackiewicz 1994; Sansone et al. 1999, 2008; Sansone and Smith 2000; Thoman et al. 2007). That is, task engagement itself is a fluid, dynamic, process that can change, promote, or maintain a person's motivational experience. As such, we suggest that it is important to understand when people will actively interact with and change the experience of a boring task.

The goal of the current project was to test whether a person's initial task orientation prior to task engagement influences how a person interacts with a boring task and ultimately experiences interest in that task. Specifically, we tested the role of a person's motivational orientation—as promotion focused or prevention focused (Higgins 1998; Higgins et al. 1994) because research shows that these foci lead to very different motivational strategies for completing a wide variety of tasks (e.g., Brodscholl et al. 2007; Freitas and Higgins 2002; Higgins 2000; Higgins et al. 2003; Horvath et al. 2006). Thus, with three experiments, we tested whether a person's focus on gains (promotion) or losses (prevention) predicts the extent to which a person varies a boring task.

Self-regulation of motivation

What does it mean to experience motivation? Extracting from Sansone and colleagues (e.g., Sansone et al. 1992;

J. L. Smith (✉) · J. Wagaman · I. M. Handley
Department of Psychology, Montana State University,
304 Traphagen Hall, Bozeman, MT 59717, USA
e-mail: jsismith@montana.edu

Smith et al. 2007), we conceptualize intrinsic motivation as the phenomenological experience of interest in an activity (Isaac et al. 1999; Thoman et al. 2007; see also Sansone and Harackiewicz 1996). The epitome of this interest experience (termed flow by Csikszentmihalyi 1978) is characterized by a loss of self-awareness and total submersion into the task. Understanding a person's experience of interest is important because it is associated with greater likelihood of performing the task in the future (e.g., Deci and Ryan 1985; Sansone et al. 1992) as well as a greater persistence in the activity (e.g., Reeve et al. 2002; Sansone et al. 1999; Schell et al. 2004). It makes intuitive sense that one might take part in and persist at a task primarily because one finds that task interesting and enjoyable. But, what happens when a task is boring? In this situation, a person can quit the task, continue the task as-is but suffer stress-related consequences (e.g., Sansone et al. 1999), or self-regulate the motivational experience by transforming the task in a way that makes it more interesting (Sansone et al. 1999). Sansone and colleagues (Sansone et al. 1992, 1999) have demonstrated that when there is a need (the task is boring) and regulation strategies are available (opportunities to vary the task in some way), people are more likely to strategically vary the task, often resulting in greater task interest and motivation to perform the task in the future. For example, people will change how they perform a repetitive copying task by changing the font or handwriting, especially when they have been given a good reason to perform the task (e.g., Sansone et al. 1992, 1999; Schell et al. 2004; Wolters 1999). Thus, a given task may initially be undertaken to fulfill a desired end-sate (e.g., to complete the task of creating a PowerPoint presentation). However, during the process of task engagement a person's goal (s) may also include enjoying him or herself. In this situation, people can enact a process whereby they achieve greater motivation for the task at hand, essentially by finding ways to make the task experience more interesting.

We suggest that a given reason or purpose for task engagement may create a particular orientation toward the task, affecting direction of attention as well as the strategies that are perceived to be relevant and available to vary the task (Sansone et al. 1989). For example, an extrinsic reward (e.g., a prize) may be effective in getting people to begin a boring task (e.g., Lepper and Gilovich 1982; Lepper and Henderlong 2000). Once begun, however, these people may be less likely than people given no reward to vary the task because the reward cues an external focus that makes them less likely to monitor their experience of interest (Deci et al. 1994; Ryan and Deci 2000; see also Sansone and Smith 2000). As detailed below, we add to such findings by suggesting that when an activity is boring, the nature of a person's task focus is important to the extent that it increases or decreases motivation to vary the boring task.

Promotion and prevention regulatory foci

The situation often dictates a person's task focus (Higgins et al. 1994; Higgins 2005). Some situations can foster an approach orientation in which people are motivated to approach matches for desired outcomes (gains) and approach mismatches for undesired outcomes (non-gains). For example, the student creating a PowerPoint presentation may approach the task in a way to fulfill the desire to get a good grade (gain). This "promotion focus" emphasizes a person's "accomplishments, hopes, and aspirations" (Higgins 1998, p. 16). Some research suggest that such a "positive" approach orientation results in enhanced performance, persistence, and task enjoyment (e.g., Roney et al. 1995; see also Smith et al. 2007) especially when people are focused on the task at hand (e.g., Freitas et al. 2002). For instance, Roney et al. (1995) found that framing an anagram task with a positive approach focus (i.e., getting a specified number of anagrams correct) resulted in greater persistence for solving anagrams than participants who were given the same task with a negative focus (i.e., not missing a specified number of anagrams; see also Bianco et al. 2003; Forster et al. 1998). As this later example illustrates, some situations can foster an avoidance orientation in which people are motivated to avoid mismatches for desired outcomes and avoid matches with undesired outcomes (Higgins 1997, 1998). For example, a different student may work on the same PowerPoint presentation with the goal to avoid getting a poor grade. This "prevention focus" regulation emphasizes "safety, responsibilities, and obligations" (Higgins 1998, p. 16) and under some circumstances may result in lower performance, less task enjoyment, and less persistence on a task (e.g., Freitas et al. 2002; Roney et al. 1995; Smith et al. 2007).

Although an approach versus avoidance orientation may have direct effects on intrinsic motivation, there is also much evidence to suggest that people experience greater interest in a task when it is framed in a way that "matches" the person's orientation (e.g., Sansone et al. 1989). A match between a person's orientation and the task at hand maximizes a person's expectancies and values (Sansone and Harackiewicz 1996) resulting in positive processes and outcomes. For example, research by Harackiewicz and Sansone (1991) illustrated that the match between an individual's reason for doing a task (e.g., to help other people) and the explicit demands of the task (e.g., designing a community service project) predicted greater immediate and future interest in a task, whereas a mismatch rendered poor motivational effects (e.g., Isaac et al. 1999).

Given the positive effects of match, it is not surprising that Higgins and colleagues (e.g., Higgins 1997) have demonstrated that a match between regulatory focus and goal pursuit results in "feeling right" about the task, and

these feelings translate to higher task value, more positive task experiences (Forster et al. 1998), and more positive perceptions about the task itself (e.g., Cesario et al. 2004). For example, a person with a promotion focus who receives approach oriented feedback (the PowerPoint presentation was good) is more likely to persist at a task and feel that the task has value because the task "feels right" (Higgins et al. 1994; Higgins and Freitas 2007; Roney et al. 1995). Conversely, a mismatch between a person's orientation and the demands or context of a given task impairs the task experience because the task "feels wrong" (Higgins et al. 1994; Higgins and Freitas 2007).

Although the bulk of research on promotion and prevention foci has primarily centered on the desired outcomes (e.g., monetary rewards, performance) that an individual is motivated to gain, or not lose, respectively, (e.g., Shah et al. 1998) it is possible that these foci may affect the extent to which people will actively vary a task to *create* such a "match" between the task and their orientation. For example, Crowe and Higgins (1997) found that participants were more likely to respond "yes" in trying to identify an item on a recognition task under a promotion-focus orientation compared to participants with a prevention-focus orientation (who were more likely to respond "no"). These findings indicate that a promotion focus leads to more eager, risk taking strategies, whereas a prevention focus leads to more vigilant, conservative strategies (Freitas and Higgins 2002; Higgins 1998; Idson et al. 2004; see also Brebels et al. 2008). As such, we expect that the risk-taking "playful" promotion orientation frees people to engage in greater task variation. In this way, a person with a promotion focus can create a better match between the task and their motivational focus by actively altering a boring task to make it more interesting. Such task variation among people with a promotion focus should, in turn, result in enhanced immediate task interest, increased willingness to seek out similar task opportunities in the future, and better task performance.

In contrast, a prevention focus should create an orientation toward the boring task that makes people less likely to deviate from what they "should" do as part of the task instructions (e.g., Higgins 1998; Idson et al. 2004), with the result that they are less likely to vary a task. A person with a prevention focus orientation, then, can best create a match by leaving the task relatively unaltered. In so doing, they will follow the specific guidelines for completing the task and decrease the likelihood of making errors by deviating from instructions, consistent with their regulatory focus. In this situation, a person with a prevention focus who does not vary the task should experience greater interest in the task, whereas a person with a prevention focus who does vary the task should experience decreased task interest. From this perspective then, it is the match per se between the person's orientation and the behavior that is important to consider (e.g., Smith and Ruiz 2007) and not just the valence of the orientation (as approach or avoidance).

Current project

In the current research, we expected that a promotion focus and prevention focus would influence the motivational experience in two ways: first, a promotion focus should lead people to construe a boring task as more interesting in general and second, a promotion focus should result in an active attempt to vary the task to make it more interesting (and thus more in "match"). Thus, although some direct effects of regulatory foci on the motivational experience were expected, we predicted that any such main effects would be qualified by an interaction with task variation. We predicted that regulatory foci affect the extent to which people will actively vary a task to create a "match" between the task and their orientation, with promotion foci leading to more task variation. Further, varying the task (or not), in turn, should increase the person's overall experience of interest when they are promotion (versus prevention) focused (e.g., Ainley et al. 2002; Green-Demers et al. 1998; Werner and Makela 1998). Three studies tested our hypotheses. In general, participants engaged in a boring copying task in which options were made available to vary the task experience. Across studies, motivational foci were manipulated prior to the task with varying levels of subtlety.

Experiment 1

Participants and procedure

Participants ($n = 74$, 65% women, 82.4% white) with a mean age of 21.69 years received credit in their psychology or communication classes for their participation. One participant failed to complete all of the measures, resulting in a total of 73 participants. Using a method similar to Sansone et al. (1999), participants were asked to perform a repetitive, boring copying task under the guise of "experiencing tasks and jobs that some people have to do on an everyday basis." The boring task consisted of working on three letter-matrix sheets. Each matrix was displayed in a different type font with empty boxes below. Participants were asked to copy the letters in the matrix into the boxes until time was called. Performance was intentionally not emphasized; instead, participants were told we were only "interested in their evaluation of the task after having some experience with it."

Before participants could read these task instructions, however, a confederate interrupted the session and

summoned the experimenter to the door. The confederate handed the experimenter a stack of mazes and said loudly "Have you started yet? Because Dr. Smith wanted to get some people to try out these mazes. She said it was okay to see if these folks would do it before they start the study, since it will only take a minute." The experimenter then shrugged and said "Okay." The experimenter proceeded to pass out the mazes, which were collated in a random order.

Manipulation of prevention and promotion focus

The mazes contained the focus manipulation, modeled after the manipulations used by Friedman and Forster (2001). Participants were randomly assigned to receive a maze picturing dots as start and finish points (no-focus condition), a maze picturing an owl hovering over a mouse (prevention-focus condition), or a maze picturing a mouse at the starting point with cheese at the finish point (promotion-focus condition). These manipulations were intended to induce promotion, prevention, or no focus in a very subtle way, likely below conscious awareness (see Friedman and Forster 2001). That is, participants were not explicitly instructed to adopt a particular orientation, nor were there any obvious demand characteristics for the participants to do so. Rather, subtle pictures of a mouse avoiding a predator or approaching cheese were used to activate these concepts in participants at an implicit level.

Participants were given 1 min to complete the maze and then asked to turn it over and set it aside. Next, participants were asked to read their instructions for the copying task and then complete an instruction-awareness check to make sure everyone understood the directions (e.g., how many task sheets will you do? Answer: three). Each participant was given 2 min to engage in each of the three task sheets. Following the last task sheet, participants completed a filler measure regarding perceptions of jobs to help maintain the cover story.

Intrinsic motivation measure

Finally, to index intrinsic motivation participants were asked to "anonymously" fill out a request form by indicating how many (0–3), if any, task sheets they wanted to take home. This "take-home" behavioral measure served as an index for the desire to interact with the task in the future (Sansone et al. 1989). To reduce participants' inclination to request the sheets out of concerns for social desirability, participants were instructed to put the completed request form into an envelope and to write a number or a symbol on the envelope that only they would recognize. Participants were informed that the sheets would be delivered to an "assistant" who would fill the envelopes with the number of task sheets indicated by the participants, and that they could pick up their envelope on the way out. The experimenter left the room to "deliver" the envelopes to the assistant. The experimenter then removed the request form (which was marked on the back with a subject number), filled the envelopes with the number of task sheets requested, and placed the envelopes by the door. All participants took their envelope, received a debriefing sheet, and were dismissed.

Task variation measure

Following procedures by Sansone et al. (1992, 1999), the number of strategies used was assessed by examining the "discarded" task sheets for evidence that participants purposely varied the manner in which they copied the letters. Two trained research assistants blind to conditions, coded if the participant varied the manner that the text was copied (e.g., changing the handwriting, altering between lower and upper case letters) and summed the total number of strategies used. A third judge resolved any disagreements between the coders.

Results and discussion

Results revealed significant differences in the extent to which individuals varied the task as a function of condition, $F(2, 69) = 3.06$, $p < .05$, $\eta_p^2 = .08$. As shown in Table 1, follow-up tests revealed that participants varied the task significantly more in the promotion-focus condition compared to the prevention-focus and no-focus conditions. The prevention and no-focus condition were statistically equal. Results revealed no significant direct effects of focus condition on number of take home sheets requested. It is possible that the restricted range of the take home sheet variable may have limited the power to detect significant differences overall. As such, we recalculated our future motivation measure as "did request" versus "did not request" and conducted a chi-square analyses. Results, however, remained unchanged and failed to yield any significant differences. Nevertheless, it is important to note that significantly fewer requests for take home sheets (using our original 0–3 index of future motivation) were made among those who varied the task with a prevention focus ($M = .13$, SE $= .25$) compared to those who varied the task with a promotion focus ($M = .62$, SE $= .18$), $F(1, 41) = 4.20$, $p < .05$, $\eta_p^2 = .09$. Further, this pattern was reversed among those who did not vary the task.

Most important, these findings indicate that a nonconsciously triggered promotion-focus (vs. prevention focus) leads participants to vary a boring task. Additionally,

Table 1 Task variation and level of intrinsic motivation as a function of regulatory focus

Condition	Promotion boring task *M* (SE)	Prevention boring task *M* (SE)	No focus boring task *M* (SE)	No focus interesting task *M* (SE)
Task variation				
Experiment 1	1.67^{a} (.27) $n = 21$	$.76^{b}$ (.28) $n = 27$	$.97^{b}$ (.30) $n = 25$	–
Experiment 2	1.86^{a} (.27) $n = 28$	$.90^{b}$ (.26) $n = 30$	$1.64^{a,b}$ (.27) $n = 28$	$.09^{c}$ (.22) $n = 43$
Experiment 3	3.18^{a} (.43) $n = 13$	1.83^{b} (.39) $n = 15$	–	$.09^{c}$ (.44) $n = 13$
Intrinsic motivation				
Experiment 1	$.46^{a}$ (.15)	$.41^{a}$ (.10)	$.43^{a}$ (.16)	–
Experiment 2	4.24^{a} (.22)	3.46^{b} (.22)	$3.59^{a,b}$ (.22)	4.63^{a} (.18)
Experiment 3	$3.19^{a,b}$ (.32)	2.51^{b} (.34)	–	3.94^{a} (.33)

Intrinsic motivation was assessed in Experiment 1 as a behavioral measure (range 0–3) and in Experiments 2 and 3 as a self-report measure (range 1–7). Means within a row not sharing a superscript, differ at $p < .05$

among those who did vary the task, individuals given a promotion-focus versus prevention-focus orientation requested more take-home sheets. One possible interpretation of this finding is that changing the task was associated with intrinsic motivation among people operating under a promotion focus orientation. To test this possibility, we computed correlations between number of strategies used and number of take home sheets requested. Supporting this idea, results showed that for prevention-focus participants, varying the task was associated with lower future motivation ($r = -.23$), whereas among promotion-focus participants, this association was positive ($r = .73$). However, it is certainly possible that people who varied the task with a promotion focus requested to take home the task sheets for reasons other than finding the task interesting. As such, a more task-specific (and variable) measure of intrinsic motivation was utilized in Experiment 2.

Experiment 1 demonstrated that people with either no-focus or a prevention-focus varied the task to a similar (low) extent compared to a promotion focus orientation. To further determine the degree to which a prevention focus inhibits task variation and promotion focus promotes task variation, Experiment 2 included another control condition for comparison purposes. We included a fourth condition in which no-focus participants engaged in an interesting task. It is important to compare our findings from Experiment 1 with an interesting-task condition because participants should vary the task only when it is boring. Thus, in comparing these conditions, only those performing the boring task should feel compelled to vary the task. An interesting task condition (in which no focus is manipulated) is important because there should be a difference in intrinsic motivation generated by the tasks themselves. We expected that similar to Experiment 1, people with a promotion focus who vary the boring task, and people with a prevention focus who do not vary the task, would both experience match and thus "feel right" and report relatively more interest in the task (Higgins 1997). The question remains if this increased level of interest in the boring task would equal or fall short of the interest reported by people engaging in the interesting task where no focus is manipulated.

Finally, relatively more direct manipulations of promotion and prevention foci were used in Experiment 2. In addition to subtle cues in our environment, promotion and prevention foci can also be triggered by more overt experiences, such as having a parent admonish a child not to get a bad grade, or a mentor encouraging a student to "shoot for the stars." Thus, we felt it was important to demonstrate that our Experiment 1 findings replicate in, and generalize to, these comparably real-world situations. To do this, we employed more explicit and overt manipulations of promotion and prevention focus in the remaining experiments.

Experiment 2

Participants and procedure

Participants ($n = 129$, 57.5% women, 93.8% white) with a mean age of 20.74 years received credit in their psychology or communication classes for their participation. Participants were randomly assigned to one of four conditions, in three of which participants encountered the same boring task used in Experiment 1 either as-is, or preceded by a manipulation of promotion or prevention focus. A fourth condition was included in which participants only encountered an interesting task, following procedures by Sansone et al. (1992). In this later task, the same three letter matrix sheets used in the boring task are presented. However, instead of copying the letters, participants are told to find words using the provided letters (similar to a word game "Boggle"). Thus, each task sheet contained a matrix of letters displayed in a different type font with either boxes below (for the boring copying task) or lines below (for the interesting task) the matrix.

Manipulation of prevention and promotion focus

Prior to receiving task instructions, participants were given a folder that contained a "pre-task worksheet." This worksheet contained the written manipulation of regulatory foci modeled after Higgins et al. (2003). In the promotion-focus conditions, participants were told to list five of their "hopes and aspirations" about their goals at this time in the semester. Participants indicated on scales ranging from one (*not at all*) to seven (*very much*) the extent to which they would ideally like to achieve each of the listed hopes or aspirations. Prevention-focus participants were asked to write about five of their "duties and responsibilities" about their goals at this time in the semester. These participants indicated on the same scales the extent to which they were concerned with achieving each of the listed duties or obligations.

Following the pre-task worksheet, participants read the instructions for the boring or interesting task, completed the same instruction-awareness check described in Experiment 1, and then were given 2 min to complete each task sheet. The task sheets were collected at the end of the study and coded for task variation, as described in Experiment 1.

Intrinsic motivation measure

Following the last task sheet, participants completed a filler measure regarding perceptions of jobs to help maintain the cover story as well as a new measure of intrinsic motivation. Specifically, participants completed five items measuring interest and enjoyment (e.g., I would describe this task as interesting; $\alpha = .82$) on a one (*strongly disagree*) to seven (*strongly agree*) scale (see Smith et al. 2007).

Results and discussion

Results showed that the number of strategies used differed by condition, $F(3, 128) = 11.21$, $p < .05$, $\eta_p^2 = .21$. As seen in Table 1, follow-up tests showed that a promotion focus resulted in significantly more task variation compared to the prevention focus, with the no-focus boring task condition again falling in the middle. Unlike results from Experiment 1, the no-focus boring task was statistically equal to both focus conditions. Results further revealed that when there was no need to regulate interest (because the task was interesting) varying the task was lowest compared to all other conditions.

Results also showed a difference in the reported experience of interest, $F(3, 128) = 7.64$, $p < .001$, $\eta_p^2 = .16$. As seen in Table 1, follow-up tests showed that participants found the "interesting" task most interesting, but not significantly more interesting than did participants who completed the boring task and received the promotion-focus manipulation. Indeed, of participants who completed the boring task, those who received the promotion-focus manipulation reported significantly greater interest than participants who received the prevention-focus manipulation, with participants in the no-focus condition falling in the middle. Further, an interaction emerged between whether participants varied the task (or not) and task foci on reported task interest, $F(1, 57) = 6.07$, $p < .05$, $\eta_p^2 = .10$. Follow-up tests showed that among participants who varied the task, a promotion focus resulted in higher interest ($M = 4.42$, SE $= .32$) compared to a prevention focus ($M = 2.82$, SE $= .36$, $p < .05$). Similar to Experiment 1, this pattern was reversed when the task was not varied, such that having a prevention focus resulted in significantly greater interest ($M = 4.10$, SE $= .36$) compared to a promotion focus ($M = 3.86$. SE $= .46$ $p < .05$).

Finally, we computed correlations between number of strategies used and ratings of task interest. Results showed that for prevention focus participants, varying the task was associated with lower reported interest ($r = -.35$) whereas among promotion focus participants, this association was small, but positive ($r = .18$). Overall, results again suggest that a person's focus prior to task engagement influences how a task is engaged and experienced.

Experiment 3 was constructed to replicate the findings of Experiment 2. However, an even more overt manipulation of promotion and prevention focus was employed, to confirm that the above results generalize to situations in which real and immediate benefits and consequences will be realized. Further, the boring-task control condition was removed, leaving two groups who received a boring task preceded by either a promotion or prevention-focus manipulation and the interesting-task condition for comparison purposes. As was observed in Experiment 2, we predicted that among participants receiving the boring task, those who received the promotion (vs. prevention) focus manipulation would vary the task more and find the task more interesting.

In this final experiment, we also chose to explore two possible explanations for the effects of self regulatory foci on task variation. First, we examined if promotion and prevention focus result in people adopting different kinds of strategies while working on a boring task. Specifically, we also coded for "type" of strategy used to explore if task variation leads to an experience of a "match" or "mismatch" because of choosing to engage in *different* variation strategies or if it is simply the degree of task variation that is important. Second, although performance was intentionally not emphasized in any of the experimental instructions, it was possible that promotion- and prevention-focus participants differentially engaged in task variation because of a concern (or lack there of) about

task performance. We explored this possibility by examining the impact of regulatory focus on performance on the copying tasks (number of letters copied).

Experiment 3

Participants and procedure

Participants ($n = 41$, 43.9% women, 88.1% white) with a mean age of 21.7 years received credit in their psychology classes for their participation, and received two passes to a local movie theater. Participants were randomly assigned to one of three conditions (promotion/boring vs. prevention/boring vs. no focus/interesting task). The same boring and interesting tasks used in Experiment 2 were employed.

Manipulation of prevention and promotion focus

Similar to Experiment 1, participants were informed the study was designed to (ostensibly) expose participants to different jobs that people have to do on an everyday basis. The written instructions for the boring task contained the promotion and prevention focus manipulation. Modeled after Shah et al. (1998), participants in the prevention-focus condition read they were beginning "the experiment with two movie tickets in your "account." If you do not provide an evaluation of the task, one movie ticket will be deducted from your account. So your goal in this experiment is to avoid the situation in which you fail to experience the task and complete the evaluation." In the promotion-focus condition, participants read they were beginning "the experiment with one movie ticket in your "account." If you provide an evaluation of the task one more movie ticket will be added to your account. So your goal in this experiment is to approach the situation in which you experience the task and complete the evaluation." Participants then completed an instruction awareness check (e.g., How many movie tickets are currently in your account? How many task sheets will you do? etc.).

Similar to Experiment 1, participants were then given 2 min to engage each of the three task sheets, which were coded for number of strategies used as done in Experiment 1. Following procedures outlined by Sansone et al. (1992), we also coded for type of strategies used. Specifically, we coded for four types of strategies (varied placement of the letters within a box; variation of the order in which a letter string was copied; varied use of upper and lower case letters; and varied letter font and flourishes). Two coders (blind to the study conditions) independently identified the use of these four strategies. Disputes were resolved by a third judge. Participants then completed the same intrinsic motivation measures used in Experiment 2, as well as various filler items intended to perpetuate the cover story. Finally, performance on the boring tasks only was measured by counting the total number of letters copied across the three task sheets.

Results and discussion

A repeated measure ANOVA revealed no significant differences in the types of strategies used as a function of regulatory focus condition. Instead, only the degree of task variation seemed to differ. Specifically, results showed significant differences in the extent to which individuals varied the task as a function of our manipulations, $F(2, 37) = 11.77$, $p < .00$, $\eta_p^2 = .38$. As seen in Table 1, follow-up tests showed that a promotion focus led to greater task variation than a prevention focus. A prevention focus (and a promotion focus) led to greater task variation than the interesting task. Thus, individuals performing the boring copying task varied the task more than individuals performing the interesting task. Indeed, when there was no need to regulate interest (because the task was interesting) varying the task occurred least.

Results also showed a difference in the reported experience of interest, $F(2, 36) = 4.53$, $p < .02$, $\eta_p^2 = .20$. As seen in Table 1, follow-up tests showed that participants again found the "interesting" task most interesting, but not significantly more interesting than did participants who completed the boring task and received the promotion-focus manipulation. Compared to participants who worked on the interesting task, participants who received the prevention-focus manipulation reported significantly lower levels of interest.

Consistent with Experiment 2, among those who varied the task, self-reported interest was greater with a promotion focus ($M = 3.73$; SE = .31) compared to a prevention focus ($M = 2.45$, SE = .31), $F(1, 22) = 5.46$, $p < .03$, $\eta_p^2 = .19$. The pattern was reversed among those who did not vary the task, albeit not significantly. Correlational analyses showed no statistically significant relationship between number of strategies used and intrinsic motivation for prevention focus participants ($r = -.09$), but a positive relationship for promotion focus participants ($r = .29$). Again, this suggests the possibility that only varying the task under a promotion focus (and not a prevention focus) was done in the service of regulating the experience of interest. Finally, we tested whether number of letters copied differed as a function of promotion and prevention focus, and it did not ($F < 1.00$). However, there was a significant negative correlation between strategy use and performance, $r(28) = -.44$, $p < .05$, suggesting that task variation did come at the expense of performance. Although short-term performance may be hampered by

strategy use, when strategy use serves to increase the experience of interest, long-term performance is enhanced (Sansone et al. 1999).

In summary, these results provide further confirmation that a promotion focus increases the likelihood of task variation. Additionally, as expected, varying the task with a promotion focus resulted in an enhanced motivational experience as evidenced by the post-task interest measure. By contrast, a prevention focus was relatively detrimental to both the motivational process and motivational outcome.

Across experiment analyses

Because the same task variation under a prevention focus (vs. a promotion focus) was negatively related to (Experiment 1, 2) or unrelated to (Experiment 3) intrinsic motivation, we wanted to further examine whether and for whom task variation was used as an interest-enhancing strategy. To do this, we combined data from the three experiments. First, we standardized the future interest measure (Experiment 1) and the self-reported interest measures (Experiment 2, 3) into z-scores, then combined them into an overall "intrinsic motivation measure." Second, we created a dummy code for each of the promotion focus manipulations (+1) and the prevention focus manipulations (−1). Next, the correlations between number of task variation strategies and intrinsic motivation were computed within promotion and prevention conditions. Results revealed the expected positive relationship between task variation and intrinsic motivation in the promotion focus conditions, $r(65) = .29$, $p < .05$. Results also yielded a significant negative relationship between task variation and intrinsic motivation in the prevention focus condition, $r(66) = -.39$, $p < .05$. Importantly, these correlations were significantly different from each other, $z = 3.97$, $p < .05$. Therefore, task variation was differentially related to intrinsic motivation as a function of the focus conditions. It appears that task variation served as an interest enhancing strategy only among participants in the promotion focus conditions. Task variation positively predicted intrinsic motivation for these participants only.

General discussion

People often find and implement creative strategies to change an ongoing dull task so that they are more motivated to engage in it, suggesting that the motivational experience can be conceptualized as both a process and an outcome (e.g., Sansone et al. 1992; Thoman et al. 2007). Yet, based on situational or individual factors, people can differ in the extent to which they are motivated to alter boring tasks and experience increased intrinsic motivation. Exploring this idea, we specifically tested the potential role of promotion (approach) and prevention (avoidance) orientations (Higgins 1996, 1998) in this motivational experience.

We conducted three experiments to test whether promotion and prevention focus orientations changed the way a boring task was engaged and experienced. We found that people operating with a promotion focus generally experienced greater interest in the boring task compared to people with a prevention focus, supporting past research on the positive effects of a promotion focus (e.g., Roney et al. 1995). However, it is less clear if a promotion focus increased intrinsic motivation or if a prevention focus decreased intrinsic motivation because the control conditions data were not always consistently different from one condition's mean or the other. Nevertheless, the pattern of results for the no-focus boring task was always in the middle, suggesting a relatively linear pattern of enhanced motivation.

Additionally, we set out to determine if prevention and promotion foci differentially influenced whether people adopt strategies for varying the way they engage in a boring letter-copying task, and results suggest that they do. In particular, we found that promotion focus participants (and to a lesser degree prevention focus participants) were likely to experience greater intrinsic motivation (defined as intent for future task-related behavior and as self-reported immediate task interest) when their task variation behavior was congruent (i.e., in match) with their regulatory focus. That is, promotion-focused participants experienced more, and prevention-focused participants experienced less, intrinsic motivation for the task the more they altered it. This suggests that more than the mere positive or negative valence of an orientation, it is the match between the orientation and the behavior that is important to the task experience (e.g., Smith and Ruiz 2007). This relatively beneficial motivational effect of task variation under a promotion versus prevention focus was evident when the orientations were induced below conscious awareness (Experiment 1), subtly (Experiment 2), and overtly (Experiment 3).

Our results suggest that regulatory foci influences intrinsic motivation both directly (by construing the task as more interesting) and indirectly (changing the task to actually make it more interesting). Certainly, these indirect effects of task variation on intrinsic motivation represent an active (vs. passive) self-regulatory process (Sansone and Smith 2000). Indeed, one interpretation of our results is that compared to a prevention-focus, a promotion-focus negatively impacted intrinsic motivation through (in) actions that corresponded to *not* varying the task. These findings are in line with research on the self-regulation of motivation that shows people who strategically alter a boring task will experience greater interest in the task (e.g.,

Sansone et al. 1992). Yet, our prevention focus results suggest a slight modification to the self-regulation of motivation model; the motivation behind any task variation is important to consider to the to the extent that the reason and task variation create feelings of "match" and task "value" (e.g., Higgins 1997, 1998; see also Isaac et al. 1999). Our results show that among those people who did vary the task under a prevention focus, intrinsic motivation was not enhanced; indeed results across our three experiments suggest that in this situation intrinsic motivation suffered. However, some prevention-focused participants did alter the task, and it is unclear what goal this served. It is possible, for example, that a prevention focus creates an orientation toward the task that makes the experience of *boredom* salient versus the experience of *interest*. Perhaps these people attempted to make the task seem less boring, but were not striving to vary the task enough to make it truly interesting. Future research would benefit from examining this possibility.

Implications

For some (e.g., those who were promotion focused in our research), the benefits of task variation can be quite meaningful, including greater interest in the task, more effort devoted toward task completion, and a greater likelihood of engaging in the task in the future (e.g., Isaac et al. 1999; Sansone et al. 1992, 1999; Thoman et al. 2007). Thus, understanding what circumstances might prompt individuals to employ task-variation strategies is theoretically important for understanding human performance and choices for future behavior, but also practically important to help increase academic and work productivity, predict choices in academic majors and careers, and potentially in predicting or enhancing life satisfaction (e.g., Renninger et al. 2004; Sansone et al. 2009; Smith et al. 2007; Thoman et al. 2007). For example, our results have potential implications for the workplace. For employees learning a novel task, the experience may seem interesting for a short time. Inevitably, a sense of routine sets in and even the most exciting jobs may become mundane and boring. Our findings suggest that the manner in which the task is engaged can make a significant difference in enjoyment and future motivation.

Further, our research can shed light on mechanisms that decrease intrinsic motivation. For instance, when dealing with vigilant tasks (e.g., goal is to not make a mistake), there are no rewards for high performance but only punishments for low performance. Take the example of an air traffic controller who is required to monitor airplanes' travel paths to avoid collision. Interestingly, little notice is taken when the job is completed successfully. However, if a crash does occur, then the air traffic controller is penalized (Maxwell 2006). This is telling for job burnout, which is often characterized by emotional exhaustion, depersonalization, and lack of sense of personal accomplishment without proper reward (Evans and Fischer 1993). And, unfortunately, our research suggests that in such a context, individuals will do little to make dull, repetitive, or routine tasks more interesting. Further, for promotion-oriented employees, such avoidance-oriented tasks may result in less interest and poorer performance because there is a mismatch between the task and focus (Higgins 2005; see also Forster et al. 1998). So, employers might consider helping employees consider novel and engaging ways to approach their daily work, or might subtly prompt promotion orientations with logos, posters, and mottos, so that employees make efforts to alter dull job tasks to make them more interesting.

Limitations and future directions

Our findings, however, are limited to situationally-induced foci. Our emphasis on experimental manipulations of promotion and prevention focus obviated our investigation of naturally occurring trait differences in promotion and prevention predilections. Much research indicates that individuals can have a chronic orientation toward promotion or prevention (e.g., Higgins 2000; Higgins et al. 2003; Horvath et al. 2006). We suggest, and future research should confirm, that people who are chronically oriented toward promotion should vary boring tasks and report more interest in these tasks, mirroring the results we obtained when this orientation was manipulated in our experiments.

Previous research also indicates that other approach- and avoidance-based goals and orientations influence the motivational experience (e.g., Horvath et al. 2006). For example, Carver (2006) distinguished between the biologically based behavior activation system (BAS) which characterizes drive seeking and fun seeking, versus the more avoidant behavior inhibition system (BIS). A person's characteristic BIS or BAS can influence a person's emotions, which in turn, predicts motivation for subsequent tasks. Thus, it could be useful to consider the role emotions might play in determining motivation and the use of task-enhancing strategies (Elliot 2006). Interest, in and of itself, has recently been characterized as an emotion (Silvia 2008). Emotional responses to interesting and boring tasks (e.g., positive and negative affect) hold promise for future work because it is still not yet well understood what role emotions play in the experience of interest as a motivational construct.

Finally, continued systematic research on different task-altering strategies could help clarify some seeming inconsistencies in the literature on emotion and information processing. For example, mounting evidence indicates that while individuals experience happiness, they avoid

processing unpleasant information or engaging in unpleasant tasks, but process uplifting information extensively and seek out enjoyable tasks, presumably in an attempt to maintain their positive emotional state (e.g., Handley and Lassiter 2002; Handley et al. 2004; Wegener and Petty 1994; Wegener et al. 1995). Yet, some research indicates that when faced with personally relevant but unpleasant information (e.g., information relevant to peoples' health), happy people will process that information to a greater extent than individuals experiencing neutral or negative emotions (Rughunathan and Trope 2002). It may be the case that to process important but unpleasant information, happy individuals employ task-alteration strategies that make the information seem more positive and less threatening. In so doing, people experiencing happiness might increase their motivation to process the otherwise threatening information.

Conclusion

Our findings emphasize the importance of a promotion- versus prevention-focus orientation toward task engagement that prompts (or dissuades) a person to vary a boring task. Whereas the motivational benefits of a promotion focus were clear, the negative effects of a prevention focus on task variation and intrinsic motivation were decidedly more ambiguous and open to interpretation. Nevertheless, to the extent that inherently interesting activities are a rare occurrence in everyday life, our findings add to the list of critical ingredients needed to understand the way by which people can enhance ever-present boring tasks.

Acknowledgment We would like to thank Dr. Carol Sansone for her input on Experiment 3. We also thank the Motivation and Diversity Lab Research Assistants for their help with data collection and coding.

References

Ainley, M., Hidi, S., & Berndorff, D. (2002). Interest, learning, and the psychological processes that mediate their relationship. *Journal of Educational Psychology, 94*, 545–561. doi:10.1037/0022-0663.94.3.545.

Bianco, A. T., Higgins, E. T., & Klem, A. (2003). How "fun/importance" fit impacts performance: Relating implict theories to instructions. *Personality and Social Psychology Bulletin, 29*, 1091–1103. doi:10.1177/0146167203253481.

Brebels, L., De Cremer, D., & Sedikides, C. (2008). Retaliation as a response to procedural unfairness: A self-regulatory approach. *Journal of Personality and Social Psychology, 96*, 1511–1525. doi:10.1037/a0012821.

Brodscholl, J., Kober, H., & Higgins, E. T. (2007). Strategies of self-regulation in goal attainment versus goal maintenance. *European Journal of Social Psychology, 37*, 628–648. doi:10.1002/ejsp.380.

Carver, C. (2006). Approach, avoidance, and self-regulation of affect and action. *Motivation and Emotion, 30*, 105–110. doi:10.1007/s11031-006-9044-7.

Cesario, J., Grant, H., & Higgins, E. T. (2004). Regulatory fit and persuasion: Transfer of fit from "feeling right". *Journal of Personality and Social Psychology, 3*, 388–404. doi:10.1037/0022-3514.86.3.388.

Crowe, E., & Higgins, E. T. (1997). Regulatory focus and strategic inclinations: Promotion and prevention in decision-making. *Organizational Behavior and Human Decision Processes, 69*, 117–132. doi:10.1006/obhd.1996.2675.

Csikszentmihalyi, M. (1978). Intrinsic rewards and emergent motivation. In M. R. Lepper & D. Greene (Eds.), *The hidden costs of reward* (pp. 205–216). Hillsdale, NJ: Erlbaum.

Deci, E. L. (1992). The relation of interest to the motivation of behavior: A self-determination theory perspective. In K. A. Renninger, S. Hidi, & A. Krapp (Eds.), *The role of interest in learning and development*. Hillsdale, NJ: Lawrence Erlbaum Associates.

Deci, E., Eghrari, H., Patrick, B., & Leone, D. (1994). Facilitating internalization: The self-determination theory perspective. *Journal of Personality, 62*, 119–142. doi:10.1111/j.1467-6494.1994.tb00797.x.

Deci, E., & Ryan, R. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum Press.

Elliot, A. J. (2006). The hierarchical model of approach-avoidance motivation. *Motivation and Emotion, 30*, 111–116. doi:10.1007/s11031-006-9028-7.

Elliot, A. J., & Harackiewicz, J. (1994). Goal setting, achievement orientation, and intrinsic motivation: A meditational analysis. *Journal of Personality and Social Psychology, 66*, 968–980. doi:10.1037/0022-3514.66.5.968.

Evans, B., & Fischer, D. (1993). The nature of burnout: A study of the three-factor model of burnout in human service and non-human service samples. *Journal of Occupational and Organizational Psychology, 66*, 29–38.

Forster, J., Higgins, E. T., & Idson, L. C. (1998). Approach and avoidance strength during goal attainment: Regulatory focus and the "goal looms larger" effect. *Journal of Personality and Social Psychology, 75*, 1115–1131. doi:10.1037/0022-3514.75.5.1115.

Freitas, A. L., & Higgins, E. T. (2002). Enjoying goal-directed action: The role of regulatory fit. *Psychological Science, 13*, 1–6. doi:10.1111/1467-9280.00401.

Freitas, A. L., Liberman, N., & Higgins, E. T. (2002). Regulatory fit and resisting temptation during goal pursuit. *Journal of Experimental Social Psychology, 38*, 291–298. doi:10.1006/jesp.2001.1504.

Friedman, R. S., & Forster, J. (2001). The effects of promotion and prevention cues on creativity. *Journal of Personality and Social Psychology, 81*, 1001–1013. doi:10.1037/0022-3514.81.6.1001.

Green-Demers, I., Pelletier, L., Stewart, D., & Gushue, N. (1998). Coping with the less interesting aspects of training: Toward a model of interest and motivation enhancement in individual sports. *Basic and Applied Social Psychology, 20*, 251–261. doi:10.1207/s15324834basp2004_2.

Handley, I. M., & Lassiter, G. D. (2002). Mood and information processing: When happy and sad look the same. *Motivation and Emotion, 26*, 223–255. doi:10.1023/A:1021725130325.

Handley, I. M., Lassiter, G. D., Nickell, E. F., & Herchenroeder, L. M. (2004). Affect and automatic mood maintenance. *Journal of Experimental Social Psychology, 40*, 106–112. doi:10.1016/S0022-1031(03)00086-6.

Harackiewicz, J. M., & Sansone, C. (1991). Goals and intrinsic motivation: You can get there from here. In M. L. Maehr & P. R. Pintrich (Eds.), *Advances in motivation and achievement* (Vol. 7, pp. 21–49). Greenwich, CT: JAI Press Inc.

Higgins, E. T. (1996). The "self digest": Self-knowledge serving self-regulatory functions. *Journal of Personality and Social Psychology, 71*, 1062–1083. doi:10.1037/0022-3514.71.6.1062.

Higgins, E. T. (1997). Beyond pleasure and pain. *The American Psychologist, 52*, 1280–1300. doi:10.1037/0003-066X.52.12.1280.

Higgins, E. T. (1998). Promotion and prevention: Regulatory focus as a motivational principle. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (pp. 1–46). New York: Academic Press.

Higgins, E. T. (2000). Making a good decision: Value from fit. *The American Psychologist, 55*, 1217–1230. doi:10.1037/0003-066X.55.11.1217.

Higgins, E. T. (2005). Value from regulatory fit. *Current Directions in Psychological Science, 14*, 209–213. doi:10.1111/j.0963-7214.2005.00366.x.

Higgins, E. T., & Freitas, A. L. (2007). Regulatory fit: Its nature and consequences. In C. Ostroff & T. Judge (Eds.), *Perspectives on organizational fit* (pp. 71–98). Mahwah, NJ: Lawrence Erlbaum Associates.

Higgins, E. T., Idson, L. C., Freitas, A. L., Spiegel, S., & Molden, D. C. (2003). Transfer of value from fit. *Journal of Personality and Social Psychology, 84*, 1140–1153. doi:10.1037/0022-3514.84.6.1140.

Higgins, E. T., Roney, C. J. R., Crowe, E., & Hymes, C. (1994). Ideal versus ought predilections for approach and avoidance: Distinct self-regulatory systems. *Journal of Personality and Social Psychology, 66*, 276–286. doi:10.1037/0022-3514.66.2.276.

Horvath, M., Herleman, H., & McKie, R. L. (2006). Goal orientation, task difficulty, and task interest: A multilevel analysis. *Motivation and Emotion, 30*, 171–178. doi:10.1007/s11031-006-9029-6.

Idson, L. C., Higgins, E. T., & Liberman, N. (2004). Imagining how you'd feel: The role of motivational experiences from regulatory fit. *Personality and Social Psychology Bulletin, 30*, 926–937. doi:10.1177/0146167204264334.

Isaac, J., Sansone, C., & Smith, J. L. (1999). Other people as a source of interest in an activity. *Journal of Experimental Social Psychology, 35*, 239–265. doi:10.1006/jesp.1999.1385.

Lepper, M., & Gilovich, T. (1982). Accentuating the positive: Eliciting generalized compliance from children through activity-oriented requests. *Journal of Personality and Social Psychology, 42*, 248–259. doi:10.1037/0022-3514.42.2.248.

Lepper, M., & Henderlong, J. (2000). Turning "play" into "work" and "work" into "play": 25 years of research on intrinsic versus extrinsic motivation. In C. Sansone & J. Harackiewicz (Eds.), *Intrinsic and extrinsic motivation: The research for optimal motivation and performance* (pp. 257–307). San Diego, CA: Academic Press.

Maxwell, V. (2006). Stress in air traffic control. *Stress and Health, 2*, 27–36.

Reeve, J., Jang, H., Hardre, P., & Omura, M. (2002). Providing a rationale in an autonomy-supportive way as a strategy to motivation others during an uninteresting activity. *Motivation and Emotion, 26*, 183–207. doi:10.1023/A:1021711629417.

Renninger, K. A., Sansone, C., & Smith, J. L. (2004). Love of learning. In C. Peterson & M. E. P. Seligman (Eds.), *Character strengths and virtues: A classification and handbook* (pp. 161–179). New York: Oxford University Press.

Roney, C. J. R., Higgins, E. T., & Shah, J. (1995). Goals and framing: How outcome focus influences motivation and emotion. *Personality and Social Psychology Bulletin, 21*, 1151–1160. doi:10.1177/01461672952111003.

Rughunathan, R., & Trope, Y. (2002). Walking the tightrope between feeling good and being accurate: Mood as a resource in processing persuasive messages. *Journal of Personality and Social Psychology, 83*, 510–525. doi:10.1037/0022-3514.83.3.510.

Ryan, R., & Deci, E. (2000). The support of autonomy and the control of behavior. *Journal of Personality and Social Psychology, 53*, 1024–1037.

Sansone, C., & Harackiewicz, J. (1996). "I don't feel like it": The function of interest in self-regulation. In L. Martin & A. Tesser (Eds.), *Striving and feeling: Interactions among goals, affect, and self regulation* (pp. 203–228). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Sansone, C., & Smith, J. L. (2000). Interest and self-regulation: The relation between having to and wanting to. In C. Sansone & J. M. Harackiewicz (Eds.), *Intrinsic and extrinsic motivation: The search for optimal motivation and performance* (pp. 341–404). San Diego, CA: Academic Press.

Sansone, C., Sachau, D. A., & Weir, C. (1989). Effects on instruction of intrinsic interest: The importance of context. *Journal of Personality and Social Psychology, 57*, 819–829. doi:10.1037/0022-3514.57.5.819.

Sansone, C., Thoman, D. B., & Smith, J. L. (2009). Interest and self-regulation: Understanding individual variability in choices, efforts and persistence over time. In R. Hoyle (Ed.), *Handbook of Personality and Self-Regulation*, Wiley-Blackwell.

Sansone, C., Weir, C., Harpster, L., & Morgan, C. (1992). Once a boring task always a boring task? Interest as a self-regulatory mechanism. *Journal of Personality and Social Psychology, 63*, 379–390. doi:10.1037/0022-3514.63.3.379.

Sansone, C., Wiebe, D., & Morgan, C. (1999). Self-regulating interest: The moderating role of hardiness and conscientiousness. *Journal of Personality, 61*, 701–733. doi:10.1111/1467-6494.00070.

Schell, K., Melton, E., Woodruff, A., & Corbin, G. B. (2004). Self-regulation, engagement, motivation, and performance in a simulated quality control task. *Psychological Reports, 94*, 944–954. doi:10.2466/PR0.94.3.944-954.

Shah, J., Higgins, E. T., & Friedman, R. (1998). Performance incentives and means: How regulatory focus influences goal attainment. *Journal of Personality and Social Psychology, 74*, 285–293. doi:10.1037/0022-3514.74.2.285.

Silvia, P. (2008). Interest: The curious emotion. *Current Directions in Psychological Science, 17*, 57–60. doi:10.1111/j.1467-8721.2008.00548.x.

Smith, J. L., & Ruiz, J. M. (2007). Interpersonal orientation in context: Correlates and effects of interpersonal complementarity on subjective and cardiovascular experiences. *Journal of Personality, 75*, 679–708. doi:10.1111/j.1467-6494.2007.00453.x.

Smith, J. L., Sansone, C., & White, P. H. (2007). The stereotyped task engagement process: The role of interest and achievement motivation. *Journal of Educational Psychology, 99*, 99–114. doi:10.1037/0022-0663.99.1.99.

Thoman, D. B., Sansone, C., & Pasupathi, M. (2007). Talking about interest: Exploring the role of social interaction for regulating motivation and the interest experience. *Journal of Happiness Studies, 8*, 335–370. doi:10.1007/s10902-006-9016-3.

Wegener, D., & Petty, R. (1994). Mood management across affective states: The hedonic contingency hypothesis. *Journal of Personality and Social Psychology, 66*, 1034–1048. doi:10.1037/0022-3514.66.6.1034.

Wegener, D., Petty, R., & Smith, S. (1995). Positive mood can increase or decrease message scrutiny: The hedonic contingency view of mood and message processing. *Journal of Personality and Social Psychology, 69*, 5–15. doi:10.1037/0022-3514.69.1.5.

Werner, C., & Makela, E. (1998). Motivations and behaviors that support recycling. *Journal of Environmental Psychology, 18*, 373–386. doi:10.1006/jevp.1998.0114.

Wolters, C. (1999). The relation between high school students' motivational regulation and their use of learning strategies, effort, and classroom performance. *Learning and Individual Differences, 11*, 281–299. doi:10.1016/S1041-6080(99)80004-1.