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ARTICLE *in* JOURNAL OF PERSONALITY AND SOCIAL PSYCHOLOGY · NOVEMBER 2002

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Motivation by Positive or Negative Role Models: Regulatory Focus Determines Who Will Best Inspire Us

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In 3 studies, the authors demonstrated that individuals are motivated by role models who encourage strategies that fit their regulatory concerns: Promotion-focused individuals, who favor a strategy of pursuing desirable outcomes, are most inspired by positive role models, who highlight strategies for achieving success; prevention-focused individuals, who favor a strategy of avoiding undesirable outcomes, are most motivated by negative role models, who highlight strategies for avoiding failure. In Studies 1 and 2, the authors primed promotion and prevention goals and then examined the impact of role models on motivation. Participants' academic motivation was increased by goal-congruent role models but decreased by goal-incongruent role models. In Study 3, participants were more likely to generate real-life role models that matched their chronic goals.

Positive role models, individuals who have achieved outstanding success, are widely expected to inspire others to pursue similar excellence. Accordingly, the accomplishments of star athletes, musicians, and award-winning scientists are often showcased in an attempt to enhance people's goals and aspirations. People are also assumed to be motivated by negative role models, individuals who have experienced misfortune; public service announcements highlight examples of AIDS patients, of smokers who have suffered lung cancer, and of motorists who have been injured as a result of drinking and driving, in the hope of motivating people to take the steps necessary to avoid similarly unpleasant outcomes. Indeed, positive role models can inspire one by illustrating an ideal, desired self, highlighting possible achievements that one can strive for, and demonstrating the route for achieving them (Lockwood & Kunda, 1997, 1999); negative role models can inspire one by illustrating a feared, to-be-avoided self, pointing to possible future disasters, and highlighting mistakes that must be avoided so as to prevent them (Lockwood, 2002). At different times, people may be differentially receptive to positive and negative role models (cf. Stapel & Koomen, 2001).

We propose that the inspirational impact of positive and negative role models may depend on the goals people are striving to achieve when they encounter these models. Goals can take the form of pursuing desirable outcomes or avoiding undesirable outcomes (e.g., Carver & Scheier, 1998; Elliot & Harackiewicz, 1996; Higgins, 1997). People may be especially likely to be inspired by positive role models, who represent a desired self, when they are bent on pursuing success, and by negative role models, who represent a feared self, when they are intent on avoiding failure.

This prediction is based on a large body of theory and research by Higgins and his colleagues (for reviews, see Higgins, 1997, 1998), who argue that individuals can pursue two different kinds of regulatory goals: promotion and prevention. Promotion goals entail striving to achieve an ideal self, and so produce a sensitivity to the presence or absence of positive outcomes; strategies for achieving promotion goals involve the eager pursuit of gains or successes. In contrast, prevention goals entail striving to avoid disasters, and so produce a sensitivity to the presence or absence of negative outcomes; strategies for achieving prevention goals involve the vigilant avoidance of losses or failures.

When people are driven by promotion goals, they scrutinize their social world for information that bears on the pursuit of success. They are especially likely to notice and recall information relating to the pursuit of success by others (Higgins & Tykocinski, 1992). They are also especially well-attuned to emotions relating to the successful or unsuccessful pursuit of positive outcomes (i.e., happiness and dejection; Higgins, Shah, & Friedman, 1997). In addition, they tend to focus on interpersonal strategies geared toward promoting desired outcomes (Higgins, Roney, Crowe, & Hymes, 1994). They also tend to show especially high motivation and persistence on tasks that are framed in terms of promotion (Shah, Higgins, & Friedman, 1998). It stands to reason that people in this state of mind will also be especially susceptible to positive role models, who exemplify positive outcomes to be pursued. Positive role models inspire others by encouraging the pursuit of success, a promotion strategy.

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This research was supported by Social Sciences and Humanities Research Council of Canada Grant 410-99-1376 awarded to Penelope Lockwood and Grant 410-99-0993 awarded to Ziva Kunda, by Natural Sciences and Engineering Research Council of Canada (NSERC) Grant 13843-98 awarded to Ziva Kunda, and by an NSERC doctoral fellowship awarded to Christian H. Jordan. We are grateful to Niki Capogiannis, Keren Fyman, Natalie Foong, Linor Gerchak, and Raymond Mar for their assistance with data collection. We thank Michael Ross, Anne Wilson, and Joanne Wood for their comments on an earlier version of this article.

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In contrast, when people are driven by prevention goals, they focus on information relevant to the avoidance of failure. They are especially likely to notice and recall information relating to the avoidance of failure by others (Higgins & Tykocinski, 1992). They are also particularly well-attuned to emotions relating to the successful or unsuccessful avoidance of negative outcomes (i.e., quiescence and anxiety; Higgins et al., 1997). In addition, they tend to focus on interpersonal strategies geared toward preventing negative outcomes (Higgins et al., 1994). They also tend to show high motivation and persistence on tasks that are framed in terms of prevention (Shah et al., 1998). We would therefore expect that people in this state of mind will likely be especially susceptible to negative role models, who illustrate negative outcomes to be avoided. Negative role models motivate others by encouraging the avoidance of failure, a prevention strategy.

In sum, people are especially sensitive to information that fits their dominant regulatory focus—promotion or prevention—and they show enhanced motivation and performance when they are encouraged to pursue strategies that match their regulatory concerns (Higgins, 2000). It therefore seems reasonable that role models will be most effective when they foster strategies that fit one's regulatory focus. Positive role models highlight promotion strategies, and so are most likely to motivate individuals with promotion goals; negative role models highlight prevention strategies, and so are most likely to motivate individuals with prevention goals.

This notion gains support from evidence suggesting that positive role models encourage the adoption of the kinds of strategies favored by people pursuing promotion goals, whereas negative role models highlight the kinds of strategies favored by people pursuing prevention goals. Positive role models boost motivation by providing a guide to achieving success; they personify plausible desired selves that people can realistically aspire to become and illustrate the means for achieving these desired selves (cf. Buunk, Collins, Taylor, Van Yperen, & Dakof, 1990; Collins, 1996; Taylor & Lobel, 1989; Taylor, Waymont, & Carillo, 1996; Wood, 1989). Indeed, successful others prompt inspiration only when their achievements seem attainable (Aspinwall, 1997; Blanton, 2001; Lockwood & Kunda, 1997, 2000). For example, in one study, an outstanding fourth-year student inspired first-year students, who believed that they could attain comparable success in due time, but did not inspire fourth-year students, who recognized that comparable success was no longer attainable for them (Lockwood & Kunda, 1997). Similarly, in another study, participants showed improved performance after observing a moderately superior model, whose achievements likely seemed attainable, but not after observing a highly superior model whose extraordinary achievements likely seemed unattainable (Seta, 1982). Indeed, when an individual's ability to imagine a self as successful as the other is constrained, motivation is undermined (Lockwood & Kunda, 1999). It therefore seems likely that promotion-focused individuals, who are especially likely to notice, recall, and be motivated by information that bears on the pursuit of success, may be especially open to inspiration by positive role models.

Whereas positive role models boost motivation by illustrating key strategies for achieving success, negative role models most likely boost motivation by illustrating key strategies for avoiding failure; they personify unwanted, feared selves and highlight ways of forestalling such selves. Some support for this possibility comes

from the finding that individuals report that social comparisons to worse-off others in domains such as marital satisfaction and health can be distressing, in that the worse-off other serves as a reminder of a negative future that may lie ahead (e.g., Buunk et al., 1990; Wood & VanderZee, 1997). Such a focus on feared selves may lead to an increase in the motivation to avoid them (Markus & Nurius, 1986). Indeed, research on counterfactual thinking suggests that reflecting on possible feared selves by imagining a narrowly avoided misfortune can lead to an increase in the motivation to avoid such misfortunes in the future and can increase intentions to pursue appropriate avoidance strategies (McMullen & Markman, 2000). The most direct evidence that negative role models increase motivation by highlighting feared selves and boosting strategies for avoiding them comes from the finding that students were especially likely to show increased motivation after learning about a failed former student if they were asked to imagine becoming like that negative model; such activation of feared selves increased their intentions to pursue strategies for avoiding failure (Lockwood, 2002). In light of these findings, it seems likely that prevention-focused individuals, who are especially likely to notice, recall, and be motivated by information that bears on the avoidance of negative outcomes, will be especially likely to be motivated by negative role models.

In sum, people may be especially motivated by models who highlight strategies that are congruent with their regulatory concerns and are useful for the attainment of their goals. In contrast, people may draw little motivation from models that highlight strategies that are incongruent with their regulatory concerns, and their motivation may even be undercut by such models. When a role model highlights strategies that are incongruent with one's regulatory concerns, one may be unlikely to seize upon and adopt these strategies: People focused on promotion may be unreceptive to the prevention strategies highlighted by a negative role model, and people focused on prevention may be unreceptive to the promotion strategies highlighted by a positive role model. Such incongruent models provide little information about the strategies that people are predisposed to pursue, and highlight other strategies that people are not ready to take on. Moreover, a role model that highlights strategies that are incongruent with one's regulatory concerns may disrupt one's dominant strategies, and thereby undermine motivation. It has been shown that when people's preferred achievement strategies are disrupted, their achievement motivation is undercut; the performance of defensive pessimists, who are motivated to avoid failure, is undermined when they are told that they might succeed (Norem & Cantor, 1986). By the same token, for prevention-focused individuals, who are bent on avoiding failure, a suggestion that they might succeed may undermine their preferred avoidance strategy without providing them with an alternative strategy that they are prepared to pursue. Similarly, for promotion-focused individuals, who are bent on achieving success, the notion that they may fail may undermine their success-pursuing strategies without providing alternatives that they find useful. Thus, individuals' motivation is unlikely to be enhanced by role models who highlight strategies that are incongruent with their regulatory concerns, and may even be undercut by such models.

Although there are stable individual differences in dominant regulatory focus, one's current focus also depends on situational factors (e.g., Higgins, 1998; Higgins & Silberman, 1998; Shah & Higgins, 2001). It is possible to induce promotion or prevention

goals by framing possible rewards or penalties for performance either in terms of benefits to be gained, priming promotion, or in terms of losses to be avoided, priming prevention (e.g., Brendl, Higgins, & Lemm, 1995; Crowe & Higgins, 1997; Förster, Higgins, & Idson, 1998; Higgins et al., 1997; Roney, Higgins, & Shah, 1995). Regulatory focus can also be primed by having participants describe personal experiences relevant either to promotion or to prevention (Higgins et al., 1994). Dominant promotion and prevention goals have similar consequences regardless of whether they are chronically salient or have been made salient by situational demands (Higgins, 1997, 1998).

In this article, we examine the role that promotion and prevention goals play in determining the impact of positive and negative role models on motivation. Studies 1 and 2 examined the impact of situationally induced goals. In both studies, we first primed promotion or prevention goals, using two different techniques, and then exposed participants to a positive or negative role model. For both, we expected that participants primed with promotion goals would be most motivated by positive role models whereas participants primed with prevention goals would be most motivated by negative role models. In Study 3, we examined the impact of individuals' chronic regulatory focus on the types of role models that they recalled when asked to describe someone who had inspired them. We expected that promotion-focused individuals would be especially likely to recall positive models whereas prevention-focused individuals would be especially likely to recall negative models.

Study 1: Primed Academic Promotion and Prevention Strategies Determine the Impact of Role Models

We began by examining whether inducing promotion or prevention goals would influence the impact of positive and negative role models on motivation. Previous research suggests that these goals can be primed by having participants describe personal experiences relevant to promotion or prevention and explain how these have changed over time (Higgins et al., 1994). In Study 1, we used a similar technique, also asking participants to describe goal-relevant experiences from their own lives. We focused specifically on academic goals: Participants were asked to describe the strategies they would use in either successfully promoting a positive academic outcome or successfully preventing a negative academic outcome.

After undergoing the goal-priming manipulation, participants read a description of either a positive or a negative role model. The positive model had excelled in his or her studies and had achieved a plum position after leaving university, whereas the negative model had experienced increasing difficulties over the course of his or her university studies and ended up working in an undesirable fast food job. The model in both cases was at a more temporally advanced stage than participants, enabling them to believe that they could become like this individual in the future, and was described as a graduate from participants' own academic program to ensure that they would perceive the model as relevant (Lockwood & Kunda, 1997).

We expected that participants would be most strongly motivated by a role model who encouraged strategies that were congruent with their primed goals; that is, promotion-primed participants would be most motivated by the positive model, and prevention-

primed participants would be most motivated by the negative. We also expected that participants would not be motivated by the role models who encouraged strategies that were incongruent with their primed goals, and would likely even show a decline in motivation in reaction to such incongruent models.

Method

Participants

Participants were 33 male and 70 female students at the University of Toronto, Ontario, Canada, who participated for course credit. Participants' gender had no effects on any of the variables and is therefore not discussed further.

Three participants were excluded because they had changed their academic major since they were recruited for the study, and so were exposed to a nonrelevant role model (we matched the targets with participants on academic major because previous research found that individuals were not influenced by a model in a domain they considered to be irrelevant; Lockwood & Kunda, 1997). Five participants were excluded because they disbelieved the cover story. One additional participant was excluded because she failed to complete the questionnaire. Altogether, 94 participants were included in the analyses.

Procedure

Goal priming. Participants were invited to take part in a study on "Life Transitions." When they arrived at the lab, the experimenter asked them if they would fill out a brief pilot questionnaire on academic strategies to help him with his undergraduate thesis. All participants agreed. In fact, this questionnaire served to prime regulatory goals. In the promotion-prime condition, participants were asked to "think about a positive academic outcome that you might want to achieve" and to describe the strategies they could use "to successfully promote this outcome." In the prevention-prime condition, participants were asked to "think about a negative academic outcome that you might want to avoid" and to describe the strategies they could use "to successfully prevent this outcome."

Next, participants were informed that the Department of Psychology had been gathering data on students' experiences during and after university to identify factors related to success and failure. Participants were told that researchers were collecting data about students' impressions of how other individuals were coping with life transitions and about their own academic experiences and adjustment.

Role model descriptions. Participants then read a self-description, ostensibly written by a previous participant in the study, a recent graduate from their own academic program. The description portrayed either a positive or negative role model. The positive role model described positive academic experiences, and finished the self-description by observing, "I just found out I won a major scholarship [for postgraduate study]. Two major companies have also contacted me about great positions . . . Right now, I'm extremely happy with my life. I feel like I know where I'm going, and what I want. I never imagined that my future could be so amazing!" The negative role model described experiencing academic difficulties, and finished the self-description by observing, "I haven't been able to find a good job. I have spent a lot of time working in fast food places, and doing some pretty boring stuff . . . Right now I'm pretty down about things. I'm not sure where I'm going to go from here—I can't afford to go back to school, but I also can't find a good job. This is not where I expected to be at this point in my life!" For both role model conditions, the description was individually tailored so that each participant read about a same-gender target who had just graduated from the same academic major as themselves. For example, Chemistry participants read about a recent Chemistry graduate, and Sociology participants read about a recent Sociology graduate.

Role model adjustment ratings. After reading the self-description, participants were asked to rate the target on five items relating to the role model's adjustment (e.g., "How successful do you think this person is?"; "How well-adjusted do you think this person is?"). Ratings were made on a 9-point scale with endpoints ranging from 1 (*not at all*) to 9 (*very*).

Motivation ratings. Next, participants went on to Part 2 of the study, in which they were asked to provide information about themselves. Participants rated themselves on a set of 14 items (see Appendix A) designed to tap their academic motivation (e.g., "I plan to study harder for tests and exams"; "I plan to keep up with reading assignments"; "I plan to procrastinate less").¹ Ratings were made on an 11-point scale with endpoints labeled 1 (*not at all true*) and 11 (*very true*).

A no-target control condition was also included, in which participants rated themselves on the motivation items without first reading about a target. In sum, the study had a 2 (primed goal: promotion or prevention) \times 3 (model type: positive, negative, or none) between-participants design.

Results and Discussion

Role Model Adjustment Ratings

The five adjustment items were combined into a single index of model's adjustment (Cronbach's $\alpha = .98$). A 2 (primed goal) \times 2 (model type) analysis of variance (ANOVA) revealed a significant main effect of model type.² The positive model was viewed as much better adjusted ($M = 8.19$) than the negative model ($M = 3.14$), $F(1, 50) = 339.02$, $p < .0001$. Neither the main effect of prime type nor the interaction was significant (both $ps > .50$).

Motivation Ratings

Motivation items were combined into a single index of academic motivation (Cronbach's $\alpha = .80$). As may be seen in Figure 1, the impact of the role model depended on the goal with which participants had been primed. Participants exposed to a goal-congruent role model were more motivated than participants exposed to no role model, whereas participants exposed to a goal-incongruent role model were less motivated than those exposed to no role model. A two-way ANOVA revealed this Primed Goal \times Model Type interaction to be significant, $F(2, 88) = 4.37$, $p = .02$. Neither main effect was significant (both $Fs < 1$).

We had predicted that individuals would be motivated by role models who fostered strategies congruent with their goals, but discouraged by incongruent role models. To provide more precise tests of these predictions, we conducted a set of orthogonal contrasts. First, we compared the congruent model conditions with the control and incongruent model conditions; we assigned weights of +1 to each of the congruent role model conditions (promotion-primed participants exposed to a positive role model and prevention-primed participants exposed to a negative role model), and weights of $-.5$ to each of the two control conditions and to each of the incongruent role model conditions (promotion-primed participants exposed to a negative model, and prevention-primed participants exposed to a positive model). This contrast was highly significant, $F(1, 88) = 8.00$, $p = .006$, indicating that, as expected, exposure to congruent role models boosted motivation. This pattern held within each of the primed goal conditions. Simple-effects tests revealed that, within the promotion-primed condition, participants exposed to a positive role model (+1) were marginally more motivated than were those exposed to a negative model ($-.5$) and

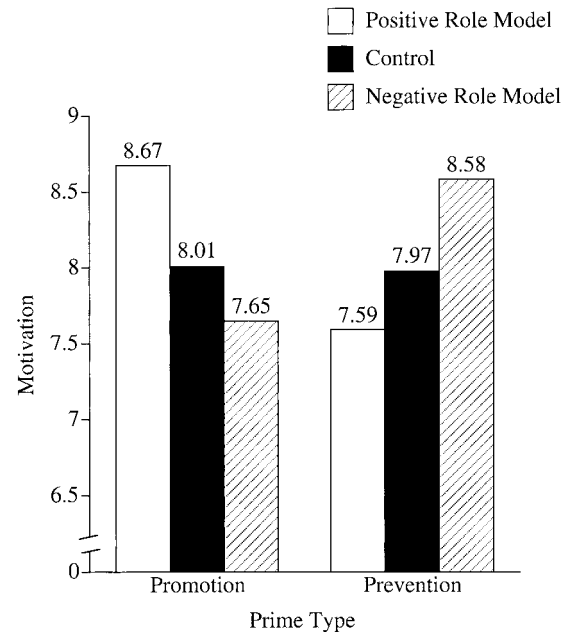


Figure 1. Motivation ratings of promotion- and prevention-primed participants after exposure to a positive role model, negative role model, or no target (Study 1).

those exposed to no role model ($-.5$), $F(1, 88) = 3.68$, $p = .06$. Within the prevention-primed condition, participants exposed to a negative role model (+1) were more motivated than were those exposed to a positive model ($-.5$) and those exposed to no role model ($-.5$), $F(1, 88) = 4.41$, $p = .04$.

We also compared the incongruent model conditions with controls; we assigned weights of $+.5$ to each of the two incongruent role model conditions and weights of $-.5$ to each of the two control conditions. As expected, participants in the incongruent conditions showed lower motivation than controls, as may be seen in Figure 1, but this contrast was not significant, $F(1, 88) = 1.34$, $p = .25$.

In sum, participants' motivation was boosted only by the role model who encouraged the adoption of strategies that matched their own goals: Promotion-primed participants were motivated only by positive role models, and prevention-primed participants were motivated only by negative role models. As expected, incongruent role models did not boost motivation. We had also suggested that incongruent models might diminish motivation. Al-

¹ Eight of the motivation items involved engaging in activities (e.g., "I plan to put more time into my schoolwork") and six involved abstaining from activities (e.g., "I plan to procrastinate less"). We had initially considered the possibility that participants in the two priming conditions might respond differently to the two types of items (engaging vs. abstaining). However, all items hung together as a highly coherent scale (Cronbach's $\alpha = .80$). The engaging and abstaining items did not load onto separate factors in a factor analysis, and did not behave differently in any of our analyses. Accordingly, we collapsed across all items to create a single index of motivation.

² Control participants were not exposed to a role model and so are not included in this analysis.

though this effect was not significant, results were in the predicted direction. It is possible that the expected decline of motivation in reaction to incongruent models in this study was minimized because our priming manipulation may have protected participants from experiencing this negative effect. Participants were asked to think about how they would successfully pursue a promotion or prevention strategy; this focus on success may have served to counteract any discouragement prompted by the incompatible models. Therefore, we examined the impact of incongruent models again in Study 2, but this time we used a priming technique that did not directly focus participants on their strategies for pursuing academic success.

Study 2: Primed Promotion and Prevention Goals Determine the Impact of Role Models

In Study 2, we used a more subtle means of priming promotion and prevention goals. We aimed to replicate the finding that participants are motivated only by models who promote strategies that are congruent with their primed goals. We also wished to test once again our prediction that goal-incongruent role models can provoke discouragement. Unlike in Study 1, the priming manipulation did not involve a focus on success and therefore was not expected to undercut the discouraging potential of incongruent role models.

In devising our manipulation, we relied on previous research suggesting that goals can be activated by priming goal-related words, which triggers the habitual means of satisfying that goal without intention or awareness (Bargh & Chartrand, 1999). For example, it has been shown that impression-formation goals can be activated by exposing individuals to words relevant to that goal, leading to a corresponding improvement in performance on an impression-formation task (Chartrand & Bargh, 1996). Similarly, participants exposed to words related to achievement goals showed a corresponding improvement in their performance on a subsequent anagram-solving task (Bargh & Chartrand, 1999). In Study 2, we explored the possibility that promotion and prevention goals could also be activated in this way.

Goals were primed through a word-categorization task that included words related either to promotion or to prevention (cf. Wilson & Ross, 2000). Participants then read about a positive role model, a negative role model, or no role model. We expected that goal-congruent role models would be inspiring, but goal-incongruent role models would be discouraging.

Method

Participants

Participants were 24 male and 73 female students enrolled in an introductory psychology course at the University of Toronto. Participants' gender had no impact on any of the variables, and therefore is not discussed further.

Six participants were excluded from the analyses because their first language was not English, and they consequently had difficulties completing the priming task. Five participants were excluded because they had changed their academic majors and thus read about a role model in a nonrelevant domain. One participant was excluded because he failed to follow the priming instructions. Altogether, 85 participants were included in the analyses.

Procedure

As in Study 1, participants were invited to take part in a study on "Life Transitions." The experimenter first asked participants if they would complete a brief pilot questionnaire on word associations to help out a Cognitive Psychology student. All participants agreed. This bogus pilot questionnaire included a goal-priming manipulation based on a procedure developed by Wilson and Ross (2000).

The ostensible purpose of the pilot study was to test materials to be used in an experiment assessing word associations. Participants were given a list of 36 words, and were asked to sort them into three categories. Participants devised their own categories; labels for the three groups were not provided. Twenty-four words were related to cooking and to children; the remaining 12 words were related either to promotion or to prevention.³

Participants then read about a positive or a negative role model, and provided ratings of target adjustment and of their own motivation. These materials and measures were the same as those used in Study 1. No-target control participants rated themselves on the motivation items without first reading about a target.

Results and Discussion

Ratings of Role Model's Adjustment

Target adjustment ratings were combined into a single index (Cronbach's $\alpha = .98$). A 2×2 ANOVA revealed a significant main effect of role model type, $F(1, 50) = 204.55, p < .0001$. The positive role model was rated as much better adjusted ($M = 8.35$) than the negative role model ($M = 3.45$). Neither the main effect of prime type nor the interaction was significant (both $ps > .25$).

Motivation Rating

Motivation items were combined into a single index of motivation (Cronbach's $\alpha = .79$). As shown in Figure 2, the impact of the role model depended on the goal with which participants had been primed. Participants exposed to a goal-congruent role model showed greater motivation than participants exposed to no role model, whereas participants exposed to a goal-incongruent role model showed lower motivation than those exposed to no role model. A two-way ANOVA revealed this Primed Goal \times Model Type interaction to be significant, $F(2, 79) = 7.29, p = .001$. Neither main effect was significant (both $F_s < 1$).

Using the same contrast weights as in Study 1, we conducted a set of orthogonal contrasts to test the prediction that participants would be motivated by congruent but discouraged by incongruent role models. We first compared the congruent model groups (promotion-primed participants exposed to a positive role model and prevention-primed participants exposed to a negative role model) with the incongruent model groups (promotion-primed participants exposed to a negative role model and prevention-primed participants exposed to a positive role model) and the control groups; this contrast was highly significant, $F(1, 79) = 11.19, p = .001$, indicating that, as expected, exposure to congruent role models boosted motivation. Simple-effects tests revealed that, within the primed-promotion condition, participants

³ The 12 promotion words were: *strive, seek, pursue, gain, win, succeed, ambition, achieve, thrive, triumph, accomplish, aspiration*. The 12 prevention words were: *avoid, prevent, avert, rejection, mistake, fiasco, flounder, flunk, defeat, disappointing, setback, fail*.

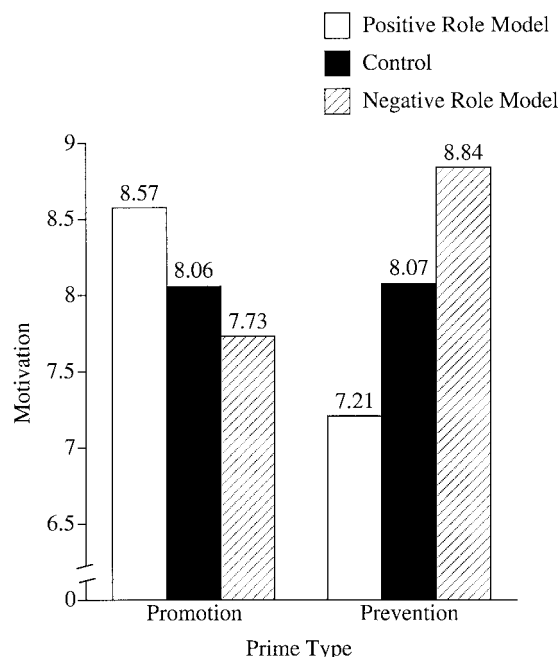


Figure 2. Motivation ratings of promotion- and prevention-primed participants after exposure to a positive role model, negative role model, or no target (Study 2).

exposed to a positive role model (+1) were marginally more motivated than were those exposed to a negative model (-.5) and those exposed to no role model (-.5), $F(1, 79) = 2.79, p = .10$. Within the primed-prevention condition, participants exposed to a negative role model (+1) were more motivated than were those exposed to a positive model (-.5) and those exposed to no role model (-.5), $F(1, 79) = 9.48, p = .003$.

We then compared the incongruent role model groups with the control groups. This contrast was significant, $F(1, 79) = 3.82, p = .05$, indicating that, unlike in Study 1, this time exposure to incongruent role models reduced motivation. Simple-effects tests revealed that, within the primed-promotion condition, participants exposed to a negative role model (+1) showed marginally lower motivation than did those exposed to a positive model (-.5) and those exposed to no role model (-.5), $F(1, 79) = 2.54, p = .11$. Within the primed-prevention condition, participants exposed to a positive role model (+1) showed lower motivation than did those exposed to a negative model (-.5) and those exposed to no role model (-.5), $F(1, 79) = 9.49, p = .003$.

As in Study 1, participants who were exposed to the role models that highlighted strategies congruent with their primed goals experienced enhanced motivation. They intended to work harder to pursue their goals. In contrast, participants exposed to models that promoted strategies incongruent with their primed goals experienced reduced motivation; they intended to work less hard. This suggests that the failure to obtain a comparable reduction in Study 1 occurred because the priming manipulation in that study also primed success. In Study 2, the priming did not focus participants on their own success; under these circumstances, goal-incongruent role models did undermine motivation.

Taken together, Studies 1 and 2 suggest that promotion and prevention goals can determine which role models will increase

one's motivation, and which will reduce it. Individuals who had been led to adopt promotion goals were motivated only by a positive role model, who highlighted strategies that could be used to promote success. In contrast, individuals who had been led to adopt prevention goals were motivated only by a negative role model, who highlighted strategies that could be used to prevent failure. Whereas goal-congruent models can be inspirational, incongruent models can be discouraging; such models provoked a decrease in motivation.

Study 3: Chronic Regulatory Focus Determines Generation of Real-Life Role Models

Although promotion and prevention goals can be temporarily enhanced or reduced, there are also ongoing individual differences in the extent to which individuals are promotion or prevention oriented (Higgins, 1997, 1998). If transitory goals can determine whether one will be better motivated by positive or negative role models, then people who are chronically preoccupied with promotion or prevention goals may be chronically on the lookout for the kinds of role models who would best motivate them—positive role models if they are driven by promotion goals and negative role models if they are driven by prevention goals. If so, when asked for examples of real-life positive or negative role models who have motivated them, people should be especially likely to provide examples that match their dominant goal. We explored this possibility in Study 3. By showing that chronically accessible promotion and prevention goals affect the impact of role models on motivation in the same manner as do temporarily induced goals, we aimed to provide further support for our argument that goal-congruent role models are especially motivating.

We created a new measure of regulatory focus that assesses chronic promotion and prevention goals directly. Respondents indicate the extent to which they endorse items relevant to promotion goals (e.g., "I frequently imagine how I will achieve my hopes and aspirations"; "I often think about the person I would ideally like to be in the future") and items relevant to prevention goals (e.g., "I frequently think about how I can prevent failures in my life"; "I am anxious that I will fall short of my responsibilities and obligations"). These items were designed to tap into the same theoretical constructs used by Higgins and his colleagues (e.g., Förster et al., 1998; Higgins et al., 1997; Shah et al., 1998), who have measured promotion and prevention focus by calculating differences in the accessibility of ideal and ought self-guides. Accessibility of ideal and ought self-guides is assumed to reflect the strength of promotion and prevention concerns because individuals with promotion goals are concerned with achieving their hopes, wishes, and aspirations, and are thus likely to have accessible ideal self-guides, whereas individuals with prevention goals are concerned with safety, protection, and responsibility, and are thus likely to have accessible ought self-guides. Higgins and his colleagues have also measured regulatory focus by examining individuals' subjective experiences of success in obtaining past prevention and promotion goals (Higgins et al., 2001). Our measure of promotion and prevention was designed to tap into the theoretical underpinnings of promotion and prevention concerns directly, providing a concise means of assessing them.

We asked participants to complete the regulatory focus measure, and then, after they had completed a series of unrelated measures,

we asked them to generate an example of a person whose success or failure had motivated them in the past. We expected that individuals with a dominant promotion focus would be especially likely to generate examples of successful, positive role models, whereas individuals with a stronger prevention focus would be especially likely to generate examples of failed, negative role models.

Method

Participants

Seven hundred ninety-nine University of Waterloo, Ontario, Canada, undergraduates enrolled in introductory psychology during two different academic terms completed a larger questionnaire that included our measures in exchange for partial course credit. Participants' gender showed no effects in any of our analyses, and so is not discussed further. Ninety-five participants were not included in our analyses because they failed to provide appropriate examples of positive or negative role models, leaving a total of 704 participants (213 male, 490 female, one gender unspecified).⁴

Regulatory Focus Questionnaire

Participants were given 1 week to complete and return the questionnaire that included our measures. Our measure of regulatory focus, which consists of two subscales designed to measure promotion and prevention goals (see Appendix B), always appeared first. Both subscales were reliable (promotion $\alpha = .81$, prevention $\alpha = .75$), and were modestly correlated with one another ($r = .17, p < .01$). All items were rated on a 9-point scale with endpoints labeled 1 (*not at all true of me*) and 9 (*very true of me*).

Recalled-Role-Model Measure

Following a series of unrelated scales, participants were asked to write an open-ended description of a time when they were motivated in a domain that was important to them by either the success or failure of another person.

You may have found another person's failure motivating because when you found out that this person had performed really poorly at an activity that you cared about, this made you worry that you too might do really poorly at that activity, and motivated you to try harder to avoid failing yourself. Or you may have found another person's success motivating because when you found out that this person had excelled at an activity that you cared about, this made you hopeful that you too could do really well at that activity, and motivated you to work harder to achieve excellence yourself.

They were then asked to describe such an experience.

The order in which success and failure examples were described in the instructions was counterbalanced across participants and showed no effects in our analyses.

Results and Discussion

The examples generated by participants in response to the recalled-role-model measure were coded by a judge blind to respondents' regulatory focus for whether they described a case of motivation by another's success (i.e., a positive role model) or motivation by another's failure (i.e., a negative role model). An independent judge, also blind to participants' regulatory focus, completed the same coding for a subset of responses ($n = 207$) and showed high agreement (Cohen's $\kappa = .95$).

Participants provided vivid examples of being motivated by the success or failure of another person. Most of the examples (47.8%) were in the domain of academic achievement, but there were also examples in other domains such as sports, arts, and social behavior.

To illustrate, some examples of inspiration by a positive role model were as follows:

In one of my classes I did poorly on a midterm, whereas a friend in the same class did quite well. After talking with this friend about their study habits, I was motivated to change my own habits for the better—modeling them after hers. This has helped me to perform better on evaluations in that class.

My best friend from camp excelled at swimming. She can do 80 lengths in 35 minutes. Her increase in ability is due to her strength and determination. This has motivated me to want to improve my endurance and try to obtain the same level as her.

A friend of mine recently got a record deal in the music business. Her success influenced me to continue on in singing with hopes that one day I may become a successful singer. And plus, I compete at the regional level and look to her as inspiration whenever I sing.

Some examples of being motivated by a negative role model were as follows:

I am motivated more by others' failures. Two friends on my floor from first year failed out of engineering. I was motivated to work really hard so that the same wouldn't happen to me.

Last year, one of my best friends started her first year at college. She ended up missing a lot of classes and "partied" so much that she failed and was not able to come back for her 2nd semester and still has not gone back. Although it was an unfortunate experience for her, this has motivated me to stay focused here at university and to take priority of my academic success rather than social situations.

I feel motivated to be more patient with people because my dad is very quick to be angry, and I do not want to turn out like him.

For our measure of regulatory focus, we created a measure of promotion goal strength and a measure of prevention goal strength by averaging the items belonging to each of these subscales. On average, promotion goal strength ($M = 6.90$) was greater than prevention goal strength ($M = 5.31$), $t(700) = 26.97, p < .001$. Perhaps for this reason, most participants (73%) generated positive role models rather than negative ones.

We expected that participants' likelihood of recalling a positive role model (rather than a negative one) would increase with the strength of their promotion goals, but decrease with the strength of their prevention goals. To test this prediction, we conducted a logistic regression analysis using type of role model as the depen-

⁴ Responses were considered inappropriate if respondents indicated that they were motivated by the target's verbal encouragement rather than by the target's performance, if they indicated that they were never motivated by another's success or failure, if it was unclear whether the target's performance was a success or failure, if the target's performance directly affected the respondent's outcome (as in a group project or team sport), or if the respondent specified his or her own past performance as the source of motivation. The regulatory focus scores of participants who were eliminated ($M = 1.65$) did not significantly differ from the scores of those included in the analyses ($M = 1.60$), $t(797) = 0.31, ns$.

dent variable (dummy coded; 0 = negative role model, 1 = positive role model), and scores on the promotion and prevention goals subscales as the predictors, after first standardizing scores on the promotion and prevention subscales. This analysis revealed that both promotion and prevention goal strength had the predicted effect on the type of role model participants recalled: Participants with stronger promotion goals were more likely to recall positive role models ($\beta = .29$), $t(698) = 3.31$, $p = .001$, whereas participants with stronger prevention goals were less likely to recall positive role models, that is, they were more likely to recall negative ones ($\beta = -.28$), $t(698) = 3.15$, $p = .002$.

We were also interested in examining the impact of the relative strength of each participant's promotion and prevention goals, because regardless of the strength of each of these goals, their relative strength may determine which regulatory concerns will gain salience and drive behavior. We expected that the greater the relative strength of promotion goals (over prevention goals), the more likely the participant would be to recall a positive role model (rather than a negative one). To test this prediction, we created a measure of dominant regulatory focus by subtracting scores on the prevention goal subscale from scores on the promotion goal subscale. Higher scores on this measure reflect relatively greater promotion than prevention focus. It should be noted that our reliance on this difference-score measure is justified by the analyses reported above, which revealed that our data meet the criteria required to satisfy the model underlying a difference score analysis (see Edwards, 1994, 1995): Promotion and prevention goal strengths had independent, equal but opposite effects on the tendency to recall positive role models.

We regressed the type of role model recalled on this measure of dominant regulatory focus, after first standardizing scores on the predictor. This analysis revealed that, as expected, participants with relatively stronger promotion goals were more likely to recall positive role models ($\beta = .37$), $t(699) = 4.08$, $p < .001$. To illustrate this effect, we classified participants as either high or low in the relative strength of their promotion goals, on the basis of a median split on the measure of dominant regulatory focus (the median was 1.56). The percentage of participants who recalled positive role models was greater among those high in the relative strength of their promotion goals (78.6%) than among those low in the relative strength of their promotion goals (68.1%).

It is interesting that even among participants low in the relative strength of their promotion goals, the majority recalled positive rather than negative role models. This may be because even for these participants, the strength of promotion goals was, on average, greater than the strength of prevention goals; their average difference score was positive ($M = 0.39$). In the absence of temporarily primed-prevention goals, the majority of individuals in student populations may be predominantly promotion focused; we would therefore expect that most of these individuals will typically be more motivated by positive than by negative models. This is consistent with earlier research suggesting that individuals can be inspired spontaneously by positive role models (Lockwood & Kunda, 1997), but are motivated by negative role models only if they imagine a future self like the worse-off other (Lockwood, 2002).

Together, these results suggest that the kinds of role models that one selects to guide one in daily life may be determined by the strength of one's chronic promotion and prevention goals. It is also

possible, however, that these results reflect differences in the accessibility of different types of role models rather than differences in the types of models one chooses; for example, promotion-focused individuals may use both positive and negative role models to guide their behavior, but may recall the goal-congruent positive examples more readily. This seems unlikely, given that participants in Study 2 were discouraged by goal-incongruent models. In any case, the notion that congruent models are more memorable is also consistent with our view; it implies that congruent models may be especially likely to be recalled and to influence motivation over the long run.

The results obtained with the new measure of chronic promotion and prevention goals in Study 3 are conceptually similar to those obtained in Studies 1 and 2, in which promotion and prevention goals were primed: In all three studies, goal-congruent role models were associated with enhanced motivation, lending convergent validity to our claim that the motivational impact of role models can depend on their fit with one's regulatory focus. These findings also bolster support for the validity of our new measure of goal strength. This easily-administered scale may provide a useful alternative to more time-consuming reaction-time measures of regulatory focus.

General Discussion

The impact of role models on motivation depends on the strength of one's regulatory concerns with promotion and prevention. We have found that role models are most likely to enhance motivation when they encourage the adoption of strategies that one is especially ready to implement, due to one's salient regulatory focus. Promotion-focused individuals, who use a strategy of pursuing desired outcomes, will find positive role models to be especially motivating; prevention-focused individuals, who use a strategy of avoiding undesired outcomes, will find negative role models to be especially motivating. However, role models who encourage strategies that are incongruent with one's regulatory concerns can undermine motivation. Incongruent role models can disrupt individuals' preferred strategies without providing an alternative that they are ready to seize upon (cf. Norem & Cantor, 1986).

In our studies, promotion and prevention goals exerted similar influences on the motivational impact of role models regardless of whether these goals were chronic or temporarily induced. These goals determined the impact of both fictitious role models encountered in the lab and real-life models encountered in the course of participants' daily lives. Using two different goal-priming techniques, we found that goal-congruent role models encountered in the lab were motivating (Studies 1 and 2) whereas goal-incongruent role models were discouraging (Study 2). Similarly, individuals' chronic promotion and prevention goals guided their recall of real-life role models that had motivated them (Study 3); participants were especially likely to report being motivated by role models congruent with their chronically dominant goals.

Regulatory theory assumes an intimate link between promotion and prevention goals and concerns with possible selves; indeed, Higgins and his colleagues (e.g., Higgins et al., 1997; Shah & Higgins, 2001; Shah et al., 1998) have assessed chronic promotion and prevention goals by measuring the accessibility of ideal and ought selves, respectively. The earlier work showed that ongoing

preoccupation with ideal or ought possible selves can be indicative of ongoing motivation to pursue promotion and prevention; we go beyond this by showing that this causal chain can proceed in the other direction as well. It has been shown that role models exert their impact by highlighting plausible possible or feared selves and pointing to strategies for pursuing or avoiding such selves (Lockwood, 2002; Lockwood & Kunda, 1997, 1999). Our studies suggest that increases in the strength of promotion and prevention goals can provoke an increased sensitivity to the corresponding possible selves, and an increased inclination to gain motivation by pursuing those strategies fostered by contemplating such ideal or feared selves. This supports and extends the assumptions of regulatory theory regarding the relatedness of regulatory focus and concerns with possible selves.

These studies have important implications for understanding how goals can influence the impact of social comparisons on behavior. Previous research on this topic has focused largely on the impact of comparisons on mood and on self-esteem (cf. Collins, 1996; Wood, 1989); motivational outcomes have not typically been assessed, perhaps because most relevant research has examined the impact of one-shot comparison experiences in which individuals have little chance to improve or decline. Such research may be unable to uncover the impact of social comparison on motivation because one is only likely to be motivated by a superior or inferior other who exemplifies a self that one believes one may become (cf. Aspinwall, 1997; Lockwood, 2002; Lockwood & Kunda, 1997). Our research extends work on social comparison by demonstrating that both better-off and worse-off others can have an impact on motivation, and that regulatory goals can determine the nature of this impact. By examining the effects of role models, we can also begin to investigate the longer-term impact of social comparisons on behavior. Individuals may select those role models that help them maintain their motivation over sustained periods of time. For promotion-focused individuals, a positive role model will serve as a constant reminder of accomplishments that are to be pursued, whereas for prevention-focused individuals, a negative role model will provide an ongoing warning about mistakes that should be avoided.

This research also has important practical implications for the design of programs that use role models to inspire individuals or to change behavior patterns. It has been proposed that self-regulation involving a positive reference point is typically more common than self-regulation involving a negative reference point (Carver & Scheier, 1990). Consistent with this perspective, Study 3 suggests that for the majority of individuals, promotion goals are stronger than prevention goals. Thus, positive role models may as a rule be more effective motivators than negative models. Indeed, previous research suggests that although individuals are often spontaneously inspired by positive role models (Lockwood & Kunda, 1999), they are not typically influenced by the experiences of worse-off others unless they are asked to reflect on the parallels between themselves and the other (Lockwood, 2002). This pattern may be unique to individuals in cultures characterized by independent self-construals, who tend to have a regulatory focus dominated by promotion goals. There is evidence to suggest that among individuals with more interdependent self-construals, prevention goals may be more dominant (Lee, Aaker, & Gardner, 2000); in collectivist cultures, therefore, negative role models may motivate individuals to a greater degree than will positive role models.

Although individuals in Western culture may tend to be more motivated by positive than negative role models, the kind of role model that they are most receptive to in a given situation may depend on the configuration of goals that are salient in that situation. Because the relative strength of promotion and prevention goals can vary in response to situational cues, the impact of any role model can be heightened by first orienting individuals toward the goal whose pursuit is encouraged by that model, as shown by Studies 1 and 2. For example, a program that uses an HIV-positive model to encourage an audience of teens to avoid unsafe sex practices may be most successful if one first induces a prevention focus among audience members. In contrast, a program that seeks to increase athletic motivation among high school students by exposing them to star athletes may be more effective if the students' promotion goals are first made salient. By encouraging the audience to focus on goals that are congruent with the strategies fostered by the model, one may also reduce the possibility that the model will have an unintended negative impact; one would not want to risk undermining motivation to exercise or to avoid unsafe sex by exposing individuals to goal-incongruent models. By increasing the salience of the appropriate regulatory goal, one should be able to maximize the motivating impact of role models on their target audiences.

Thus, role models will best enhance motivation when they foster strategies that fit individuals' current regulatory concerns. Individuals' chronic preoccupation with promotion and prevention goals will likely influence the kinds of role models that they usually gravitate toward spontaneously in the course of their daily lives. Nevertheless, most individuals are likely to be receptive to both positive and negative role models, on at least some occasions. Situational factors that heighten the salience of a given regulatory concern—promotion or prevention—can enhance one's openness to inspiration by role models that encourage strategies for advancing that concern.

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(Appendixes follow)

Appendix A

Motivation Scale Items

Using the scale below, please write the appropriate number in the blank beside each item.

- | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|----|------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| not at | | | | | | | | | | very |
| all | | | | | | | | | | true |
| true | | | | | | | | | | |
1. ___ I plan to put more time into my schoolwork.
 2. ___ I plan to study harder for tests and exams.
 3. ___ I plan to spend less time partying with friends.
 4. ___ I plan to put extra effort into the rest of my term papers.
 5. ___ I plan to keep up with reading assignments.
 6. ___ I plan to procrastinate less.
 7. ___ I plan to start studying for finals before the term ends.
 8. ___ I plan to spend more time at the library.
 9. ___ I plan to stop engaging in social activities that interfere with schoolwork.
 10. ___ I plan to avoid wasting time.
 11. ___ I plan to be more organized.
 12. ___ I plan to avoid missing work deadlines.
 13. ___ I plan to be less casual about schoolwork.
 14. ___ I plan to focus more on my studies.

Appendix B

Promotion/Prevention Scale

Using the scale below, please write the appropriate number in the blank beside each item.

- | | | | | | | | | |
|----------|---|---|---|---|---|---|---|---------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Not at | | | | | | | | Very |
| all true | | | | | | | | true of |
| of me | | | | | | | | me |
1. ___ In general, I am focused on preventing negative events in my life.
 2. ___ I am anxious that I will fall short of my responsibilities and obligations.
 3. ___ I frequently imagine how I will achieve my hopes and aspirations.
 4. ___ I often think about the person I am afraid I might become in the future.
 5. ___ I often think about the person I would ideally like to be in the future.
 6. ___ I typically focus on the success I hope to achieve in the future.
 7. ___ I often worry that I will fail to accomplish my academic goals.
 8. ___ I often think about how I will achieve academic success.
 9. ___ I often imagine myself experiencing bad things that I fear might happen to me.
 10. ___ I frequently think about how I can prevent failures in my life.
 11. ___ I am more oriented toward preventing losses than I am toward achieving gains.
 12. ___ My major goal in school right now is to achieve my academic ambitions.
 13. ___ My major goal in school right now is to avoid becoming an academic failure.
 14. ___ I see myself as someone who is primarily striving to reach my "ideal self"—to fulfill my hopes, wishes, and aspirations.
 15. ___ I see myself as someone who is primarily striving to become the self I "ought" to be—to fulfill my duties, responsibilities, and obligations.
 16. ___ In general, I am focused on achieving positive outcomes in my life.
 17. ___ I often imagine myself experiencing good things that I hope will happen to me.
 18. ___ Overall, I am more oriented toward achieving success than preventing failure.

Received August 30, 2001
 Revision received February 18, 2002
 Accepted February 20, 2002 ■