Chapter 16

The Impact of Social Comparisons on Motivation

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Traditionally, social comparison research has focused largely on the impact of better- and worse-off others on individuals’ self-esteem and affect (for reviews, see Collins, 1996; Wood, 1989), rather than on the motivational consequences of such comparisons. Upward comparisons, for example, can have a positive or negative impact on one's affect and self-perceptions. One might feel pleased and proud if one has a close connection to a superior other, and can bask in the reflected glory of the other's achievements (Cialdini et al., 1976); if one's brother is a football star, and football is not a domain in which one has personal ambitions, then one may derive pleasure from one's association with the star sibling (Tesser, 1988).

If, on the other hand, the comparison domain is highly self-relevant, the achievements of a close other may be distressing, highlighting one's personal inferiority. For example, finding out that a peer is outperforming one at school may have a negative impact on one's self-esteem (e.g., Lockwood & Kunda, 1999).

Downward comparisons can also have both positive and negative effects on the self. Exposure to a worse-off other can buoy one's self-image, providing evidence that one is superior to another person in a cherished domain. Such comparisons can have an especially positive impact to the extent that one has recently received a threat to the self (Wills, 1981). However, if one recognizes that one is vulnerable to the fate of the other, one may be discouraged by the prospect of a similarly dismal future (Aspinwall, Hill, & Leaf, 2002; Lockwood, 2002).

Recent evidence suggests that comparisons can influence not only affect and self-perceptions, but also individuals’ motivation to change their behaviors (Aspinwall et al., 2002; Lockwood & Kunda, 2000; Markman & McMullen, 2003). Comparisons can influence
motivation through the activation of alternative selves—representations of a self that differs in some way from one’s current self (cf. Markman & McMullen, 2003). Upward comparisons can encourage one to develop a more positive future self; the superior other functions as a positive role model, providing an example of the kinds of achievements for which one can strive, and serving as a guide for how one might go about attaining such goals. For example, when Joan encounters a highly successful graduate from her program, she may be inspired; provided that she perceives the other’s success to be attainable, she may picture herself achieving similar academic glory, and so decide to work harder in her studies (Lockwood & Kunda, 1997, 1999). Downward comparisons, in contrast, can activate feared selves; the unsuccessful other functions as a negative role model, providing an example of the kinds of pitfalls that may lie ahead, and illustrating the behaviors that one should avoid if one is to escape such a negative fate. For example, if John encounters someone who dropped out of his program as a result of poor grades, he may be motivated to work harder; to the extent that he perceives the other’s fate to be a plausible future outcome for himself, he may be alarmed at the possibility that he might fail, and so decide to spend more time at the library (Lockwood, 2002). Social comparisons thus can serve as representations of the selves that one hopes or fears one might become in the future. Upward comparison targets can serve as positive role models, inspiring individuals to approach more positive alternative selves; downward comparison targets can serve as negative role models, motivating individuals to avoid more negative alternative selves.

### MOTIVATION ARISING FROM POSSIBLE SELVES

Considerable evidence suggests that highlighting alternative selves can motivate individuals to change their behavior. The literature on possible selves indicates that the self-concept can include a number of alternatives to one’s current self, including desirable selves that one hopes to become, and undesirable selves that one fears one might become (Markus & Nurius, 1986). When a hoped-for self is activated, individuals are motivated to approach this desirable outcome. When a feared self is activated, individuals are motivated to avoid this undesirable outcome. Indeed, the presence of positive and negative achievement-related possible selves together is associated with increased persistence and success in school, suggesting that these hoped-for and feared selves do indeed affect individuals’ motivation to achieve success (Oyserman, Gant, & Ager, 1995). For example, African American students who took part in an intervention that activated positive possible selves (i.e., they were encouraged to develop perceptions of themselves as successful adults) became more concerned with doing well in school, more likely to attend classes, and less likely to get into trouble (Oyserman, Terry, & Bybee, 2002).

### MOTIVATION ARISING FROM COUNTERFACTUAL SELVES

Further evidence regarding the potential for alternative selves to influence motivation comes from the literature on counterfactual thinking. Upward counterfactuals—thoughts about how a situation might have turned out better—can be demoralizing if one simply focuses on one’s less optimal actual outcome. However, such thoughts can also be motivating if one believes that one may face similar situations in the future: A student who narrowly misses achieving an A on a midterm exam may experience the close counterfactual of an alternative self who achieved the better grade, and consequently may be motivated to study harder for the next test and so achieve the desirable alternative. In one study, for example, students who generated upward counterfactuals regarding a poor test score reported greater intentions to engage in activities aimed at improving their academic standing (Roese, 1994, Study 2). Similarly, students who generated upward counterfactuals regarding their performance on an anagram task showed enhanced performance, relative to those who generated downward counterfactuals, when the task was administered a second time (Roese, 1994, Study 3). The thoughts about how they might have done better on the first task served a preparative function, encouraging the participants to consider strategies for future improvement.

More recent evidence suggests that downward counterfactuals—thoughts about how a situation might have turned out worse—also have motivating potential. An individual who
narrowly escapes failing a course may experience relief that a dreaded outcome did not occur. However, to the extent that he or she focuses on this negative outcome, rather than simply contrasting it with his or her current circumstances, he or she may be motivated to avert such undesirable situations in the future. In one study, for example, students who had just received a midterm grade were asked to consider a worse grade that they might have received; those students who focused on this worse grade reported greater intentions to work hard and study for future tests than did students who simply contrasted the worse grade with their actual grade, or those who did not consider a counterfactual self at all (McMullen & Markman, 2000). Thus counterfactuals involve thoughts about more positive selves that one just missed becoming or more negative selves that one just managed to avoid becoming. These alternative selves can in turn motivate individuals to pursue more desirable or avoid less desirable outcomes in the future.

**MOTIVATION ARISING FROM SOCIAL COMPARISON**

To the extent that social comparison targets, like possible selves and counterfactual outcomes, represent alternatives to one’s current self, they have the potential to motivate behavior change. To date, social comparison researchers have focused largely on the possible motivational effects of upward comparisons, noting that superior others can serve a self-improvement function (Taylor & Lobel, 1989; Wood, 1989). For example, couples in distressed marriages may benefit from exposure to more satisfied couples, because such examples provide them with information about how they can improve their own relationships (Buunk, Collins, Taylor, Van Yperen, & Dakof, 1990). A number of studies from the literature on social comparison and health have examined how individuals can use upward comparisons as exemplars of how to cope with physical and psychological distress associated with illness (e.g., Blalock, Affifi, DeVellis, Holt, & DeVellis, 1990; DeVellis et al., 1991; Giorgino et al., 1994; Llewellyn-Thomas, Thiel, & McGreal, 1992; Taylor, Aspinwall, Giuliano, Dakof, & Reardon, 1993; Van der Zee, Oldersma, Buunk, & Bos, 1998; Wood, Taylor, & Lichtman, 1985). However, because these studies typically focused on the self-reported impact of comparisons on ability to cope with illness, it remains unclear how such comparisons might alter individuals’ motivation to change their behaviors.

Additional evidence regarding the motivating impact of upward comparisons comes from longitudinal studies assessing the effect of social comparison direction on academic performance. Blanton, Buunk, Gibbons, and Kuyper (1999) found that students who compared themselves to more successful peers were more likely to perform well in school. However, other research suggests that students in a high-achieving cohort tend to develop more negative self-perceptions over time than those who start with a similar performance level but are in a less successful cohort; those who are “small fish” in “big ponds” are faced with more demoralizing upward comparisons, and consequently have less positive academic self-concepts (Marsh & Hau, 2003; Marsh, Hau, & Craven, 2004; Marsh & Parker, 1984). These less positive self-concepts may in turn lead to diminished academic performance over time (Guay, Marsh, & Boivin, 2003). Thus, although there is some evidence that upward comparisons can be motivating, this may not always be the case. Moreover, research to date has given little attention to the motivating potential of downward comparisons. Overall, it is unclear when upward and downward comparisons will be most effective in motivating individuals to change their behavior.

**REGULATORY FOCUS DETERMINES MOTIVATION BY ROLE MODELS**

In a series of studies, we have examined the degree to which both upward and downward comparisons affected individuals’ intentions to work hard, and the circumstances under which each form of comparison was most influential. We have proposed that individuals should be most motivated by social comparisons when the comparisons match their regulatory orientations—the extent to which they are focused on promoting positive outcomes or preventing negative outcomes. Specifically, individuals may be most likely to be motivated by upward comparisons to targets that represent desired alternative selves when they are focused on promoting successful outcomes, and by
downward comparisons to targets that represent undesirable alternative selves when they are focused on preventing unsuccessful outcomes.

These hypotheses were based on the theory of regulatory focus developed by Higgins and his colleagues (Higgins, 1997, 1998). Higgins has argued that individuals can be characterized by two forms of regulatory orientation: promotion or prevention. Promotion-focused individuals pursue a strategy aimed at achieving their ideal selves, the desirable selves that they hope to become. They are therefore especially attuned to the presence or absence of positive outcomes, and adopt a strategy aimed at pursuing gains and successes. They are especially likely to attend to and recall information involving the pursuit of success by others (Higgins & Tykocinski, 1992). In addition, their performance tends to be enhanced when task incentives are framed in terms of achieving gains rather than avoiding losses (Shah, Higgins, & Friedman, 1998). Moreover, their motivational strength in completing a task tends to be maintained more vigorously when the task is framed in terms of approaching gains (Forster, Higgins, & Idson, 1998). Promotion-focused individuals’ motivation is also strongest when benefits of compliance rather than costs of noncompliance with a persuasive message are emphasized (Spiegel, Grant-Pillow, & Higgins, 2004). We therefore reasoned that individuals with strong promotion orientations should be most motivated by upward comparisons to positive role models (Lockwood, Jordan, & Kunda, 2002). Positive models highlight a strategy of pursuing a desirable end-state, illustrating the benefits of success, and thus fit with the strategic approach inclinations of promotion-focused individuals.

Prevention-focused individuals, in contrast, are especially attuned to the presence or absence of negative outcomes, and adopt a strategy aimed at avoiding losses and failures. They are especially likely to attend to and recall information pertaining to prevention of failures rather than the pursuit of success by others (Higgins & Tykocinski, 1992), and their performance tends to be enhanced when task incentives are framed in terms of avoiding losses rather than achieving gains (Shah et al., 1998). Moreover, their motivational strength in completing a task tends to be maintained more vigorously when the task is framed in terms of avoiding losses (Forster et al., 1998). Prevention-focused individuals’ motivation is also strongest when costs of noncompliance rather than benefits of compliance with a persuasive message are emphasized (Spiegel et al., 2004). We therefore reasoned that individuals with strong prevention orientations should be most motivated by downward comparisons to negative role models. Negative models highlight a strategy of avoiding negative outcomes, illustrating the costs of failure, and thus fit with the strategic avoidance inclinations of prevention-focused individuals.

**Study 1: Priming Academic Strategies Determines Motivation by Role Models**

In a first set of studies (Lockwood et al., 2002), we examined the degree to which individuals’ regulatory orientation would determine their responses to upward and downward comparisons. Although individuals differ in their chronic regulatory focus, situational cues can also activate promotion or prevention orientations (e.g., Brendl, Higgins, & Lemm, 1995; Roney, Higgins, & Shah, 1995). We first assessed whether temporarily activated regulatory focus would determine responses to role models. In one study, participants first completed a priming task in which they described either a situation in which they had successfully promoted a positive academic outcome (promotion prime) or successfully averted a negative academic outcome (prevention prime). Participants then read about either a positive or negative role model. The positive model was a recent graduate who had achieved high grades in his or her academic program, had been accepted to the graduate or professional program of his or her choice, and had also been offered a number of prestigious jobs. The negative model was a recent graduate whose grades had become increasingly poor throughout his or her college career, who had not been accepted to the postgraduate program of his or her choice, and who was currently working in a fast food restaurant. After reading about the role model, participants completed a measure assessing their motivation to engage in activities such as studying, spending time at the library, participating in classes, and keeping up with assignments. A control group of participants completed this measure without first reading about a role model. As predicted, participants were most motivated by role models who matched...
their primed regulatory focus. Promotion-primed participants were motivated only by the outstanding recent graduate; prevention-primed participants were motivated only by the abysmally unsuccessful recent graduate. Thus individuals were motivated by role models who highlighted strategies that were congruent with their own regulatory goals.

**Study 2: Primed Regulatory Focus Determines Motivation by Role Models**

In Study 1, we primed specific academic promotion and prevention strategies. In a second study, we attempted to replicate our findings, using a more general regulatory focus prime (Lockwood et al., 2002, Study 2). Participants were asked to sort a list of 36 words into three categories. Two categories were neutral, and involved words relating to cooking and children, respectively; the third category comprised 12 target words that were associated with either promotion (e.g., seek, gain, pursue) or prevention (e.g., avert, avoid, prevent). By exposing participants to these target words, we sought to temporarily prime their promotion or prevention orientations. After completing the sorting task, participants read about the same role models and completed the same motivation measure as in Study 1. Once again, those participants primed with promotion were motivated only by positive models, whereas those primed with prevention were motivated only by negative models.

**Study 3: Regulatory Focus Determines Choice of Role Models in Everyday Life**

In Studies 1 and 2, we assessed the impact of temporarily activated regulatory strategies on the motivating effect of role models. We reasoned that individuals’ chronic promotion and prevention strategies might also influence the kinds of role models that they would attend to and seize upon when attempting to maintain their motivation to achieve goals on an ongoing basis. Accordingly, we next examined whether participants’ chronic regulatory orientation would influence their choice of role models in everyday life (Lockwood et al., 2002, Study 3). We predicted that promotion-focused individuals would be most likely to select positive models, and that prevention-focused individuals would be most likely to select negative models.

Participants completed an 18-item measure of regulatory orientation. Nine items assessed promotion focus (e.g., “I frequently imagine how I will achieve my hopes and aspirations”), and nine items assessed prevention focus (e.g., “I frequently think about how I can prevent failures in my life”). Then, in an ostensibly unrelated questionnaire, participants were asked to describe someone who had motivated them to work harder in the past, either by setting a positive example that they hoped to emulate or a negative example that they hoped to avoid.

Overall, participants tended to report stronger promotion than prevention orientations, and were more likely to describe being motivated by positive (73%) than by negative models. However, consistent with our predictions, results of a logistic regression analysis revealed that promotion orientation was associated with nominating positive models; prevention orientation, in contrast, was associated with nominating negative models. Thus chronic regulatory orientation appears to play a role in determining the kinds of role models that individuals seize upon to harness their motivation in everyday life: Individuals use role models who match their regulatory strategies.

**Cultural Differences in Responses to Role Models**

To the extent that regulatory orientations influence motivation by role models, it seems likely that groups that differ in their focus on promotion relative to prevention will show similar patterns of responses to role models. Recent evidence suggests that cultural groups differ in their regulatory orientations (Lee, Aaker, & Gardner, 2000). Members of individualistic cultures tend to have especially strong independent self-construals. They view the self as a distinct, unique individual (for reviews, see Heine, Lehman, Markus, & Kitayama, 1999; Markus & Kitayama, 1991; Triandis, 1989). Individuals with highly independent self-construals are motivated to stand out from others by being exceptionally successful, and thus tend to focus on the personal attainments and ambitions they hope to achieve (Markus & Kitayama, 1991). Such individuals view information about personal successes as more relevant to their self-esteem than information about personal failures (Kitayama, Markus, Matsumoto, & Norasakkunkit, 1997).
This concern with personal achievement and self-enhancement appears to be associated with an emphasis on promotion strategies. North Americans, who are typically characterized by strongly independent self-construals, view events framed in terms of winning as more important than events framed in terms of losing; they also report especially strong emotional reactions to gains relative to losses (Lee et al., 2000). North Americans also tend to persist on tasks following success rather than failure experiences, indicating a focus on the pursuit of success rather than the correction of mistakes (Heine et al., 2001). Indeed, North Americans tend to report greater strivings for approach relative to avoidance goals (Elliot, Chirkov, Kim, & Sheldon, 2001). For such individuals, positive role models may be especially relevant: The successful other exemplifies the achievements for which one can strive, illustrating the strategies through which one can attain such successes. Thus positive role models highlight a strategy that may be particularly relevant to the regulatory focus of North Americans. Indeed, in Study 3 above, the North American participants in our sample were more likely to remember a positive than a negative role model.

In contrast, members of collectivistic cultures tend to have stronger interdependent self-construals, viewing the self as part of a complex web of social relationships (Heine et al., 1999; Markus & Kitayama, 1991; Triandis, 1989). Individuals with strongly interdependent selves are motivated to fit in with their social groups; they tend to focus on their obligations and duties to others, and try to avoid behaviors that could create social discord or cause distress to significant others in their lives (Heine et al., 1999). Among such individuals, special emphasis is placed on the correction of faults rather than on the achievement of successes (Heine, Takata, & Lehman, 2000).

This concern with self-criticism and personal obligations appears to be associated with an emphasis on prevention strategies. Members of East Asian cultures, who tend to have strong interdependent relative to independent self-construals, view events framed in terms of losing as more important than events framed in terms of winning (Lee et al., 2000). They tend to persist longer at a task after failure than after success, suggesting that they are motivated to avoid similar failures in the future (Heine et al., 2001). Members of East Asian cultures also report especially strong avoidance relative to approach goals (Elliot et al., 2001). For such individuals, negative role models may be particularly relevant: The unsuccessful other highlights the failures that they seek to avoid, illustrating the strategies that can be used to prevent such undesirable outcomes in the future.

In sum, to the extent that cultures differ in their emphasis on promotion or prevention, we might expect to find corresponding cross-cultural differences in responses to positive and negative role models. Specifically, members of individualistic cultures, which emphasize promotion, may be more motivated by positive than negative role models; members of collectivistic cultures, which emphasize prevention, may be more motivated by negative than positive role models.

**Study 4: Cultural Differences in Perceived Motivation by Role Models**

To assess our hypotheses, we selected undergraduate participants who described their cultural background as either Western European or East Asian, and examined their beliefs about the kinds of role models that would motivate them (Lockwood, Marshall, & Sadler, 2005). All participants were residing in Canada at the time of the study. Participants completed measures assessing their self-construals (Singelis, 1994) and regulatory focus (Lockwood et al., 2002). They then rated the extent to which they would be motivated to work harder by a series of six positive and six negative academic role models. The positive models had achieved successful outcomes, such as attaining an A+ average or getting an excellent job following graduation; the negative models had experienced unsuccessful outcomes, such as being placed on academic probation due to poor grades or failing to find a job following graduation.

Results indicated that East Asian Canadians reported stronger interdependent self-construals, which were associated with stronger prevention orientations. Moreover, these stronger prevention orientations predicted motivation by negative role models. In contrast, Western European Canadians reported marginally stronger independent self-construals, which in turn tended to be associated with stronger promotion orientations; furthermore, promotion was strongly associated with greater motivation by positive models. The ef-
fecteds of culture on motivation by positive and negative role models were partially mediated by self-construals and regulatory focus.

Study 5: Cultural Differences in the Impact of Role Models on Motivation

In an additional study, we examined the relation between culture and responses to role models, this time preselecting East Asians who had lived in Canada for fewer than 10 years. In addition, rather than assessing beliefs about the motivating effects of role models, we measured the impact of role models on participants’ intentions to work hard.

Participants were first-year undergraduate students who described their cultural background as East Asian or Western European. Participants first read a one-page self-description, ostensibly written by a previous participant in the study. In one condition, the target described increasingly positive academic experiences, culminating in an award for academic achievement. In another condition, the target described increasingly negative academic experiences, and finished by noting that he or she had been placed on academic probation at the end of the year due to poor performance. After reading about the role model, participants rated their motivation to work hard at their own academic pursuits, using the same scale described in Study 1. Control participants rated themselves on these motivation items without first reading about a role model.

As predicted, participants were motivated only by role models who emphasized a regulatory strategy congruent with that favored by their cultural group. That is, participants from Western European backgrounds, whom we would expect to have stronger promotion orientations, were motivated only by positive models; participants from East Asian backgrounds, whom we would expect to have stronger prevention orientations, were motivated only by negative models. Role models who highlighted strategies that were incongruent with participants’ culturally emphasized regulatory orientation had no impact on motivation: Western European participants were unaffected by negative models, and East Asian participants were unaffected by positive models.

Taken together, these two studies suggest that cultural differences in regulatory orienta-
tion have an impact on how individuals respond to role models. Members of cultures that emphasize independent self-construals tend to favor promotion strategies, and so are most likely to be motivated by positive models. Individuals with strong independent selves are especially concerned with promoting self-enhancement and achieving success. An outstanding role model provides an example of success, and highlights strategies needed to attain similar achievements. Members of cultures that emphasize interdependent self-construals, in contrast, tend to favor prevention strategies, and so are most likely to be motivated by negative models. Individuals with strong interdependent selves are especially concerned with preventing failure and avoiding situations that might bring shame to themselves and those close to them. A model who has experienced a failure provides an example of the situation that they are striving to avoid, and highlights strategies needed to avert such an outcome in the future.

Motivation by Role Models Across the Adult Lifespan

Although Studies 4 and 5 suggest that North Americans will typically be more motivated by positive than by negative models, we note that this tendency should be weakened or reversed in domains for which individuals have especially strong prevention concerns. For example, in the domain of health, we might expect to find age differences in regulatory orientation that in turn affect reactions to role models. Older adults tend to perceive greater stability in their development than do younger adults; they expect fewer changes in desirable and undesirable attributes (Heckhausen & Krueger, 1993), and reporting fewer hoped-for and feared selves (Cross & Markus, 1991). To the extent that they are anticipating little change in the near future, older adults may place less emphasis on approaching gains and avoiding losses than do younger adults. However, although older adults report fewer possible selves overall, they report more possible selves, and more feared selves in particular, in the domain of health than do younger adults (Cross & Markus, 1991). Thus, although older adults’ general regulatory goals may be attenuated, their specific focus on avoiding health problems may be enhanced. Consequently, in health
domains, older adults may have especially strong prevention orientations.

We predicted that young adults, who are generally expecting positive health outcomes and are not anticipating health problems in their near futures, would be especially promotion-oriented with respect to health, focusing on gains that they hope to pursue. Older adults, who have had more experience with health problems and have less positive expectations about their future health, should be more prevention-oriented with respect to health, focusing on losses that they hope to avoid. They may continue to hope for positive health outcomes, but this hope may be balanced by the recognition that health problems may lie ahead. Thus we expected that young adults would be especially motivated by examples of fit, healthy individuals, who highlight their strategy of pursuing health gains. In contrast, older adults would be motivated not only by examples of healthy individuals, but also by examples of individuals who are experiencing health problems as a result of their behaviors, and who thus highlight a strategy of avoiding losses.

**Study 6: The Impact of Health-Related Role Models on Young and Older Adults**

To test this possibility, we examined both general and health-related regulatory focus among young (ages 18–25) and older (ages 60–75) adults (Lockwood, Chasteen, & Wong, 2005). On a general regulatory focus measure (Lockwood et al., 2002), older adults scored lower on both promotion and prevention goals than did younger adults, possibly reflecting the greater stability that older adults perceive in their lives. However, on a modified version of the regulatory focus measure consisting of six health-related promotion items (e.g., “My major health-related goal right now is to increase my level of physical fitness”) and six health-related prevention items (e.g., “My major health-related goal right now is to avoid experiencing health problems”), older adults reported stronger health-related prevention orientations than did younger adults; health-related promotion orientations did not differ across the two groups.

Participants also rated the extent to which they would be motivated by a series of 12 role models: Six were positive (e.g., “a person my age who is trim and fit,” “a very athletic person my age,” “a person my age in excellent physical condition”), and six were negative (e.g., “a person my age in poor physical condition,” “a very unathletic person my age,” “a person my age who is overweight”). As expected, older adults perceived the negative models to be more motivating than did the young adults. Older and younger adults did not differ in their perceptions of the motivating impact of positive models. Moreover, the difference in motivation by negative role models among young and older adults was mediated by health-related prevention focus. This difference was independent of any perceived differences in participants’ health; older adults were not simply more influenced by the negative role models because they were already experiencing poor health, and so viewed the negative model to be more relevant. Rather, older adults were more motivated by models of poor health than were younger adults because of their stronger focus on averting negative health outcomes. Thus, in any domain in which individuals are attuned to avoiding losses rather than simply focused on accruing gains, negative role models may be especially effective.

**ROLE MODEL PREFERENCES AND FIT WITH THE DESIRED BEHAVIOR CHANGE**

Up to this point, we have discussed the characteristics of individuals, their regulatory strategies, and the degree to which these characteristics will determine the motivating impact of positive and negative role models. However, it is also possible that the effectiveness of role models may be determined in part by the nature of the behavior change that the role model is expected to elicit. Specifically, role models may be most motivating when they highlight a strategy that is congruent with the desired behavior change. Additive behavior changes involve starting a new activity with potentially beneficial consequences; for example, individuals may decide to join a fitness club or start an exercise program. Subtractive behavior changes involve abstaining from or cutting back on an activity with potentially injurious consequences; for example, individuals may decide to refrain from smoking or reduce their intake of high-fat foods. Individuals’ receptiveness to making such additive and subtractive behavior changes may depend on the degree to which incentives for the changes are framed in
promotion or prevention terms. Promotion involves a concern with avoiding errors of omission—with making sure that one engages in the activities that will lead one to a desirable end-state (Higgins, 1997). When one is faced with an incentive framed in terms of achieving gains, a promotion stimulus, one may be especially likely to engage in additive behaviors; by adopting behaviors with potentially beneficial consequences, one can increase one’s likelihood of approaching the desirable end-state. Prevention involves a concern with errors of commission—averting activities that could lead to unpleasant outcomes (Higgins, 1997). When one is faced with an incentive framed in terms of avoiding losses, a prevention stimulus, one may be especially likely to engage in subtractive behaviors; by cutting back on a potentially deleterious activity, one can prevent an undesirable end-state.

Support for this possibility comes from research on counterfactual thinking, which suggests that the kinds of behaviors (additive or subtractive) that individuals select when trying to mentally undo an event are influenced by whether the event is framed in promotion or prevention terms. For example, in one study (Roese, Hur, & Pennington, 1999), when individuals were encouraged to make prevention counterfactuals about how negative situations could have been avoided, they tended to select subtractive behaviors: They mentally deleted actions that produced the unpleasant outcomes. In contrast, when individuals were encouraged to make promotion counterfactuals about how positive situations might have been achieved, they tended to select additive behaviors: They mentally adopted actions that could have produced a more desirable outcome. Thus, when situations were framed as losses that could have been avoided, the resulting counterfactuals involved subtractive behaviors, whereas when situations were framed as gains that could have been achieved, the resulting counterfactuals involved additive behaviors.

We expected to find a similar congruence between behavior changes and role model preferences. When individuals are considering engaging in an additive behavior, such as studying harder, they may be most motivated by a positive role model, such as someone who is academically successful. The positive model represents the gains that such a behavior change can lead to, and so may be most effective among individuals seeking to boost their motivation to study. When individuals are considering engaging in a subtractive behavior, such as procrastinating less or watching less TV, they may be most motivated by a negative model, such as a poorly coping student. The unfortunate other represents the losses that such undesirable behaviors can lead to, and so will likely be most effective among individuals seeking to cut back on their bad habits. Thus individuals may show a preference for models that are congruent with the behavior change that they are seeking to make: By maximizing the fit between the behavior and the strategy highlighted by the model, individuals can attempt to boost the motivation that they draw from the model.

We conducted an additional set of studies to examine this possibility (Lockwood, Sadler, Fyman, & Tuck, 2004).

**Study 7: Preferences for Positive and Negative Academic Role Models**

We first examined preferences for positive and negative academic role models among individuals contemplating additive and subtractive behavior changes. Introductory psychology students were asked to consider a set of six additive behaviors (e.g., develop better study habits, spend more time studying, try to get more A's) and six subtractive behaviors (e.g., spend less time partying with friends, procrastinate less, stop falling behind in readings). For each behavior, participants rated the degree to which they would be motivated by a positive relative to a negative model (e.g., “someone who is on academic probation for poor performance” vs. “someone who has won an award for academic achievement”; “someone from your program who has been unemployed since graduating last year” vs. “someone from your program who landed a great job after graduating last year”). Ratings were made on a 7-point scale ranging from −3 (greater motivation by negative model) to +3 (greater motivation by positive model). As we predicted, participants’ preference for positive relative to negative models was stronger for additive (M = 1.71) than for subtractive (M = 0.48) behaviors.

We also considered the possibility that participants’ regulatory focus would influence role model preferences. Promotion focus and additive behaviors are both associated with a strategy of accruing gains. We therefore expected that promotion would be associated with a preference for positive models, who represent
such gains; moreover, we expected that this effect would be strongest for individuals considering additive behaviors. In contrast, prevention focus and subtractive behaviors are both associated with a strategy of avoiding losses. We therefore expected that prevention would be associated with a preference for negative models, who illustrate such losses, and that this effect would be strongest among individuals considering subtractive behaviors. Thus an individual’s regulatory focus should be most influential in determining role model preferences when there is a good fit (Higgins, 2000) between regulatory focus and behavior type.

As expected, role model preferences among individuals considering additive behaviors were predicted by promotion but not prevention focus. Also as expected, role model preferences among individuals considering subtractive behaviors were predicted by prevention focus.

Unexpectedly, however, promotion focus also predicted role model preferences among individuals considering subtractive behaviors. It is possible that students typically consider academic activities in promotion rather than prevention terms. These first-year college students had been high achievers in high school; they may not have been accustomed to thinking about avoiding academic failure, because they may have had little past experience with such failures. Accordingly, in an additional study, we examined role model preferences in a domain in which individuals tend to have more even-handed perceptions of possible positive and negative outcomes. Most individuals have at one time or another felt uncomfortable with their body shape and fitness levels; therefore, in this domain, individuals may have goals to prevent an unhealthy body image as well as to promote a healthy body image. We thus examined preferences for physical fitness role models (Lockwood et al., 2004, Study 2).

**Study 8: Preferences for Positive and Negative Health-Related Role Models**

Participants rated the degree to which they would be motivated by a series of positive models (e.g., someone in great physical condition) versus negative models (e.g., someone in terrible shape) when considering a set of additive (e.g., joining a gym) and subtractive (e.g., cutting back on dietary fat) health-related behaviors. They also completed a measure of their health-related promotion and prevention orientations, as described in Study 6.

As in Study 7, participants considering additive behaviors ($M = 2.12$) were more likely to select positive relative to negative models than were participants considering subtractive behaviors ($M = 1.09$). Moreover, role model preferences among individuals considering additive health behaviors were predicted by health-related promotion but not prevention orientation; in contrast, role model preferences among individuals considering subtractive health behaviors were predicted by health-related prevention but not promotion orientation.

Taken together, these two studies suggest that the perceived effectiveness of role models is influenced by both the type of behavior change involved (additive or subtractive) and by regulatory focus (promotion or prevention). Positive role models are most likely to be perceived as effective by individuals with strong promotion orientations who are harnessing their motivation to make additive behavior changes. Negative role models are most likely to be perceived as effective by individuals with strong prevention orientations who are harnessing their motivation to make subtractive behavior changes.

**CONCLUSION**

Overall, the impact of social comparisons on motivation will be influenced by the degree of fit among the direction of the comparison, an individual’s regulatory focus and culture, and the nature of the behavior change involved. Upward comparisons are most likely to be motivating among individuals with strong chronic or temporarily activated promotion orientations, and among individuals from cultures that emphasize promotion concerns. Such comparisons, moreover, will be preferred by individuals who are attempting to harness their motivation to make additive behavior changes. Downward comparisons, in contrast, are most likely to be motivating among individuals with strong chronic or temporarily activated prevention orientations, and may be especially effective among individuals from cultures that emphasize prevention concerns. Such comparisons, moreover, will be preferred by individuals who are attempting to boost their motivation to make subtractive behavior changes.