

Regulatory Focus Theory

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Abstract

Regulatory focus theory was the child of self-discrepancy theory and the parent of regulatory fit theory. Self-discrepancy theory distinguishes between self-regulation in relation to hopes and aspirations (ideals) versus self-regulation in relation to duties and obligations (oughts). It proposes that *ideal* versus *ought* self-regulation are *two different motivational systems* for approaching pleasure and avoiding pain. In regulatory focus theory, promotion concerns with ideals (growth and advancement more generally) and prevention concerns with oughts (safety and security more generally) are motivational states that not only vary across individuals (personality) but also can be situationally induced. Regulatory focus theory proposes that the motivational state of being at “0” has *negative valence* in promotion (“0” as a nongain in relation to “+1”) but *positive valence* in prevention (“0” as a nonloss in relation to “-1”). Finally, giving rise to regulatory fit theory, regulatory focus theory distinguishes between the *eager* strategies that fit *promotion* and the *vigilant* strategies that fit *prevention*. Foundational research supporting each of these proposals is reviewed, and then more recent cutting-edge research is described, including how this distinction is revealed in the behavior of nonhuman animals and how different tactics (e.g., risky vs conservative) can serve either promotion-eagerness or prevention-vigilance under different circumstances. Finally, I discuss two key issues for future research: whether promotion and prevention are competing motivations or can work together as partners, and whether there is support for the promotion-prevention distinction in everyday life beyond the laboratory.

INTRODUCTION

The story of the development of regulatory focus theory begins with self-discrepancy theory. When people are emotionally overwhelmed by a serious setback in their life, such as the death of their child, the loss of their job, or the break-up of their marriage, why do some become depressed while others become anxious? To answer this question, self-discrepancy theory proposed that even when people have the same specific goals, they often vary in how they represent them. The goals that direct our self-regulation are called *self-guides*. There are two basic kinds of self-guides. There are *ideal* self-guides, which represent who we hope and aspire to be, and

ought self-guides, which represent our beliefs about who it is our duty or obligation to be.

According to self-discrepancy theory (Higgins, 1987), it is this difference between failing to meet ideal self-guides versus failing to meet ought self-guides that explains why we have different emotional reactions to the same negative life event. When a negative life event happens to us, we represent it as saying something about how we are doing. When there is a discrepancy between how we are doing, which is our *actual self*, and a self-guide—a *self-discrepancy*—we suffer. A discrepancy between our actual self and our ideal self-guides makes us feel sad, disappointed, and discouraged—dejection-related emotions that relate clinically to depression. A discrepancy between our actual self and our ought self-guides makes us feel nervous, tense, and worried—agitation-related emotions that relate clinically to anxiety disorders. Thus, different kinds of emotional suffering depend on which type of self-guide is emphasized in our self-regulation—dejection/depression suffering when ideals are emphasized and agitation/anxiety suffering when oughts are emphasized.

As reflected in the name of the theory, self-discrepancy theory emphasized the negative emotions produced by actual self-discrepancies to self-guides. However, the theory also described the positive emotions produced by actual self-congruencies to self-guides. An actual self-congruency with ideal self-guides makes us feel happy and encouraged—cheerfulness-related emotions. An actual self-congruency with ought self-guides makes us feel calm and relaxed—quiescence-related emotions.

Self-discrepancy theory, then, distinguished between two self-regulatory systems that produced two different emotional dimensions: a cheerfulness–dejection dimension for self-regulation in relation to ideal self-guides and a quiescence–agitation dimension for self-regulation in relation to ought self-guides. This distinction between two self-regulatory systems with different emotional consequences was the first step in the development of regulatory focus theory because it challenged the utility of the most influential principle in motivation—the *hedonic principle*. The hedonic principle states that people approach pleasure and avoid pain. Does that principle tell us why people have different emotional reactions to the same negative life event (dejection vs agitation) or why people have different emotional reactions to the same positive life event (cheerfulness vs quiescence)? It does not, because to know why people have different emotional reactions we must understand that the hedonic principle plays out motivationally in two very different ways. Self-discrepancy theory identified ideal versus ought self-regulation as *two different ways to approach pleasure and two different ways to avoid pain*. Recognizing this motivational distinction was central to the development of regulatory focus theory. It made clear that, to understand

how motivation works, it was essential to go “beyond pleasure and pain” and study how different systems of self-regulation function (Higgins, 1997, 2012).

The downside of self-discrepancy theory for considering further the motivational differences between the ideal versus ought self-regulatory systems was that self-discrepancy theory restricted the distinction between ideal and ought self-regulation to a personality difference. However, motivation concerns psychological states and personality is just one source of psychological states. Situations also induce psychological states, just as differences in the accessibility of constructs can derive from chronic individual differences in accessibility or from situational priming (Higgins, 1990). Another limitation of self-discrepancy theory was its restriction to ideal and ought self-guides because these self-guides are self-belief mental representations that are not found in other animals and even in humans do not develop until approximately 3–5 years of age (Higgins, 1989). However, I felt that there was an even more basic motivational distinction between two self-regulatory systems that was found in nonhuman animals and infants. This was a distinction between two forms of survival—between the survival associated with safety, security and defense and the survival associated with nurturance, growth, and advancement (see also Bowlby, 1969, 1973).

Regulatory focus theory (Higgins, 1997, 1998) distinguishes between the promotion motivational system and the prevention motivation system. The *promotion* system relates to nurturance, growth, and advancement, and to the attainment of better states, which includes, but is not restricted to, fulfilling the hopes and aspirations represented in ideal self-guides. The *prevention* system relates to safety, security, and defense, and to the maintenance of satisfactory states, which includes, but is not restricted to, meeting the duties and obligations represented in ought self-guides. Individuals can have a promotion focus or a prevention focus from a chronic predisposition (personality) or from a situational induction, such as framing performance outcomes either as a gain for success and a nongain for failure (promotion induction) or as a nonloss for success and a loss for failure (prevention induction). Finally, promotion and prevention are independent such that individuals can be high in both, low in both, or high in one and low in the other.

Like the ideal versus ought distinction, the promotion versus prevention distinction is motivationally significant by distinguishing between two different systems for approaching pleasure and avoiding pain. It is motivationally significant in another way as well. In brief, *the motivational state of being at “0” has a different valence in promotion versus prevention*. Historically, “0” in relation to “–1” or “+1” is treated as a neutral state. Importantly, regulatory focus theory does not treat “0” as neutral. Indeed, “0” has a different valence

in the promotion versus the prevention system (see also Brendl & Higgins, 1996).

For promotion goal pursuit, successfully attaining a positive outcome supports the goal pursuit because it represents the presence of a positive outcome or a *gain*, and as such it has positive valence. Not attaining a positive outcome impedes promotion goal pursuit because it represents the absence of a positive outcome or a *nongain*, and as such it has negative valence. This means that simply maintaining a status quo “0” is *not* experienced as neutral in the promotion system of goal pursuit; instead, it has *negative* valence because it fails to attain a positive outcome (failure to advance from “0” to “+1”). In contrast, for prevention goal pursuit, maintaining a status quo “0” has *positive* valence because it represents the absence of a negative outcome or a *nonloss*. Thus, once again, “0” is *not* experienced as neutral but instead has positive valence (success in maintaining “0” against “-1”). What has negative valence for prevention goal pursuit is failing to maintain a status quo “0” against a “-1,” which represents the presence of a negative outcome or a *loss*.

There is a third way that the distinction between the promotion and prevention systems has general motivational significance. It reveals the distinct motivational underpinnings of two general strategies of goal pursuit—*eager* strategies and *vigilant* strategies. There is a natural preference in the promotion system for using eager strategies that advance the goal pursuit from the current state to “+1.” Eager strategies *fit* promotion (Higgins, 2000). Eager strategies and a promotion focus support and strengthen one another (Higgins, 2006). In contrast, there is a natural preference in the prevention system for using vigilant strategies that carefully maintain the current satisfactory state of “0” against “-1.” Vigilant strategies *fit* prevention; they support and strengthen one another (Higgins, 2000, 2006). This natural fit does not mean that promotion and eagerness or prevention and vigilance are redundant variables because a current situation, such as receiving instructions from your supervisor, could force you to use strategies that are a nonfit with your focus, such as being told to be vigilant when you have a promotion focus. These conditions of regulatory fit and nonfit have their own significant motivational consequences (Higgins, 2000, 2005).

FOUNDATIONAL RESEARCH

There is foundational research that highlights how the differences between the promotion and prevention systems outlined above translates into different ways of seeing the world, different ways of dealing with tasks, different responses to failure, and different processes of decision-making that intensify value.

DIFFERENT WAYS OF SEEING THE WORLD

At the time that regulatory focus theory began to emerge from self-discrepancy theory, Higgins, Roney, Crowe, and Hymes (1994) conducted a study testing whether a situational induction of either ideal-promotion or ought-prevention would influence whether eager-related or vigilant-related story events would be better remembered. In the first regulatory focus priming study, undergraduate participants were asked to report either on how their hopes had changed over time (priming ideal-promotion) or on how their sense of obligation had changed over time (priming ought-prevention). They then read about several episodes that occurred over a few days in the life of another student. In the episodes where the target was trying to approach a desired end-state, the target used either an eager approach strategy (e.g., Because I wanted to be at school for the beginning of my 8:30 psychology class which is usually excellent, I woke up early this morning) or a vigilant avoidance strategy (e.g., I wanted to take a class in photography at the community center, so I did not register for a class in Spanish that was scheduled at the same time). The study found that the participants remembered episodes involving an eager approach strategy significantly better when ideal-promotion was primed than when ought-prevention was primed, whereas the reverse was true for remembering episodes involving a vigilant avoidance strategy.

DIFFERENT WAYS OF DEALING WITH TASKS

As discussed earlier, when individuals are in a promotion focus, motivational strength should be higher if they have an eager approach orientation during the goal pursuit than an avoidant vigilant orientation, and the opposite should be true for individuals in a prevention focus. Moreover, the greater motivational strength from such fit should translate into superior performance. Förster, Higgins, and Idson (1998) tested this hypothesis in a set of studies in which they either measured or manipulated participants' regulatory focus. The undergraduate participants were asked to perform an arm-pressure procedure while completing a set of anagrams. Half of the participants pressed upward on the bottom of a surface—which involves arm flexion, a motor action previously shown to induce an eager-related approach orientation (Cacioppo, Priester, & Berntson, 1993). The other half of the participants pressed downward on the top of a surface—which involves arm extension, a motor action previously shown to induce a vigilant-related avoidance orientation. Förster *et al.* (1998) found that the promotion-focused participants who engaged in arm flexion found more anagrams than those who engaged in arm extension, whereas the reverse was true for prevention-focused participants.

Förster *et al.* (1998) also found that as the participants proceeded through the anagram sets (from the first to the last), there was a “goal looms larger” effect of increased arm pressure as participants got closer to the end of the anagram sets, with this positive gradient being obtained for arm flexion for the promotion participants and for arm extension for the prevention participants. Importantly, this evidence for a “goal looms larger” effect indicates that *both* promotion and prevention participants experienced their task as approaching desired end-states (i.e., *both* approaching pleasure). The difference between promotion and prevention was at the strategic level, that is, *two different ways to approach pleasure*, with strategic eager approach (arm flexion) becoming stronger and stronger for promotion participants as they neared task completion and strategic vigilant avoidance (arm extension) becoming stronger and stronger for prevention as they neared task completion.

Later studies by Förster, Higgins, and Bianco (2003) replicated this “goal looms larger” effect while, in addition, testing the prediction that, when faced with a trade-off between speed and accuracy, promotion participants would emphasize eager-related speed, whereas prevention participants would emphasize vigilant-related accuracy. In a pair of studies in which promotion- and prevention-focused participants were asked to complete a series of four “connect-the-dot” pictures, Förster *et al.* (2003) assessed the number of dots participants connected for each picture within the allotted time frame, which constituted a measure of speed of goal completion. They also assessed the number of dots participants *missed* up to the highest dot they reached for each picture, which constituted a (reverse) measure of accuracy of goal completion. As predicted, promotion-focused participants were faster (i.e., got through a greater percentage of the pictures in the allotted time), whereas prevention-focused participants were more accurate (i.e., made fewer errors in the portions of the pictures that they had completed). Förster *et al.* (2003) also found that the promotion-focused participants became faster and faster (i.e., more and more eager) as they moved through the task from the first to the final picture, whereas prevention-focused participants became more and more accurate (i.e., more and more vigilant). These latter findings again reflect the “goal looms larger” effect, whereby strategic motivation increases as people get closer and closer to goal completion.

DIFFERENT RESPONSES TO FAILURE

As discussed earlier, research on self-discrepancy theory showed that people’s emotional responses to failure are different when they are in an ideal-promotion focus versus an ought-prevention focus—having dejection-related emotions in the former and agitation-related emotions

in the latter. There is also a difference between promotion and prevention in how people imagine after a failure how things might have turned out differently had they taken certain actions or *not* taken certain actions—*counterfactual thinking*. *Additive* counterfactuals are thoughts about what might have happened had one taken a different action. *Subtractive* counterfactuals are thoughts about what might have happened had one *not* taken a particular action (Roese, 1997). Roese, Hur, and Pennington (1999) examined regulatory focus differences in people's likelihood of generating additive versus subtractive counterfactuals in response to a failure.

Because an additive counterfactual leads people to imagine how things might have turned out differently had they not missed an opportunity for advancement, that is, *the painful failure to attain a "+1" (a nongain)*, this counterfactual represents an eager strategy of reversing a past error of omission and thus should be preferred by people with a promotion focus. In contrast, because a subtractive counterfactual leads people to imagine how things might have turned out differently had they avoided making a mistake, that is, *the painful failure of committing a "-1" (a loss)*, this counterfactual represents a vigilant strategy of reversing a past error of commission and thus should be preferred by people with a prevention focus. In one study conducted by Roese *et al.* (1999), participants read hypothetical scenarios involving either promotion failures (i.e., failures to attain accomplishment-related goals) or prevention failures (i.e., failures to attain safety-related goals). Participants were then asked, for each scenario, to expand in writing on a counterfactual stem reading, "If only ...".

As predicted, participants who had received promotion-framed scenarios were more likely than participants who had received prevention-framed scenarios to generate additive counterfactuals. The reverse was true for generating subtractive counterfactuals. Supporting the regulatory focus link to different emotional reactions to failure, the same promotion versus prevention difference in the likelihood of generating additive versus subtractive counterfactuals, respectively, was found in another study by Roese *et al.* (1999) in which either a promotion or prevention focus was induced in participants by having them think of a negative experience they had had within the past year that involved, respectively, either feeling *dejected* or feeling *agitated*.

DIFFERENT PROCESSES OF DECISION-MAKING THAT INTENSIFY VALUE

In a study of regulatory fit effects on intensifying value, Higgins, Idson, Freitas, Spiegel, and Molden (2003) tested the hypothesis that having a promotion versus a prevention focus would interact with an eager versus vigilant decision-making process. Participants were asked to choose between a coffee mug and a disposable pen. The coffee mug was pretested to be preferred

by the participants. Half of the participants were asked to think about what they would *gain* if they chose each object (an eager decision-making process), and the other half were asked to think about what they would *lose* if they did *not* choose each object (a vigilant decision-making process). Note that for *both* decision-making processes, it is the positive or pleasant properties of the two objects that were emphasized in the instructions—positive properties they would gain (eager process) or would not lose (vigilant process) by choosing an option. Thus, once again, both conditions concerned approaching a desired end-state. What varied was the strategic process for making the choice—either an eager or a vigilant process.

As intended, almost all participants chose the mug and it is these participants who are considered in the analyses. In one study, the participants were given the opportunity to own the mug by offering their own money to buy it. They knew that their offer had to be above a set price (hidden in an envelope) in order for them to receive the mug “for the price that you offered.” Promotion-focused participants offered more money for the mug when they had used an eager than a vigilant decision-making process and the reverse was true for prevention-focused participants. In one study, in which the price of the nonchosen object (i.e., the pen) was also assessed, the positive value of the nonchosen object was also greater in the fit conditions (i.e., promotion focus-eager decision; prevention focus-vigilant decision) than the nonfit conditions (i.e., promotion focus-vigilant decision; prevention focus-eager decision). Thus, fit intensified the positive value of both the chosen and nonchosen objects. This finding rules out a dissonance-based (Festinger, 1957) or self-perception-based (Bem, 1967) explanation of the findings, because these theories predict that the value of the nonchosen object would *decrease*.

AREAS OF CUTTING-EDGE WORK

Promotion and prevention self-regulation function at the system level of self-regulation. Eagerness and vigilance function at the strategic level. Recent research on regulatory focus has been concerned with the implications of considering the next, lower level in the hierarchy of self-regulation—the tactical level (Scholer & Higgins, 2008). Whereas strategies serve systems, such as eager strategies serving the promotion system and vigilant strategies serving the prevention system, tactics serve strategies. And which tactic serves a particular strategy at a particular time depends on how the regulatory system as a whole is doing at that time—an assessment or monitoring of the current state of affairs for that system. For example, whether it is risky or conservative tactics that will better serve the prevention system depends on whether the current state is a satisfactory “0” or a threatening “–1.”

Early research testing regulatory focus theory (e.g., Crowe & Higgins, 1997; Levine, Higgins, & Choi, 2000) found that individuals or groups who were performing a recognition memory task in a prevention focus—compared to those in a promotion focus—were more likely to make conservative decisions (a tendency during the memory test to say “No” to both new and old items to ensure against errors of commission) than to make risky or lenient decisions (a tendency to say “Yes” to both new and old items to ensure against errors of omission). When making the decision to be risky or conservative, the participants in these early studies were dealing with neutral or positive stimuli and were themselves in a satisfactory or positive condition (a positive state of affairs). What would happen if, instead, prevention-focused participants were dealing with negative stimuli or were themselves in a negative condition (a negative state of affairs)? This question was addressed by Scholer and her colleagues in a couple of research programs.

The first research program reexamined the recognition memory decisions of prevention-focused participants (vs promotion-focused) for stimuli that this time were *negative* (e.g., vomit; decay) rather than neutral or positive (Scholer, Stroessner, & Higgins, 2008). For these negative stimuli, Scholer *et al.* (2008) found that participants had a risky detection bias rather than a conservative bias. Thus, in order for prevention-focused individuals to be appropriately vigilant for the occurrence of negative objects or events, they need to be willing to take a “risk” and falsely identify something as a negative item that they have seen before even when they have not (i.e., make an error of commission).

This willingness of prevention-focused individuals to make a tactically risky decision when the current state of affairs is threatening, that is, tactical risk in the service of vigilance, was also clearly demonstrated in another program of research by Scholer, Zou, Fujita, Stroessner, and Higgins (2010). Using a “two-study” paradigm, the participants in one experiment were paid to complete a questionnaire battery and were then given a choice to leave or to invest their payment in a second, stock-investment study. Most participants decided to invest in the stock-investment study. At the end of the first round of investing, all participants learned that they had lost not only their original investment but also additional money—a *real loss*. At this point, participants were given a choice between investing in either a risky stock that could make up for all of their loss and a conservative stock where they were more likely to make money on the investment but not enough to bring them back to where they began. The expected value of these stocks was the same, but the risky stock was riskier both in that its variance was greater and participants perceived it as riskier. The study found that participants who were more prevention-focused were *more* likely to choose the riskier stock.

However, this was not the end of the story. A second study included a different pair of options. Now *both* the risky and the conservative options had the potential of returning participants to their break-even point, with the more conservative option being more likely to reach “0,” and the more risky option being less likely to definitely reach “0” but with some potential to go well beyond “0.” Now the more prevention-focused individuals were *less* likely to choose the risky option. Together, these studies make clear that what matters to prevention-focused individuals is to do what is necessary to restore a nonloss by returning from “-1” to “0.” If only the risky option can do this, then they will choose the risky option. If both options can do it and the conservative option is more likely to do it, then they will choose the conservative option.

Recent research by Franks and her colleagues provides another illustration of prevention-focused individuals being more likely than promotion-focused individuals to choose a “risky” tactic in the service of vigilance but being less likely under other conditions (Franks, Champagne, & Higgins, 2012; Franks, Reiss, Cole, Friedrich, Thompson, & Higgins, 2013). Importantly, this research also extends the testing of regulatory focus theory predictions from human populations to monkeys and rats. The behavior of the monkeys and rats in their cage homes, that is, seeking safety versus seeking food treats, allowed promotion and prevention individuals to be identified. Then their tactical behavioral choices were examined under other, different conditions. For example, the monkey study was with cotton-top tamarins and the responses of promotion and prevention monkeys to the introduction of objects into their cage were examined. The specific tactical behavior examined was the speed of approaching the object. Under most conditions, approach speed was faster for promotion than prevention. However, when the object was new and would not provide a food treat, approach speed was faster for prevention than promotion. The absence of a food treat made this condition a nongain for promotion and thus decreased approach speed. However, the new object was a prevention-focused threat, that is, a potential loss, and thus it needed to be approached and checked out. Such checking behavior by prevention-focused animals is an approach tactic in the service of being vigilant (see also Franks *et al.*, 2012).

Another area of cutting-edge work also shows, like the previous studies, that the self-regulatory distinction between promotion and prevention is not simply approach versus avoidance. This new work also demonstrates the utility of functional magnetic resonance imaging technology for examining such issues (see also Cunningham, Raye, & Johnson, 2005). Specifically, Strauman *et al.* (2013) examined the neural correlates of priming promotion ideal goals versus prevention ought goals, and correlated this goal-related activation to both a chronic measure of promotion and prevention orientation (the

Regulatory Focus Questionnaire, Higgins *et al.*, 2001) and to a well-established chronic measure of approach and avoidance orientation (the Behavioral Inhibition System/Behavioral Activation System scale, Carver & White, 1994). The study found that distinct neural regions were activated by promotion ideal goals versus prevention ought goals. In addition, this differential activation was correlated with individual differences in chronic promotion and chronic prevention, respectively, but it was *not* correlated with individual differences in chronic approach and chronic avoidance.

KEY ISSUES FOR FUTURE RESEARCH

There are two key issues that need to be addressed in future research to understand better the nature and the applicability of the regulatory focus distinction between promotion and prevention. First, we need to know more about whether promotion and prevention are best characterized as competing motivations, where only one can function at a time, or as independent motivations that can both be active at the same time and even work together effectively. Second, there is the issue of whether the laboratory findings about how promotion and prevention work can be generalized to everyday situations; that is, can we move from past success in establishing internal validity to evidence for generalizability and applicability?

ARE PROMOTION AND PREVENTION COMPETITORS OR PARTNERS?

There are ways to think about promotion and prevention that make them seem like opposite motivational orientations that would naturally come into conflict with one another. For example, prevention thinks of a satisfactory status quo "0" as a positive state that needs to be maintained whereas promotion thinks of "0" as a negative, nongain state that needs to be abandoned in order to advance to a better "+1" state. The question is, should I move away from "0" or stay at "0?" Put this way, this creates a conflict. As another example, if promotion takes the position that accuracy (or quality) must be sacrificed for the sake of speed (or quantity) and prevention takes the opposite position, then there would again be a conflict. As a third example, if promotion's position in a signal detection recognition memory task is that a risky tactic of saying "Yes" to test items (ensuring against errors of omission) is better than a conservative tactic of saying "No" (ensuring against errors of commission), whereas prevention's position is opposite, once again conflict would occur. As a final example, Förster and Higgins (2005) found using the Navon (1977) task where large letters are made up of small letters, for example, a global large H made up of local small F's, that participants with a stronger promotion focus were faster to process the global than the local letters and the

reverse was true for individuals with a stronger prevention focus. So what are you looking at, a global H or local F's? A recipe for conflict.

These examples support the conclusion that promotion and prevention are competing forces that conflict with one another and thus promotion and prevention cannot work together as partners. Is this conclusion correct? To answer this question, it is useful to distinguish between two versions of this conclusion—simultaneous promotion and prevention versus successive promotion and prevention. The conclusion is not correct for the successive case because promotion and prevention could work together as partners by taking turns being the dominant motivational force. Such turn taking could be very advantageous. As just one example, Fugelstad, Rothman, and Jeffery (2008) found that for health programs of smoking cessation and weight loss, it was advantageous for people to be in a promotion focus at the beginning of the program when behavioral change needed to be initiated because they would be eager to move from the current status quo "0" to a more positive state (+1), and it was advantageous for people later when the initiated change needed to be maintained to be in a prevention focus because they would be vigilant to maintain their new status quo and not slip back to where they started (-1).

One could also think of taking turns between promotion and prevention in the Navon task in order to perceive correctly that the stimulus is a global large H made up of local small F's, and in a signal detection recognition memory task taking time to emphasize promotion and prevention in order to ensure against errors of omission *and* commission and thereby maximize correct discrimination. These are examples of how promotion and prevention can work together to produce a better outcome.

It is not always clear whether two motivational forces are working in parallel or in sequence. However, it should be noted that if it is a sequence, the time interval could be very fast—so fast that it could be considered simultaneous (in parallel). What this means is that the outcome will reflect the advantage of the two motivational forces being *both strong* and working together. This is the case for the speed-accuracy "trade-off" (Förster *et al.*, 2003). This trade-off is sometimes discussed as if there were a negative correlation between speed and accuracy such that those individuals who have the highest speed also have the lowest accuracy, and vice versa. However, it is possible for some individuals to be high in speed and high in accuracy and others to be low in both. Similarly, in the signal detection recognition memory task, rather than individuals who have the least errors of omission necessarily having the most errors of commission and vice versa (a negative correlation), it is possible for some individuals to be low in both kinds of errors and others to be high in both. What this would mean is that there could be a performance advantage when individuals are strong in both promotion and prevention or when

teams have some individuals who are strong in promotion and others who are strong in prevention. Future research needs to examine this possibility.

What we do know is that satisfaction in romantic couples is greater when one partner has a strong promotion focus and the other partner has a strong prevention focus; that is, when there is complementarity rather than similarity of focus. Bohns *et al.* (2013) found that the pairing of a relationship partner who prefers to pursue goals eagerly with a relationship partner who prefers to pursue goals vigilantly led to positive relationship outcomes when the partners agreed on which goals to pursue. Having available both eager and vigilant strategic preferences in the relationship allows these couples to “divide and conquer” their goal activities (e.g., cooking dinner together) such that each partner can take on his or her preferred eager or vigilant strategic role.

One can understand this case, and other cases where promotion and prevention can work together effectively, in classic negotiation terms. The examples of conflict between promotion and prevention that I discussed earlier are cases where, as I purposely described them, promotion is taking one position and prevention is taking an opposite position, which produces conflict. However, effective negotiation involves treating differences as differences in *interests* rather than differences in *position*. When the negotiating sides have different interests or strengths of preferences a “win-win” outcome is achieved by trading off one preference for another so that each side is given what they want most—trading across issues to let each side have what they want (logrolling). As in the Bohns *et al.* (2013) case of letting the promotion partner do the eager parts of the goal task and letting the prevention partner do the vigilant parts, rather than promotion insisting they both be eager and prevention insisting they both be vigilant, this allows promotion and prevention to work together effectively as partners.

HOW GENERALIZABLE AND APPLICABLE IS THE PROMOTION–PREVENTION DISTINCTION?

The above section already provides two clear examples of the promotion–prevention distinction being applicable to real-world issues in everyday life—being more effective in changing health habits by emphasizing promotion to initiate change and prevention to maintain change, and being more effective in working with your romantic partner by dividing labor so the promotion partner can be eager and the prevention partner can be vigilant. In addition, the work of Franks and her colleagues described earlier demonstrates that the promotion–prevention distinction generalizes to the behavior of nonhuman animals (monkeys and rats). I will now briefly mention a few other examples of general applicability.

The first is a study on shooting penalty shots in soccer where the participants were active soccer players in a regional league of the German Football Association (Plessner, Unkelbach, Memmert, Baltes, & Kolb, 2009). The study took place during one of the official training sessions. Each player participant took five penalty shots. The participants varied in chronic promotion and chronic prevention. The framing of how to succeed in the penalty shoot-out was experimentally manipulated. In the “success as gain (eager shooting)” condition, the participants were told “You are going to shoot five penalties. Your aspiration is to score at least three times.” In the “success as avoiding loss (vigilant shooting)” condition, the participants were told “You are going to shoot five penalties. Your obligation is not to miss more than two times.” Even for such seasoned soccer players who are highly skilled and always want to do their best, the shoot-out performance was about 30% better in the fit conditions (predominant promotion/gain; predominant prevention/avoid loss) than in the nonfit conditions (predominant promotion/avoid loss; predominant prevention/gain).

Another study investigated the relation between regulatory focus and the tendency for business managers to copy the managing behavior of their former manager after having earlier experienced this manager’s behavior as its recipient and later themselves taking on the same managing role (Zhang, Higgins, & Chen, 2011). Earlier experimental evidence that individuals with a stronger prevention (vs promotion) focus were more likely to copy others, because the behavior of others functions as a status quo norm to be maintained, was generalized to the field by surveying a sample of superior-subordinate dyads in real-world organizations. This field study found that current managers copied the managing style that they had received from their superior *even when* they reported that they *disliked* that style when it was used with them.

Another study (Wallace & Chen, 2006) examined employees who worked in an organization’s facilities department (e.g., plumbing; electrical) where their supervisors varied in their emphasis on safety (a situational safety climate variable) and they varied in conscientiousness (a personality variable). The dependent measures were the employees’ productivity and their safety performance. The study found that the impact of safety climate and conscientiousness on productivity and safety performance were mediated by the employees’ promotion and prevention focus. For example, having a situational safety climate positively related to having a prevention focus and having a prevention focus positively related to safety performance, whereas having a situational safety climate negatively related to having a promotion focus and having a promotion focus negatively related to safety performance. What this and other studies clearly show is that the promotion–prevention distinction is applicable to real-world issues in everyday life.

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