

# Journal of Personality and Social Psychology

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Online First Publication, April 29, 2013. doi: 10.1037/a0032503

### CITATION

Hui, C. M., Molden, D. C., & Finkel, E. J. (2013, April 29). Loving Freedom: Concerns With Promotion or Prevention and the Role of Autonomy in Relationship Well-Being. *Journal of Personality and Social Psychology*. Advance online publication. doi: 10.1037/a0032503

# Loving Freedom: Concerns With Promotion or Prevention and the Role of Autonomy in Relationship Well-Being

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Close relationships fulfill many important needs. However, not all of these needs are equally salient under all circumstances. This article investigated how the broad motivational context in which people evaluate relationships affects the salience of particular needs, thereby altering how the fulfillment of these needs predicts relationship well-being. Across 5 studies, participants reported how well their current romantic relationship met their needs for self-direction and autonomy, either by providing support for the fulfillment of these needs (Studies 1–3) or by allowing them to feel that they autonomously choose to remain in the relationship (Studies 4 and 5). In motivational contexts emphasizing personal growth and advancement (*promotion*), one's own independent priorities could become more salient, increasing the relevance of autonomy experiences when evaluating relationship well-being. However, in motivational contexts emphasizing safety and security (*prevention*), autonomy experiences might not be especially salient and thus might not have any special relevance when evaluating relationship well-being. Both measurements and manipulations of participants' motivations for growth or security consistently supported these hypotheses.

*Keywords:* regulatory focus, autonomy, relationship well-being, close relationships

Beyond meeting people's fundamental desires for social connection, close relationships can help people fulfill a variety of other important needs. For example, relationship partners provide feelings of security and protection, support and assistance toward the completion of agentic goals, and verification and expansion of one's own identity (e.g., Aron, Steele, Kashdan, & Perez, 2006; Bowlby, 1969; Coan, Schaefer, & Davidson, 2006; Feeney, 2004; Kwang & Swann, 2010; Reis, Collins, & Berscheid, 2000; Rusbult, Finkel, & Kumashiro, 2009). Moreover, people value relationships that are instrumental to their basic needs (Berscheid & Hatfield, 1969; Finkel & Eastwick, in press; La Guardia & Patrick, 2008). Thus, how well people feel that their relationships do fulfill different needs has emerged as a primary source of their evaluations of their relationship partners (Fitzsimons & Finkel, 2011; Maisel, Gable, & Strachman, 2008; Swann, Hixon, & De La Ronde, 1992).

However, given the variety of needs that close relationships can serve, it is unlikely that all of these needs will be equally salient at any given time. Depending on additional circumstances, such as trait- or state-level variation in the characteristics of the individuals

in the relationship or the larger social environment the relationship inhabits, some needs may achieve greater prominence than others. Those needs that are more prominent may then play a greater role, at least temporarily, in shaping how much people value their relationships and how they behave toward their relationship partners (e.g., Converse & Fishbach, 2012; Fitzsimons & Finkel, 2011; Fitzsimons & Fishbach, 2010; Fitzsimons & Shah, 2008). Therefore, the larger motivational context within which individuals evaluate a relationship could have important effects on how the various qualities of that relationship influence the way it is experienced and judged. The primary objective of the present research is to examine how changes in this motivational context alter the link between (a) relationship partners' perceptions of the fulfillment of particular needs by the relationship and (b) relationship well-being, both in terms of subjective evaluations of relationship quality and pro-relationship intentions following conflict.

In particular, we focus on one need that has been shown to have broad implications for the health and stability of relationships: the degree to which the individuals in the relationship maintain a sense of self-direction and choice, or *autonomy*, and feel that their partner respects and supports this autonomy (e.g., Deci, La Guardia, Moller, Scheiner, & Ryan, 2006; Patrick, Knee, Canevello, & Lonsbary, 2007). Research has shown that the more relationship partners feel autonomous within the relationship, the more they are attached to and willing to rely on their partner, and the more openly and effectively they cope with conflicts that arise. However, we propose that, although the fulfillment of autonomy needs is generally important for relationships, it may assume greater or lesser importance for people's evaluations of their relationship based on the priority they currently place on attaining personal growth and advancement, or *promotion concerns*, versus maintaining safety and security, or *prevention concerns* (see Higgins, 1997).

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Preparation of this article was supported in part by National Science Foundation (NSF) Grants BCS-719780 and BCS-0951571. The opinions and conclusions expressed herein are those of the authors and do not necessarily reflect the opinions of the NSF.

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Because greater concerns with promotion and attaining growth may highlight the importance of self-direction and self-expansion, these concerns may increase the judged relevance of perceived satisfaction of autonomy needs when evaluating these relationships. In contrast, because greater concerns with prevention and maintaining security depend less on self-direction, these concerns may not increase the judged relevance of perceived autonomy-need satisfaction when evaluating relationships. Thus, we investigate how chronic or temporary activation of people's promotion concerns might increase the role that the satisfaction of autonomy needs plays in their relationship well-being, whereas chronic or temporary activation of people's prevention concerns might be less related to the connection between the satisfaction of autonomy needs and relationship well-being.

Before elaborating on these specific proposals, we first review previous research on needs for autonomy in close relationships and on general concerns with promotion and prevention. We then further discuss why promotion concerns might be expected to increase the judged relevance of autonomy needs for relationship well-being and outline our specific hypotheses. Finally, we present five studies that support these hypotheses and describe the broader implications of considering the larger motivational context in which people represent and evaluate their close relationships.

### Autonomy and Close Relationships

The fulfillment of needs for autonomy and self-direction has long been considered fundamental to people's functioning across many different cultures (Ryan & Deci, 2000). According to self-determination theory, people who feel autonomous experience a sense of self-governance and choice about their behaviors, whereas those who do not feel autonomous experience a sense of control and pressure from "alien" impulses or externally imposed incentives (Ryan & Deci, 2006). Much research across a wide variety of domains has shown that, whereas circumstances and individuals that support feelings of autonomy improve performance and well-being, circumstances and individuals that instead create feelings of coercion or control decrease performance and well-being (Ryan & Deci, 2000, 2006).

The experiences of autonomy or control defined by self-determination theory have been most thoroughly studied in the context of people's achievement of their personal goals and individual well-being, but more recent research has begun to examine the implications of these experiences in the context of interdependent outcomes and relationship well-being. In their review of this latter research, La Guardia and Patrick (2008) have identified two primary ways in which people may feel autonomous or controlled in their close relationships. The first way is that individuals may feel that a relationship partner directly supports their autonomy by "acknowledging [their] perspective, providing choice, encouraging self-initiation, and being responsive to [them]" (Deci et al., 2006, p. 313), which helps them fulfill their basic desires for self-direction. Studies have shown that, analogous to research in other domains, perceiving this type of *autonomy support* from a relationship partner is beneficial for the relationship and is associated with greater attachment security, commitment, relationship satisfaction, and sustained positive feelings following relationship conflict (Deci et al., 2006; Koestner, Powers, Carbonneau, Milyav-

kaya, & Chua, 2012; La Guardia, Ryan, Couchman, & Deci, 2000; Patrick et al., 2007; Slotter & Finkel, 2009).

The second way in which people may feel autonomous in their relationships is their *autonomous intentions* regarding the relationship itself, that is, the extent to which they experience their broader motivations for sustaining a relationship in a more autonomous or controlled way (e.g., Blais, Sabourin, Boucher, & Vallerand, 1990). Relative to autonomy support, this experience of autonomy derives less from direct experiences with the actions of one's partner. That is, people may feel that they have freely chosen a particular relationship and that they stay in the relationship for autonomous reasons (e.g., enjoyable moments together) or, instead, that they are controlled by the relationship and feel pressured to stay (e.g., due to financial security and the absence of romantic alternatives). Thus, whereas autonomy support influences how much a person experiences the freedom to pursue personal goals that may exist outside of the relationship, autonomous intentions, by definition, reflect how much a person experiences the freedom to maintain the relationship itself. Studies have also shown that more autonomous intentions to remain in a relationship are similarly associated with greater attachment security, relationship satisfaction, and reduced defensiveness following relationship conflict (Blais et al., 1990; Gaine & La Guardia, 2009; Knee, Lonsbary, Canevello, & Patrick, 2005; Patrick et al., 2007).

Thus, in accordance with the evidence that experiences of autonomy appear to have generally positive consequences and should be something that all individuals desire (Deci & Ryan, 2000; Ryan & Deci, 2000), people generally have more positive evaluations of, and take actions to protect, relationships experienced as more autonomous compared to relationships experienced as more controlling (Patrick et al., 2007). However, the attention that people pay to any given motivational concern, including autonomy, might fluctuate depending upon the other motivational concerns that are also active. That is, as noted above, because the larger motivational context in which people evaluate their relationships could shift attention toward relevant experiences and away from irrelevant experiences (Bijleveld, Custers, & Aarts, 2009; Markman, Brendl, & Kim, 2007; Radel & Clement-Guillotin, 2012; see Molden & Higgins, 2012), the satisfaction of autonomy needs could, at times, become more or less prominent in people's evaluations of relationship well-being depending upon this motivational context. Therefore, we now consider a particular set of motivational concerns that we argue is especially relevant to how much people weight autonomy when evaluating the quality and value of their relationships.

### Concerns With Promotion or Prevention

Researchers have long studied the basic motivations that are central to people's thought and behavior (for a historical review, see Fiske, 2008; Pittman & Zeigler, 2007). Among these basic motivations, one frequent distinction is between concerns with growth (i.e., nourishment, advancement, and development) and concerns with security (i.e., shelter, safety, and protection; Bowlby, 1969; Maslow, 1955). Building upon this distinction, regulatory focus theory (Higgins, 1997) proposes that concerns with advancement (i.e., promotion) and security (i.e., prevention) not only represent different fundamental motives but also create different modes of goal-pursuit. These distinct modes, in turn, alter

people's sensitivities to particular types of information and the self-regulatory strategies they choose during goal pursuit (for a review, see Molden, Lee, & Higgins, 2008).

When concerned with promotion, people focus on attaining advancement and strive to exploit opportunities that will aid them in reaching what they view as ideals they hope to achieve. That is, they see themselves as working to approach the presence of positive outcomes (i.e., *gains*) while avoiding the absence of positive outcomes (i.e., missed opportunities, or *nongains*; Higgins, 1997; Molden et al., 2008). In contrast, when concerned with prevention, people focus on maintaining security and strive to protect against setbacks that might interfere with what they view as the standards that they need to uphold. That is, they see themselves as working to approach the absence of negative outcomes (i.e., safety from threats, or *nonlosses*) while avoiding the presence of negative outcomes (i.e., *losses*).

Because promotion concerns center on seeking advancement and gains, such concerns create a special interest in and sensitivity to information related to the evaluation and pursuit of such advancement; however, because prevention concerns center on maintaining security and protecting against loss, such concerns create interest in and sensitivity to information related to the evaluation and pursuit of such security (cf. Kunda, 1990). Indeed, multiple studies have demonstrated that stronger promotion concerns lead people to pay more attention to and be more influenced by information related to gains and advancement, whereas stronger prevention concerns lead people to pay more attention to and be more influenced by information related to security and loss-prevention (e.g., Evans & Petty, 2003; Higgins & Tykocinski, 1992; Jain, Lindsey, Agrawal, & Maheswaran, 2007; Lee & Aaker, 2004; Li et al., 2011; Touryan et al., 2007). In addition, stronger promotion concerns lead to greater engagement and performance when people are visualizing or experiencing successful advancement, whereas stronger prevention concerns lead to greater engagement and performance when people are visualizing or experiencing threats to security (e.g., Förster, Grant, Idson, & Higgins, 2001; Hazlett, Molden, & Sackett, 2011; Idson & Higgins, 2000; Kurman & Hui, 2012; see also Markman, Baldwin, & Maddox, 2005).

Beyond affecting sensitivity to particular types of information, promotion and prevention concerns also influence people's priorities during goal pursuit (Molden, 2012; Molden & Higgins, 2012). The focus on advancement arising from promotion concerns motivates strategies of eagerly seeking all opportunities for advancement, even at the risk of committing errors and accepting losses. In contrast, the focus on security arising from prevention concerns motivates strategies of vigilantly protecting against losses, even at the risk of missing opportunities and forgoing gains. Many studies have illustrated these strategic differences in information seeking and goal pursuit and shown that stronger promotion concerns create preferences for divergent thinking and seeking many different alternative routes to success, whereas stronger prevention concerns create preferences for convergent thinking and narrowing in on the few most essential routes to success (e.g., Crowe & Higgins, 1997; Förster, Higgins, & Bianco, 2003; Hui & Molden, 2012; Kurman & Hui, 2012; Liberman, Idson, Camacho, & Higgins, 1999; Molden & Higgins, 2004, 2008; Molden & Hui, 2011; Pham & Chang, 2010).<sup>1</sup>

### Concerns With Promotion or Prevention and the Value of Autonomy

Given the different sensitivities and strategies generally evoked in the context of larger concerns with promotion or prevention, such concerns can influence how attuned and responsive people are to different aspects of their relationship. Previous studies have shown that stronger promotion concerns lead people to focus attention on achieving personal hopes and aspirations within the relationship and to place greater value on how their partners provide opportunities for growth and advancement. In contrast, stronger prevention concerns lead people to focus on fulfilling personal responsibilities and standards within the relationship and to place greater value on how their partners ensure safety and security (Molden & Finkel, 2010; Molden, Lucas, Finkel, Kumashiro, & Rusbult, 2009; Winterheld & Simpson, 2011; for a review, see Molden & Winterheld, in press). Therefore, when evaluating a relationship partner or deciding how to respond to a partner's behavior, concerns with promotion or prevention could influence how these different aspects of the relationship bear on such judgments and actions.

Before describing how concerns with promotion or prevention may moderate the judged relevance of autonomy experiences in people's relationship well-being, it is important to note that promotion or prevention concerns do not simply create an autonomous or a controlled experience in one's general goal pursuit (Molden & Miele, 2008; Moretti & Higgins, 1999a, 1999b). The achievements to which one aspires and the responsibilities one strives to uphold can both either be freely and autonomously chosen or experienced as coercive and externally imposed (Higgins, 1987; Moretti & Higgins, 1999a, 1999b). That is, a person who freely chooses to stay in a romantic relationship because of the intrinsic enjoyment she derives from the relationship can experience this enjoyment as an inherent positive feeling that comes from either attaining growth or maintaining security.<sup>2</sup> Thus,

<sup>1</sup> It is worth distinguishing our work on regulatory focus from the related work on approach and avoidance motivations in close relationships (Gable & Impett, 2012). At a conceptual level, promotion and prevention concerns are orthogonal to approach and avoidance motivations (see Molden et al., 2008; Molden & Miele, 2008; Scholer & Higgins, 2008). Indeed, as noted, individuals with promotion concerns focus both on approaching gains and avoiding nongains, and individuals with prevention concerns focus both on approaching nonlosses and avoiding losses (Higgins, 1997). Consistent with these theoretical distinctions, at an empirical level, whereas relationship well-being has been consistently shown to be fostered by approach motivations and undermined by avoidance motivations (e.g., Frank & Brandstatter, 2002; Impett, Gable, & Peplau, 2005; Impett et al., 2010; Impett, Strachman, Finkel, & Gable, 2008), multiple studies have now shown that, overall, relationship well-being can be fostered by both promotion and prevention concerns (Bohns et al., 2013; Molden & Finkel, 2010; Molden et al., 2009; Winterheld & Simpson, 2011), but through different means and different mechanisms (also see Molden & Winterheld, in press).

<sup>2</sup> Deci and Ryan (2000) have suggested that psychological motivations for security are never intrinsic and arise only as a deficit in one's fulfillment of autonomy, competence, or relatedness needs. Although our theorizing is consistent with the majority of Deci and Ryan's larger analysis of intrinsic versus extrinsic motivations, we take a different perspective on the point of security motivations. We instead propose that security is indeed an inherent need in its own right, as is consistent with many other traditional theories of motivation (e.g., Arndt & Vess, 2008; Bowlby, 1969; Higgins, 1997; Maslow, 1955; Pittman & Zeigler, 2007).

motivations that are autonomous, self-chosen, and inherently satisfying may include both promotion and prevention concerns. Similarly, a person who chooses to stay in a romantic relationship because of the extrinsic rewards it provides (e.g., access to money and instrumental support) can perceive these rewards as gains that she has the opportunity to exploit or as minimal standards that she feels a responsibility to meet. Thus, motivations that are controlling, external, and that serve as means to some further end may also include both promotion and prevention concerns. In other words, individuals can experience autonomy or control whether they are pursuing promotion-focused or prevention-focused relationship goals.

What we propose, however, is that experiences of autonomy within a relationship will be perceived as more relevant to relationship well-being when promotion versus prevention concerns are active. Seeking to achieve one's aspirations may emphasize one's own priorities independent of the preferences or priorities of one's partner (cf. Aaker & Lee, 2001; Lee, Aaker, & Gardner, 2000). That is, pursuing concerns with growth and advancement may be perceived as requiring greater autonomy to express one's own preferences, and, when engaging in such pursuits, how well people experience autonomy within a relationship could become particularly salient in their evaluations of relationship well-being. Therefore, this evaluation may be more heavily derived both from the partner's autonomy support for pursuit of their personal goals and from their perceived autonomy to stay in the relationship.

In contrast, seeking to uphold one's responsibilities may not emphasize independent priorities to the same extent (Aaker & Lee, 2001; Lee et al., 2000). Indeed, when engaging in such pursuits, people are typically more closely attuned to the interdependence or connection between their own and others' priorities, and how well the relationship supports their feelings of autonomy may not be especially salient. In fact, concerns for security could even lead to less emphasis on autonomy experiences within a relationship if such experiences could potentially signal disconnection or a lack of intimacy and were perceived as indicating a partner's neglect or indifference toward the relationship and one's own freedom to pursue alternative partners (e.g., Murray & Holmes, 2009; Rusbult & Buunk, 1993). Therefore, to summarize, whereas promotion concerns may increase the judged relevance of how well a relationship supports and fulfills autonomy needs for relationship well-being, prevention concerns may not increase the judged relevance of such support for relationship well-being, or could even decrease the relevance of such support when it is perceived as threatening to relationship maintenance.

### Overview of the Present Studies

Thus, to summarize, our primary hypothesis was that promotion concerns increase the judged relevance of autonomy experiences within close relationships, as assessed by the association of these autonomy experiences with evaluations of relationship well-being. That is, because people may generally view pursuing growth and advancement as requiring greater autonomy, and thus be more sensitive to whether their relationships provide such autonomy when primarily focused on advancement, we predicted that as participants' promotion concerns increased, they would show a stronger positive association between autonomy experiences and relationship well-being. In contrast, because people may generally

view autonomy as less relevant for maintaining safety and security, and thus not possess any greater sensitivity as to whether relationships provide such autonomy when primarily focused on security, we predicted that as participants' prevention concerns increased, they would not show any increase in the association between autonomy experiences and relationship well-being, and might even show a decrease in this association.

We tested these hypotheses across five studies in which we measured (Studies 1a, 2, 3a, 5a, and 5b) or manipulated (Studies 1b, 3b, 4a, and 4b) participants' concerns with promotion or prevention and examined how these concerns moderated the association of (a) either perceived satisfaction of autonomy needs within the relationship (autonomy support; Studies 1–3) or perceived autonomy to stay in the relationship (autonomous intentions; Studies 4 and 5) with (b) diverse indicators of relationship well-being. Moreover, to demonstrate the unique relevance of experiences of autonomy among promotion-focused individuals, we contrasted the influence on relationship well-being of autonomy support with the influence of other important types of support, including perceived partner responsiveness (Studies 2 and 3) and support for other basic needs such as relatedness and competence (Study 3; e.g., La Guardia & Patrick, 2008; Reis, Clark, & Holmes, 2004; Reis et al., 2000).

### Study 1a: Chronic Promotion Concerns and the Value of Autonomy Support

Study 1a was designed as a preliminary test of whether promotion concerns are associated with stronger connections between perceived support of autonomy needs and relationship well-being. Participants reported their chronic promotion and prevention concerns, rated the autonomy support they received from their current romantic partner, and, as an indicator of relationship well-being, indicated the overall value they placed on the relationship.

### Method

**Participants.** Ninety-nine students at a private university in the United States (59 females,  $M_{\text{age}} = 18.72$ ,  $SD = 1.02$ ) filled out a battery of questionnaires in a mass-testing session in exchange for a course credit. All participants indicated that they were currently involved in a dating relationship of an average length of 15.75 months ( $SD = 14.13$ ).

**Materials and procedures.** Participants completed the following questionnaires.

**Chronic promotion and prevention concerns.** Participants first completed an 11-item measure of their chronic concerns with promotion (e.g., "I feel like I have made progress toward being successful in my life") and prevention (e.g., "Not being careful enough has gotten me into trouble at times" [reversed]; Higgins et al., 2001). This scale has been extensively validated in previous research (for a review, see Haws, Dholakia, & Bearden, 2010; Molden & Winterheld, in press). Participants filled out the items on a 5-point scale (1 = *strongly disagree* to 5 = *strongly disagree*), and separate indices were created for promotion concerns ( $\alpha = .66$ ,  $M = 3.95$ ,  $SD = 0.55$ ) and prevention concerns ( $\alpha = .81$ ,  $M = 3.22$ ,  $SD = 0.98$ ).

**Autonomy support.** Participants were then asked to think about their current romantic relationship and next to complete a

10-item autonomy support scale that measured their perceptions of how much this person supported their freedom of choice (Deci et al., 2006). The questionnaire was originally modified from the Health Care Climate Questionnaire (Williams, Grow, Freedman, Ryan, & Deci, 1996), and sample items included the following: "I feel that this person provides me with choices and options," and "This person tries to understand how I see things before suggesting a new way to do things." All of the items were answered on a 7-point scale (1 = *strongly disagree* to 7 = *strongly agree*) and were averaged into a single index ( $\alpha = .87$ ,  $M = 6.19$ ,  $SD = 0.71$ ).

**Relationship valuation.** Finally, participants reported how much they valued their current relationship with two items: "This relationship is very important to me," and "I value this relationship very much." These items were also answered on a 7-point scale (1 = *strongly disagree* to 7 = *strongly agree*) and were averaged into a single index ( $\alpha = .95$ ,  $M = 6.72$ ,  $SD = 1.14$ ).

## Results and Discussion

**Preliminary analyses.** Correlational analyses showed that perceptions of autonomy support were (marginally) related to chronic prevention concerns,  $r(99) = .18$ ,  $p = .08$ , but not to promotion concerns,  $r(99) = -.01$ ,  $p = .94$ .

**Primary analyses.** We conducted hierarchical regressions on relationship valuation with standardized scores of participants' promotion and prevention concerns and autonomy support entered simultaneously into the first step, followed by the Promotion  $\times$  Autonomy and Prevention  $\times$  Autonomy interactions into the second step. Consistent with our hypotheses, the results presented in Table 1 revealed that the association between autonomy support and relationship valuation was qualified by promotion concerns but not prevention concerns.

As depicted in Figure 1, simple-slope analyses (Aiken & West, 1991) showed that autonomy support was more strongly associated with relationship valuation among participants with strong promotion concerns (evaluated at +1 *SD* from the mean),  $\beta = .72$ ,  $t(93) = 4.45$ ,  $p < .001$ , than participants with weak promotion concerns (evaluated at -1 *SD* from the mean),  $\beta = .27$ ,  $t(93) = 2.00$ ,  $p = .05$ . Furthermore, promotion concerns were (marginally) negatively associated with relationship valuation when autonomy support was low (evaluated at -1 *SD* from the mean),  $\beta = -.29$ ,  $t(93) = -1.92$ ,  $p = .06$ , but were not associated with relationship valuation when autonomy support was high (evaluated at +1 *SD* from the mean),  $\beta = .16$ ,  $t(93) = 1.17$ ,  $p = .24$ .

Table 1  
Hierarchical Regression Analyses on Relationship Valuation in Study 1a

Predictor	$\beta$	$t$
Autonomy support	.51	5.96***
Promotion	-.06	-0.70
Prevention	.19	2.26*
Promotion $\times$ Autonomy Support	.22	1.95*
Prevention $\times$ Autonomy Support	-.08	-1.05

Note. Degrees of freedom for  $t$  statistics: Step 1 (main effects) = 95; Step 2 (interactions) = 93.

\*  $p \leq .05$ . \*\*\*  $p \leq .001$ .

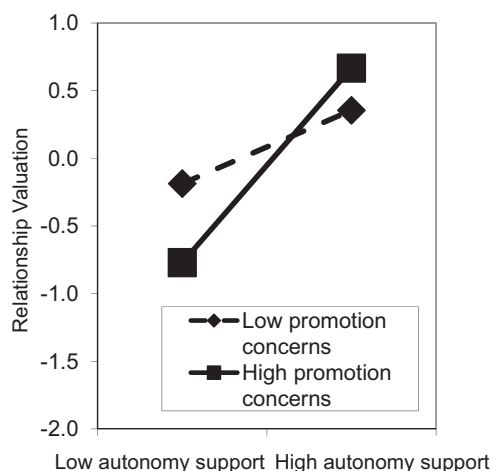


Figure 1. Relationship value as a function of chronic promotion concerns and support for autonomy needs (Study 1a).

In sum, Study 1a provided initial support for our hypotheses. As participants' chronic promotion concerns increased, this association between autonomy support and relationship valuation was stronger. In contrast, the strength of participants' prevention concerns did not moderate the association between autonomy support and relationship valuation.

## Study 1b: Induced Promotion Concerns and the Value of Autonomy Support

The primary objective of Study 1b was to extend Study 1a by establishing the causal role of broad concerns with promotion or prevention on the association of perceived autonomy support with relationship well-being. Therefore, we directly manipulated participants' promotion or prevention concerns and then assessed how their ratings of autonomy support by a relationship partner predicted their ratings of relationship well-being, as measured by their commitment to and satisfaction with their partner. Similar to Study 1a, we predicted that temporarily activating promotion versus prevention concerns would produce stronger association between autonomy support and relationship well-being.

## Method

**Participants.** One hundred and twelve volunteers residing in the United States (77 females,  $M_{\text{age}} = 27.78$ ,  $SD = 9.49$ ) completed an online study administered on the Amazon Mechanical Turk (mTurk) website (Buhrmester, Kwang, & Gosling, 2011; Paolacci, Chandler, & Ipeirotis, 2010).<sup>3</sup> Participants were all cur-

<sup>3</sup> In each of the five studies conducted in the mTurk website (i.e., Studies 1b, 2, 3b, 4a, and 4b), potential participants first reported mTurk Worker ID number in the online questionnaire. They were only allowed to proceed if their Worker ID number did not match with those of the participants who had participated in any related studies. In each study, we also administrated an instructional manipulation check (Oppenheimer, Meyvis, & Davidenko, 2009) to ensure that participants closely followed instructions. Data from participants who failed to correctly respond to this manipulation check were not included in the subsequent analyses reported.

rently involved in a heterosexual dating relationship of an average length of 38.00 months ( $SD = 38.66$ ). None of them were married.

**Materials and procedures.** We first manipulated promotion and prevention concerns, then measured relationship well-being, and finally measured perceived autonomy support.

**Manipulation of promotion and prevention concerns.** Participants were first randomly assigned to one of two experimental conditions. Previous research has shown that thinking about one's hopes, ideals, and aspirations creates a focus on attainment and gains that temporarily induces promotion concerns for subsequent tasks (Higgins, 1997). Accordingly, participants in the *promotion* condition were first asked to write a brief essay about their own personal hopes and aspirations both now and in the past. In contrast, thinking about one's duties and responsibilities has been found to create a focus on maintenance and security that temporarily induces prevention concerns for subsequent tasks. Accordingly, participants, in the *prevention* condition were first asked to write a brief essay about their own personal duties and responsibilities both now and in the past (Higgins, 1997). Many previous studies have successfully used these manipulations to activate promotion or prevention concerns (e.g., Higgins, Roney, Crowe, & Hymes, 1994; Molden & Higgins, 2004, 2008; Molden & Hui, 2011).

**Relationship well-being.** Immediately after writing the essay, participants completed a 12-item relationship commitment measure ("I feel very attached to our relationship—very strongly linked to my partner"; Arriaga & Agnew, 2001). This scale was averaged to form a single index ( $\alpha = .90$ ,  $M = 4.30$ ,  $SD = 0.64$ ). They next completed a 5-item relationship satisfaction measure ("I feel satisfied with our relationship"; Rusbult, Martz, & Agnew, 1998). This scale was also averaged to form a single index ( $\alpha = .89$ ,  $M = 4.13$ ,  $SD = 0.71$ ). Both measures were answered on 5-point scales (1 = *strongly disagree* to 5 = *strongly agree*). Given that the two scales were highly correlated,  $r(112) = .70$ ,  $p < .001$ , the two scores were standardized and averaged to create a composite score of relationship well-being.

**Autonomy support.** Finally, participants completed a three-item autonomy support scale developed by La Guardia et al. (2000; e.g., "When I am with my partner, I feel free to be who I am"). These items were answered on a 7-point scale (1 = *strongly disagree* to 7 = *strongly agree*) and were averaged into a single index ( $\alpha = .83$ ,  $M = 6.01$ ,  $SD = 1.16$ ).

## Results and Discussion

**Preliminary analyses.** Initial regression analyses showed that activating promotion or prevention concerns (coded as  $-1 = \textit{prevention}$ , and  $1 = \textit{promotion}$ ) did not affect mean levels of perceived autonomy support,  $\beta = -.01$ ,  $t(110) = -0.01$ ,  $p = .91$ .

**Primary analyses.** We next conducted a hierarchical regression analysis on relationship well-being with a variable representing participants' activated concerns ( $-1 = \textit{prevention}$ , and  $1 = \textit{promotion}$ ) and standardized scores of autonomy support entered into the first step, followed by the Activated Concerns  $\times$  Autonomy Support interaction into the second step. Consistent with our hypotheses, the results presented in Table 2 revealed that the association between autonomy support and relationship well-being was qualified by participants' activated promotion or prevention concerns.

Table 2  
*Hierarchical Regression Analyses on Relationship Well-Being in Study 1b*

Predictor	$\beta$	$t$
Autonomy support	.61	8.22***
Prime (1 = Promotion, $-1 = \textit{Prevention}$ )	-.18	-2.49**
Prime $\times$ Autonomy Support	.18	2.22*

Note. Degrees of freedom for  $t$  statistics: Step 1 (main effects) = 109; Step 2 (interactions) = 108.

\*  $p \leq .05$ . \*\*  $p \leq .01$ . \*\*\*  $p \leq .001$ .

As depicted in Figure 2, simple-slope analyses revealed that autonomy support was more strongly associated with relationship well-being among promotion-primed participants,  $\beta = .85$ ,  $t(108) = 6.45$ ,  $p < .001$ , than among prevention-primed participants,  $\beta = .50$ ,  $t(108) = 5.76$ ,  $p < .001$ . Furthermore, promotion-primed participants reported less relationship well-being than prevention-primed participants when autonomy support was perceived as low ( $-1 SD$  from the mean),  $\beta = -.36$ ,  $t(108) = -3.35$ ,  $p = .001$ , but reported similar levels of relationship well-being as prevention-primed participants when autonomy support was perceived as high ( $+1 SD$  from the mean),  $\beta = -.01$ ,  $t(108) = -0.08$ ,  $p = .94$ .

Consistent with previous research (Deci et al., 2006; La Guardia et al., 2000; Patrick et al., 2007) and Study 1a, perceived support of one's autonomy needs within a romantic relationship was positively associated with relationship well-being. However, participants whose promotion versus prevention concerns were temporarily activated showed a stronger association between autonomy support and their relationship well-being than did participants whose prevention concerns were temporarily activated. Overall, these findings demonstrate the causal role of concerns with promotion or prevention in the varying relevance of autonomy support for relationship well-being. Moreover, these findings were obtained using a different operationalization of perceived autonomy support and more established measures of relationship well-being, providing additional generalizability for our results.

## Study 2: Chronic Promotion Concerns and the Unique Value of Autonomy Support Versus General Partner Responsiveness

The primary objective of Study 2 was to replicate the findings of Studies 1a and 1b with two extensions. First, we examined whether promotion concerns may enhance the associations of perceived autonomy support with both global perceptions of relationship quality and pro-relationship intention, as assessed by forgiveness. Second, we further aimed to demonstrate the robustness of the effect of perceived support for autonomy beyond perceived partner responsiveness (Reis et al., 2004). As we argue that autonomy support uniquely signals opportunities for growth rather than merely reflecting general responsiveness of the partner, we sought to show that promotion concerns continue to enhance the value of autonomy support, even after controlling for the impact of perceived partner responsiveness.

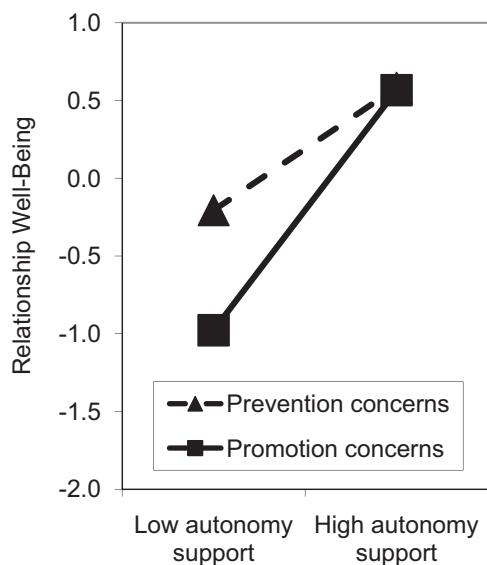


Figure 2. Relationship well-being as a function of temporarily activated promotion or prevention concerns and support for autonomy needs (Study 1b).

## Method

**Participants.** Ninety-one mTurk volunteers residing in the United States (48 females,  $M_{\text{age}} = 33.05$ ,  $SD = 10.74$ ) completed an online study. Participants were all currently involved in a heterosexual dating relationship of an average length of 79.26 months ( $SD = 87.81$ ). Forty-four participants were married.

**Materials and procedures.** Participants completed the following questionnaires.

**Chronic promotion and prevention concerns.** As in Study 1a, participants first completed the same 11-item measure of their chronic concerns with promotion ( $\alpha = .63$ ,  $M = 3.53$ ,  $SD = 0.57$ ) and prevention ( $\alpha = .85$ ,  $M = 3.20$ ,  $SD = 0.80$ ; Higgins et al., 2001).

**Autonomy support.** Participants then completed the same 10-item autonomy support scale, as in Study 1a (Deci et al., 2006;  $\alpha = .89$ ,  $M = 5.82$ ,  $SD = 0.92$ ).

**Perceived partner responsiveness.** Participants also completed a 12-item perceived partner responsiveness scale developed by Reis, Maniaci, Caprariello, Eastwick, and Finkel (2011; e.g., “He/she esteems me, shortcomings and all”). All items were responded on a 7-point scale (1 = *not at all true* to 7 = *completely true*;  $\alpha = .96$ ,  $M = 5.78$ ,  $SD = 1.10$ ).

**Relationship quality.** Next, participants answered the 18-item relationship quality scale developed by Fletcher, Simpson, and Thomas (2000). The measure captures the six important components of relationship quality: relationship satisfaction, commitment, intimacy, trust, passion, and love. Sample item included “How intimate is your relationship?” Participants responded on a 7-point scale (1 = *not at all* to 7 = *extremely*). We averaged all the items to index global perceptions of relationship quality ( $\alpha = .94$ ,  $M = 6.07$ ,  $SD = 0.89$ ).

**General forgiveness.** Participants were finally presented with four hypothetical conflict scenarios involving their relationship

partner, which were adapted from Molden and Finkel (2010). In each scenario, participants were asked how likely they would be to perform four different behaviors varying both in how active and passive they were and in how constructive or destructive they would likely be for the relationship (Rusbult, Verette, Whitney, Slovik, & Lipkus, 1991; Rusbult, Zembrodt, & Gunn, 1982). In each scenario, voicing or expressing one’s dissatisfaction in hope of improvement represented an active and constructive strategy (AC); loyally remaining silent and waiting for an improvement represented a passive and constructive strategy (PC); behaviors related to exiting or quitting a relationship represented an active and destructive strategy (AD); and neglecting one’s partner or simply allowing the relationship to decline represented a passive and destructive strategy (PD). For example, one scenario read “Your current partner says something that hurts you.” Participants then rated how likely they would be to perform each of the following four behaviors on a 9-point scale (1 = *extremely unlikely* to 9 = *extremely likely*): “I would ask him/her why s/he had hurt my feelings” (AC); “I would try to understand that s/he may not have intended to hurt me” (PC); “I would say something equally mean right back” (AD); and “I would give him/her ‘the cold shoulder’ for a while” (PD). For the full text of the scenarios, see the Appendix.

Previous research has shown that AC and PC strategies are adaptive strategies in conflict situations that involve *accommodating* a partner’s behavior and are good for relationship well-being, but AD and PD strategies are not (Rusbult et al., 1991, 1982). Therefore, as in previous research (e.g., Etcheverry & Le, 2005; Finkel & Campbell, 2001), an overall accommodation intentions index was calculated for each scenario by the following equation:  $(AC + PC - AD - PD)/2$ . This score was then averaged across the four scenarios ( $\alpha = .83$ ,  $M = 1.99$ ,  $SD = 2.37$ ). In each of these scenarios, participants were also asked at the end whether they would forgive their partner for his or her behavior on a 9-point scale (1 = *extremely unlikely*, 9 = *extremely likely*). Scores on this measure were then averaged across all four scenarios ( $\alpha = .86$ ,  $M = 6.35$ ,  $SD = 1.55$ ) to form a separate forgiveness index. Given that accommodation and forgiveness were highly correlated,  $r(91) = .54$ ,  $p < .001$ , we standardized and averaged the two scores to index general forgiveness.

## Results and Discussion

**Preliminary analyses.** Correlational analyses showed that perceived autonomy support was significantly related to chronic promotion concerns,  $r(91) = .33$ ,  $p < .01$ , but not to prevention concerns,  $r(91) = .12$ ,  $p = .24$ . Perceived partner responsiveness was related to promotion concerns,  $r(91) = .25$ ,  $p = .02$ , and (marginally) to prevention concerns,  $r(91) = .19$ ,  $p = .07$ .

Marital status did not moderate any interactions presented below ( $ps > .10$ ), except the Prevention  $\times$  Perceived Partner Responsiveness interaction on general forgiveness,  $\beta = .49$ ,  $t(73) = 3.26$ ,  $p < .01$ . Given that this interaction was tangential to our primary hypotheses and that marital status did not moderate the interaction on our other primary dependent variable, we do not attempt to interpret these results any further.

**Primary analyses.** We conducted separate hierarchical regressions on relationship quality and general forgiveness with standardized scores of participants’ promotion and prevention con-



cerns, autonomy support, and perceived partner responsiveness entered into the first step, followed by the Promotion  $\times$  Autonomy, Prevention  $\times$  Autonomy, Promotion  $\times$  Responsiveness, and Prevention  $\times$  Responsiveness interactions into the second step.

**Relationship quality.** Consistent with our hypotheses, the results presented in Table 3 revealed that the association between autonomy support and relationship quality was qualified by promotion concerns but not prevention concerns. As depicted in Panel A of Figure 3, simple-slope analyses showed that autonomy support was significantly positively associated with relationship quality among participants with strong promotion concerns (+1 *SD* from the mean),  $\beta = .66$ ,  $t(82) = 4.03$ ,  $p < .001$ , but not among participants with weak promotion concerns (−1 *SD* from the mean),  $\beta = .18$ ,  $t(82) = 1.01$ ,  $p = .28$ . Furthermore, promotion concerns were negatively associated with relationship quality when autonomy support was low (−1 *SD* from the mean),  $\beta = -.29$ ,  $t(82) = -2.16$ ,  $p = .03$ , but not when autonomy support was high (+1 *SD* from the mean),  $\beta = .19$ ,  $t(82) = 1.30$ ,  $p = .20$ .

**General forgiveness.** Table 3 also revealed that the association between autonomy support and general forgiveness was qualified by promotion concerns but not prevention concerns. As depicted in Panel B of Figure 3, simple-slope analyses showed that autonomy support was positively associated with forgiveness among participants with strong promotion concerns (+1 *SD* from the mean),  $\beta = .81$ ,  $t(82) = 3.89$ ,  $p < .001$ , but not among participants with weak promotion concerns (−1 *SD* from the mean),  $\beta = .14$ ,  $t(82) = 0.65$ ,  $p = .52$ . Furthermore, promotion concerns were (marginally) negatively associated with forgiveness when autonomy support was low (−1 *SD* from the mean),  $\beta = -.32$ ,  $t(82) = -1.86$ ,  $p = .07$ , but were (marginally) positively associated with forgiveness when autonomy support was high (+1 *SD* from the mean),  $\beta = .35$ ,  $t(82) = 1.91$ ,  $p = .06$ .

In addition, we observed unhypothesized interactions such that promotion concerns qualified the associations of perceived partner responsiveness with relationship quality and (marginally) with forgiveness. Given that, as presented below, the interaction between promotion and perceived responsiveness was not replicated in the next two studies, we are reticent to draw any firm conclusions from this effect.

In sum, Study 2 provided support for our hypotheses that, as participants' chronic promotion concerns increased, the associa-

tion between autonomy support and relationship well-being would be stronger. In contrast, the strength of participants' prevention concerns did not further moderate the association between autonomy support and relationship well-being. Finally, after controlling for the effects of perceived partner responsiveness, the unique association of autonomy support with relationship well-being among individuals with strong versus weak promotion concerns still held. These results suggest that autonomy support within a relationship uniquely signals opportunities for personal growth and advancement in a way that general responsiveness does not.

### Study 3a: Chronic Promotion Concerns and the Unique Value of Support for Autonomy Versus for Other Basic Needs

The results of Studies 1 and 2 provided consistent support for our primary hypotheses involving the increased relevance of autonomy support for perceived relationship well-being when concerned with promotion. However, these previous studies only examined the effects of promotion versus prevention concerns on the role of one type of need support without controlling for support for other basic needs. Studies 3a and 3b were therefore designed to examine whether promotion concerns uniquely increase the judged relevance of support for autonomy needs within relationships, as hypothesized, or whether these concerns increase the judged relevance of many types of need support within relationships (see also Molden et al., 2009). To achieve this end, we compared autonomy support with support for other basic needs that were hypothesized to be less relevant to promotion concerns.

Beyond needs for autonomy, self-determination theory (Deci & Ryan, 2000; Ryan & Deci, 2000) also proposes that people have basic needs for *relatedness*—the need to feel connected with others and form caring relationships—and *competence*—the need to seek to control one's outcomes and experience mastery. Research has shown that, compared to other psychological needs, these three are among the most salient and relevant to judgments of how satisfying an event is (Sheldon, Elliot, Kim, & Kasser, 2001). Indeed, fulfillment of each of the three basic needs independently contributes to relationship well-being (La Guardia et al., 2000; Patrick et al., 2007). However, although all three needs are all important for relationship well-being, we have argued that support for autonomy is uniquely salient when concerned with promotion because of its clear connection to perceived opportunities for growth. In contrast, support for relatedness and competence needs were not expected to be clearly connected to growth and advancement above and beyond other concerns, and therefore were not expected to interact with individuals' promotion concerns in their evaluations of their relationship.

To test these hypotheses, we measured participants' chronic concerns with promotion or prevention and their perceptions of support for their autonomy, relatedness, and competence needs, as well as their general perceived responsiveness from a romantic partner. We then assessed their global perceptions of relationship quality as an index of their relationship well-being. As in previous studies, we predicted that participants with greater promotion concerns would show a stronger association between support for autonomy needs and relationship quality. We also predicted that participants with greater promotion concerns would not show stronger associations between support for relatedness or compe-

Table 3  
Hierarchical Regression Analyses in Study 2

Predictor	Relationship quality		General forgiveness	
	$\beta$	$t$	$\beta$	$t$
Autonomy support	.41	3.56***	.52	3.53***
Responsiveness	.46	4.05***	.11	0.79
Promotion	−.11	−1.55	.01	0.10
Prevention	−.05	−0.80	.15	1.80 <sup>†</sup>
Promotion $\times$ Autonomy Support	.24	2.06*	.34	2.27*
Prevention $\times$ Autonomy Support	.08	0.72	.09	0.69
Promotion $\times$ Responsiveness	−.31	−2.16*	−.35	−1.90 <sup>†</sup>
Prevention $\times$ Responsiveness	.06	0.57	−.20	−1.55

Note. Degrees of freedom for  $t$  statistics: Step 1 (main effects) = 86; Step 2 (interactions) = 82.

<sup>†</sup>  $p < .10$ . \*  $p \leq .05$ . \*\*\*  $p \leq .001$ .

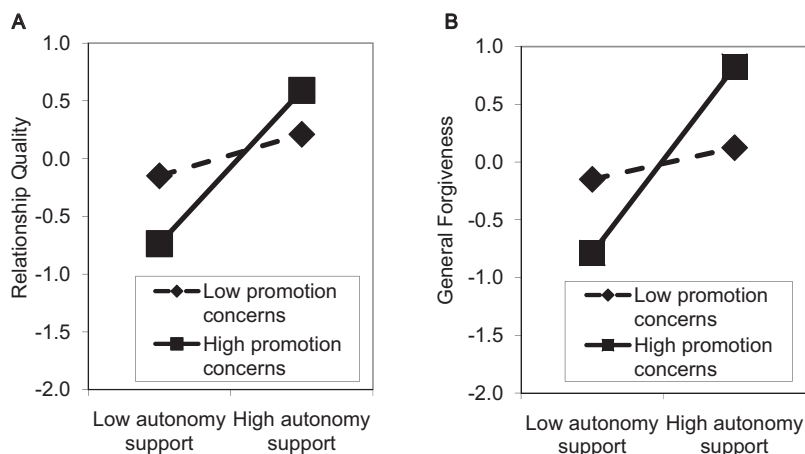


Figure 3. Relationship quality (Panel A) and general forgiveness (Panel B) as a function of chronic promotion concerns and support for autonomy needs (Study 2).

tence needs and relationship quality. Finally, we tentatively predicted that participants with greater prevention concerns might show a stronger association between fulfillment of relatedness needs and relationship quality. As mentioned earlier, previous research has suggested that concerns with security and prevention increase people's focus on interdependence with others (Aaker & Lee, 2001; Lee et al., 2000; Murray & Holmes, 2009). Therefore, how much a relationship partner is actively supporting these needs for interdependence or relatedness could become more relevant for people's relationship quality when they are focused on prevention.

## Method

**Participants.** Eighty-seven heterosexual dating couples ( $M_{\text{age}} = 20.55$ ,  $SD = 2.03$ ; mean relationship length = 16.84 months,  $SD = 13.42$ ), who were recruited by flyers posted around campus at a private university in the United States, participated in a study of relationships and filled out a large battery of questionnaires.

**Materials and procedures.** Among the many measures completed by participants as part of a diverse study on relationship behavior, we selected the specific questionnaires described below in order to test our primary hypotheses of interest. All of these questionnaires were completed using a 7-point scale. The relationship quality measure (Fletcher et al., 2000) was anchored with *not at all* and *extremely*. The other measures were anchored with *strongly disagree* and *strongly agree*.

**Chronic promotion and prevention concerns.** Promotion concerns ( $\alpha = .65$ ,  $M = 5.37$ ,  $SD = 0.82$ ) and prevention concerns ( $\alpha = .83$ ,  $M = 4.56$ ,  $SD = 1.42$ ) were assessed using the same questionnaire as in Studies 1a and 2 (Higgins et al., 2001).

**Support for autonomy, relatedness, and competence needs.** Perceived support for autonomy, relatedness, and competence needs was measured by a nine-item need fulfillment scale (La Guardia et al., 2000). The autonomy subscale ( $\alpha = .72$ ,  $M = 5.67$ ,  $SD = 1.08$ ) was the same three-item measure that was used in Study 1b. The relatedness subscale ( $\alpha = .82$ ,  $M = 6.17$ ,  $SD = 0.84$ ; e.g., "My partner makes me feel a lot of closeness and intimacy") and the competence subscale ( $\alpha = .85$ ,  $M = 5.80$ ,

$SD = 1.01$ ; e.g., "My partner makes me feel like a competent person") also had three items each. The correlations among the three subscales were all significant ( $r_s = .54-.58$ ).

**Perceived partner responsiveness.** Perceived partner responsiveness was measured by an extended 18-item version of the scale (Reis et al., 2011) used in Study 2 ( $\alpha = .96$ ,  $M = 5.96$ ,  $SD = 0.80$ ).

**Relationship quality.** Finally, global perceptions of relationship quality were captured by the same measure (Fletcher et al., 2000), as in Study 2, with one exception: The commitment subscale was replaced by a more comprehensive seven-item measure of relationship commitment (Rusbult et al., 1998; e.g., "I am committed to maintaining my relationship with my partner";  $\alpha = .94$ ,  $M = 5.89$ ,  $SD = 1.21$ ). The overall score of the remaining five components was averaged into a single index ( $\alpha = .90$ ,  $M = 6.20$ ,  $SD = 0.61$ ). Given that relationship commitment was highly correlated with this index,  $r(174) = .69$ ,  $p < .001$ , we standardized both indices and then averaged them to create scores of global perceptions of relationship quality.

## Results and Discussion

**Preliminary analyses.** Correlational analyses showed that autonomy support was mildly correlated with chronic prevention concerns,  $r(174) = .18$ ,  $p = .02$ , but not with chronic promotion concerns,  $r(174) = .11$ ,  $p = .17$ . Thus, consistent with the previous studies, the link between concerns with promotion or prevention and autonomy support was weak or nonexistent. Furthermore, relatedness support had small positive correlations with both promotion,  $r(174) = .16$ ,  $p = .04$ , and prevention concerns,  $r(174) = .25$ ,  $p < .01$ . Competence support also had small positive correlations with both promotion,  $r(174) = .21$ ,  $p = .01$ , and prevention concerns,  $r(174) = .22$ ,  $p < .01$ . Finally, perceived partner responsiveness was correlated with both promotion,  $r(174) = .17$ ,  $p = .02$ , and prevention concerns,  $r(174) = .28$ ,  $p < .001$ .

**Primary analyses.** Because the data of each individual were nested within a couple, we used multi-level regression analyses to control for the statistical dependency within couples (Campbell & Kashy, 2002). Using the SPSS MIXED macro (Peugh & Enders,

2005), we performed hierarchical multilevel regressions on relationship quality with the scores of participants' promotion and prevention concerns, support for three basic needs and perceived partner responsiveness standardized (i.e., centered around grand mean) and entered into the first step, followed by the eight two-way interaction terms between each of the promotion and prevention indices and each of the three need support scores and perceived partner responsiveness into the second step. In all these analyses, we modeled the random effect as random intercept (Kenny, Kashy, & Cook, 2006). Consistent with our hypotheses, the results presented in Table 4 revealed that both the Promotion  $\times$  Autonomy and Prevention  $\times$  Relatedness interactions were significant.

As depicted in Panel A of Figure 4, simple-slope analyses revealed that autonomy support was (marginally) positively associated with relationship quality among individuals with strong promotion concerns (+1 *SD* from the mean),  $\beta = .17$ ,  $t(155) = 1.88$ ,  $p = .06$ , but not among those with weak promotion concerns (-1 *SD* from the mean),  $\beta = -.06$ ,  $t(148) = -0.64$ ,  $p = .53$ . Furthermore, promotion concerns were not significantly related to relationship quality both when autonomy support was low (-1 *SD* from the mean),  $\beta = -.10$ ,  $t(146) = -1.42$ ,  $p = .16$ , and when autonomy support was high (+1 *SD* from the mean),  $\beta = .13$ ,  $t(144) = 1.60$ ,  $p = .11$ .

In addition, as depicted in Panel B of Figure 4, simple-slope analyses revealed that relatedness support was positively associated with relationship quality among individuals with strong prevention concerns (+1 *SD* from the mean),  $\beta = .48$ ,  $t(154) = 4.06$ ,  $p < .001$ , but not among those with weak prevention concerns (-1 *SD* from the mean),  $\beta = .11$ ,  $t(119) = 1.57$ ,  $p = .12$ . Furthermore, prevention concerns were (marginally) negatively related to relationship quality when relatedness support was low (-1 *SD* from the mean),  $\beta = -.16$ ,  $t(153) = -1.93$ ,  $p = .06$ , but were positively related to relationship quality when relatedness support was high (+1 *SD* from the mean),  $\beta = .20$ ,  $t(155) = 2.51$ ,  $p = .01$ .

The effects of other interactions in the regression analysis were not close to statistical significance, except (marginally) for the

Promotion  $\times$  Relatedness and Prevention  $\times$  Competence interactions. Simple-slope analyses revealed that relatedness support was less strongly associated with relationship quality among individuals with strong promotion concerns (+1 *SD* from the mean),  $\beta = .19$ ,  $t(124) = .186$ ,  $p = .07$ , than among individuals with weak promotion concerns (-1 *SD* from the mean),  $\beta = .40$ ,  $t(155) = 4.94$ ,  $p < .001$ . Furthermore, promotion concerns were not significantly related to relationship quality both when relatedness support was low (-1 *SD* from the mean),  $\beta = .12$ ,  $t(151) = 1.55$ ,  $p = .13$ , and when relatedness support was high (+1 *SD* from the mean),  $\beta = -.09$ ,  $t(154) = -1.29$ ,  $p = .20$ . These results are the inverse of the association between relatedness support and prevention concerns presented above, and are thus further support for the general hypothesis that concerns with growth and promotion can reduce one's focus on interdependence whereas concerns with security and prevention can increase this focus (Aaker & Lee, 2001; Lee et al., 2000; Murray & Holmes, 2009). The significant Prevention  $\times$  Competence interaction was not predicted, and the pattern was not replicated in Study 3b, so we do not attempt to further interpret this effect.

The results of Study 3a again showed that that support for autonomy was judged more relevant among individuals concerned with promotion. In addition, the results also provided preliminary evidence supporting our ancillary hypothesis that support for relatedness would be judged more relevant among individuals concerned with prevention. Global perceptions of relationship quality increased as perceived support for one's relatedness needs within a romantic relationship increased, but these associations were stronger among individuals with stronger prevention concerns (and among individuals with weaker promotion concerns). These results thus further support previous research suggesting that an increased concern with security and prevention highlights people's focus on interdependence with others, whereas increased concerns with growth and promotion diminish people's focus on others (Aaker & Lee, 2001; Lee et al., 2000; Murray & Holmes, 2009). Consistent with Study 2, these effects held even after controlling for perceived partner responsiveness. To increase our confidence in these results, Study 3b sought to replicate Study 3a with an experimental manipulation of promotion versus prevention concerns.

Table 4

*Hierarchical Multilevel Regression Analyses on Relationship Quality in Study 3a*

Predictor	$\beta$	<i>df</i>	<i>t</i>
Autonomy support	.10	157	1.61
Relatedness support	.19	113	3.31****
Competence support	.05	117	0.84
Responsiveness	.40	147	5.69****
Promotion	.01	156	0.16
Prevention	.01	135	0.29
Promotion $\times$ Autonomy Support	.11	140	1.95*
Prevention $\times$ Autonomy Support	-.00	135	-0.06
Promotion $\times$ Relatedness Support	-.11	154	-1.80†
Prevention $\times$ Relatedness Support	.18	158	2.65**
Promotion $\times$ Competence Support	.04	137	0.63
Prevention $\times$ Competence Support	-.11	140	-2.02*
Promotion $\times$ Responsiveness	.03	116	0.40
Prevention $\times$ Responsiveness	-.04	143	-0.51

*Note.* *df* = approximate degrees of freedom for *t* statistics. The degrees of freedom for each *t* statistic are adjusted by SPSS to obtain a more accurate *p*-value estimate.

†  $p < .10$ . \*  $p \leq .05$ . \*\*  $p \leq .01$ . \*\*\*  $p \leq .001$ .

### Study 3b: Induced Promotion Concerns and the Unique Value of Support for Autonomy Versus for Other Basic Needs

Study 3b attempted to replicate the key findings of Study 3a using a direct manipulation of promotion or prevention concerns and establish the causal role of these concerns on the association between autonomy support and global perceptions of relationship quality. Analogous to the previous study, we predicted that promotion-primed participants would associate autonomy support with relationship well-being more, and associate relatedness support with relationship well-being less, than prevention-primed individuals.

### Method

**Participants.** One-hundred and twenty-one mTurk volunteers residing in the United States (64 females,  $M_{\text{age}} = 31.62$ ,  $SD = 11.03$ ) completed an online study. Participants were currently

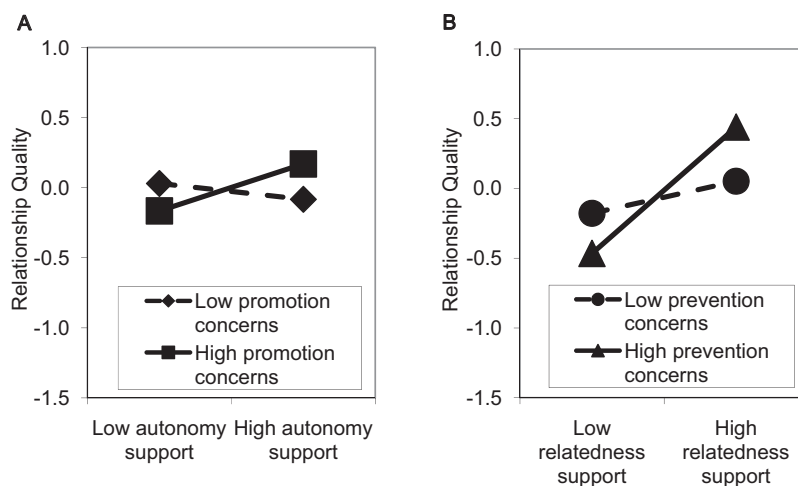


Figure 4. Relationship quality as a function of chronic promotion concerns and support for autonomy needs (Panel A), and chronic prevention concerns and support for relatedness needs (Panel B) (Study 3a).

involved in a relationship of an average length of 72.68 months ( $SD = 90.93$ ). Fifty-two participants were married.

**Materials and procedures.** We first manipulated promotion and prevention concerns. We then measured perceived support for autonomy, relatedness, and competence needs, and perceived partner responsiveness. Finally, we measured perceived relationship quality.

**Manipulation of promotion and prevention concerns.** Analogous to Study 1b, we first manipulated concerns with promotion and prevention by asking participants to describe either three personal hopes and aspirations or three duties and responsibilities (Freitas & Higgins, 2002). This procedure has also been successfully used in previous studies (e.g., Florack, Friese, & Scarabis, 2010; Pham & Avnet, 2004). To strengthen the manipulation, participants also answered six additional questions (adapted from Higgins, Shah, & Friedman, 1997) on 7-point scales (1 = *not at all* to 7 = *very much*). Participants in the promotion condition answered two questions for each of the three hopes and aspirations they listed: (a) the extent to which they ideally liked to achieve the hope or aspiration, and (b) the extent to which they had actually achieved the hope or aspiration. Participants in the prevention condition answered two questions for each of the three duties and responsibilities they listed: (a) the extent to which they believed that they ought to complete the duty or responsibility, and (b) the extent to which they had actually achieved the duty or responsibility.

**Support for autonomy, relatedness, and competence needs.** Perceived support for autonomy, relatedness, and competence was measured by the same nine-item need fulfillment scale (La Guardia et al., 2000), as in Study 3a. The three subscales were all reliable (autonomy:  $\alpha = .71$ ,  $M = 5.74$ ,  $SD = 1.10$ ; relatedness:  $\alpha = .81$ ,  $M = 5.65$ ,  $SD = 1.28$ ; competence:  $\alpha = .83$ ,  $M = 5.73$ ,  $SD = 1.13$ ). The correlations among the three subscales were all significant ( $r_s = .66-.72$ ).

**Perceived partner responsiveness.** Perceived partner responsiveness was measured using a 12-item scale (Reis et al., 2011), as in Study 2 ( $\alpha = .97$ ,  $M = 5.68$ ,  $SD = 1.28$ ).

**Relationship quality.** Finally, perceived relationship quality was measured by the same 18-item scale (Fletcher et al., 2000), as in Study 2 ( $\alpha = .96$ ,  $M = 5.92$ ,  $SD = 1.01$ ).

## Results and Discussion

**Preliminary analyses.** Initial regression analyses showed that activating promotion or prevention concerns (coded as  $-1 = prevention$ , and  $1 = promotion$ ) had a main effect on perceived partner responsiveness, such that participants in the promotion condition reported (marginally) greater perceived partner responsiveness than participants in the prevention condition,  $\beta = .16$ ,  $t(119) = 1.77$ ,  $p = .08$ . However, activating promotion or prevention concerns did not affect perceived autonomy support,  $\beta = .05$ ,  $t(119) = 0.57$ ,  $p = .57$ ; relatedness support,  $\beta = .13$ ,  $t(119) = 1.43$ ,  $p = .16$ ; and competence support,  $\beta = .03$ ,  $t(119) = 0.38$ ,  $p = .71$ . Marital status did not moderate the interactions presented below ( $p_s > .12$ ).

**Primary analyses.** We next conducted a hierarchical regression on relationship quality with participants' activated concerns ( $-1 = prevention$ , and  $1 = promotion$ ) and the four standardized scores of partner support for three basic needs and perceived partner responsiveness entered into the first step, followed by the Activated Concerns  $\times$  Need Support or Responsiveness interactions entered into the second step. Consistent with our predictions, the results presented in Table 5 revealed that activation of promotion or prevention concerns qualified the associations between autonomy support and relationship quality and between relatedness support and relationship quality. The effects of the other two interactions in the regression analysis were not close to statistical significance.

As depicted in Panel A of Figure 5, simple-slope analyses revealed that autonomy support was positively associated with relationship quality among promotion-primed participants,  $\beta = .25$ ,  $t(111) = 2.35$ ,  $p = .02$ , but not among prevention-primed participants,  $\beta = -.08$ ,  $t(111) = -0.61$ ,  $p = .54$ . Furthermore, promotion-primed and prevention-primed participants reported

Table 5  
Hierarchical Regression Analyses on Relationship Quality in Study 3b

Predictor	$\beta$	$t$
Autonomy support	.12	1.59
Relatedness support	.07	0.90
Competence support	.10	1.48
Responsiveness	.64	8.01****
Prime (1 = Promotion, -1 = Prevention)	.04	0.87
Prime $\times$ Autonomy Support	.16	1.99*
Prime $\times$ Relatedness Support	-.17	-2.08*
Prime $\times$ Competence Support	-.07	-0.91
Prime $\times$ Responsiveness	.02	0.30

Note. Degrees of freedom for  $t$  statistics: Step 1 (main effects) = 115; Step 2 (interactions) = 111.

\*  $p \leq .05$ . \*\*\*\*  $p \leq .001$ .

similar levels of relationship quality when autonomy support was perceived as low ( $-1$  SD from the mean),  $\beta = -.12$ ,  $t(111) = -1.27$ ,  $p = .21$ , but that promotion-primed participants reported greater relationship quality than prevention-primed participants when autonomy support was perceived as high ( $+1$  SD from the mean),  $\beta = .20$ ,  $t(111) = 2.19$ ,  $p = .03$ .

In addition, as depicted in Panel B of Figure 5, simple-slope analyses revealed that relatedness support was positively associated with relationship quality among prevention-primed participants,  $\beta = .28$ ,  $t(111) = 2.25$ ,  $p = .03$ , but not among promotion-primed participants,  $\beta = -.05$ ,  $t(111) = -0.53$ ,  $p = .60$ . Furthermore, promotion-primed participants reported greater relationship quality than prevention-primed participants when relatedness support was perceived as low ( $-1$  SD from the mean),  $\beta = .21$ ,  $t(111) = 2.27$ ,  $p = .03$ , but that promotion-primed and prevention-primed participants reported similar levels of relationship quality when relatedness support was perceived as high ( $+1$  SD from the mean),  $\beta = -.12$ ,  $t(111) = -1.34$ ,  $p = .19$ .

To summarize, in Studies 3a and 3b, measurements or manipulations of promotion or prevention concerns continued to support

our primary hypotheses. That is, support for autonomy needs was more strongly associated with relationship well-being among individuals with stronger promotion, but not prevention, concerns. These two studies also supported our ancillary hypothesis that needs for relatedness and interdependence would be more strongly associated with relationship well-being among individuals with stronger prevention, but not promotion, concerns. In addition, all of these associations held after controlling for perceived partner responsiveness and support for other types of needs. Thus, consistent with our predictions, promotion concerns appear to uniquely increase sensitivity to support for autonomy needs when evaluating relationship quality rather than simply any type of need support from one's partner.

### Studies 4a and 4b: Induced Promotion Concerns and the Value of Autonomous Intentions to Remain in a Relationship

Studies 1–3 examined how concerns with promotion or prevention moderate the strength of the association of perceived support for autonomy needs provided by a relationship partner with relationship well-being. In Studies 4 and 5, we extended these previous studies by examining how such concerns moderate the strength of the association between people's autonomous intentions to remain in a relationship itself and their relationship well-being. Studies 4a and 4b tested this hypothesis by activating people's promotion- or prevention-related representations of their relationships and either asking participants to think about the current relationship as an aspiration or a responsibility or emphasizing the gains or nonlosses of staying. We then assessed participants' intentions to remain in a relationship.

In line with our earlier hypotheses involving autonomy support, we posited that promotion versus prevention concerns would elevate the importance of experiencing autonomy to remain in a relationship when evaluating relationship well-being. Therefore, we hypothesized that autonomous intentions to remain in a relationship should be more strongly associated with relationship well-being among participants with induced promotion versus

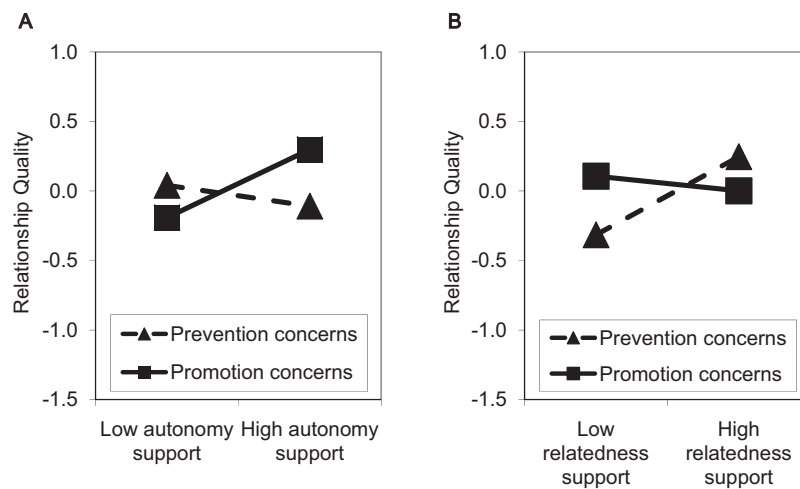


Figure 5. Relationship quality as a function of temporarily activated promotion or prevention concerns and support for autonomy needs (Panel A) or support for relatedness needs (Panel B) (Study 3b).

prevention concerns. Relationship well-being was again assessed by global perceptions of relationship quality.

## Method

### Participants.

**Study 4a.** Fifty-one mTurk volunteers residing in the United States (34 females,  $M_{\text{age}} = 35.24$ ,  $SD = 12.48$ ) completed an online study. Participants were all currently involved in a relationship of an average length of 138.69 months ( $SD = 131.62$ ). All participants were married.

**Study 4b.** Eighty-three mTurk volunteers residing in the United States (41 females,  $M_{\text{age}} = 32.29$ ,  $SD = 21.26$ ) completed an online study. Participants were all currently involved in a relationship of an average length of 55.22 months ( $SD = 80.74$ ). Twenty-three participants were married.

**Materials and procedures.** All procedures were the same across both studies except for the specific manipulation of promotion or prevention concerns. We first manipulated relationship-specific concerns with promotion and prevention, then measured autonomous and controlled reasons for staying in a relationship, and finally measured relationship quality.

**Manipulation of relationship-specific promotion or prevention concerns.** We manipulated relationship-specific promotion or prevention concerns in two different ways. In Study 4a, we modified the manipulation used in Study 1b and asked participants in the promotion or the prevention condition to write about how their current relationship has become an aspiration or a responsibility. This manipulation was only administered to a sample of married participants because previous research has suggested that individuals in dating relationships are more likely to generally represent the relationship in terms of hopes and aspirations and less likely to represent the relationship in terms of duties and responsibilities, whereas married individuals do not differ in their tendency to represent the relationship in terms of aspirations versus responsibilities (Molden et al., 2009).<sup>4</sup>

In Study 4b, we used a different manipulation so that we could include dating participants. Previous studies have shown that framing a situation in terms of gains and nongains can induce promotion concerns and framing a situation in terms of losses and nonlosses can induce prevention concerns (e.g., Higgins et al., 1997; Idson, Liberman, & Higgins, 2000; Shah, Higgins, & Friedman, 1998). Therefore, participants in the promotion condition were asked to write about both what they wanted to attain by staying in the relationship (*gains*) and what they would not want to miss (*nongains*), whereas participants in the prevention condition were asked to write about both what they wanted to maintain by staying in the relationship (*nonlosses*) and what they did not want to lose (*losses*). In both studies, participants were asked to write the essay for 3 min until the online questionnaire allowed them to proceed to the next page.

**Autonomous and controlled intentions to remain in a relationship.** The autonomous and controlled intentions to remain in a relationship was measured by the 21-item couple motivation questionnaire (Blais et al., 1990). Participants indicated the extent to which they remained in the relationship for each of 21 reasons on 7-point scales (1 = *strongly disagree* to 7 = *strongly agree*). The scale has been widely used to measure participants' autonomous and controlled intentions to remain in a relationship

(e.g., Gaine & La Guardia, 2009; Knee et al., 2005; Patrick et al., 2007).

The questionnaire captured six types of intentions to remain in a relationship based on the framework of self-determination theory (Ryan & Deci, 2000). These reasons included the following: *intrinsic* intentions reflecting one's choice and inherent enjoyment of the relationship ("because I love the numerous crazy and amusing moments that I have with my partner"), *integrated* intentions reflecting one's integration between the relationship and other aspects of one's life ("because he/she is the person I choose to help me accomplish important projects"), *identified* intentions reflecting the value one attaches to the relationship ("because it's a mean that enables me to share emotions and special events with someone"), *introjected* intentions reflecting one's internal controlling imperatives to maintain the relationship ("because my relationship with him/her is a commitment that I must hold"), *external* intentions reflecting one's motivation to maintain the relationship due to external rewards and punishments ("because the people who are important to me [children, family, friends] are proud of our relationship and I would not want to disappoint them"), and *amotivation* reflecting the lack of the sense of personal control over the situation and hence the absence of intentional efforts to maintain or leave the relationship ("I don't know; I feel helpless to the fact that sooner or later we are going to separate"). The first three types of intentions are considered to be autonomous intentions to remain in a relationship, whereas the last three are considered to controlled intentions.

The scale is typically scored (Blais et al., 1990) with the following algorithm that puts different weights on each type of intentions based on its relative autonomy or control: (Intrinsic  $\times$  3) + (Integrated  $\times$  2) + (Identified  $\times$  1) + (Introjected  $\times$  -1) + (External  $\times$  -2) + (Amotivation  $\times$  -3). In this calculation, autonomous and controlled intentions are treated as two poles of a continuum. However, previous findings have shown that autonomous and controlled intentions to pursue a goal tended to be weakly or not related to each other and, in such cases, have been analyzed separately (e.g., Gaine & La Guardia, 2009; Koestner, Otis, Powers, Pelletier, & Gagnon, 2008; Sheldon & Elliot, 1998;

<sup>4</sup> An additional pilot study also supported this notion. An independent sample of mTurk volunteers who were currently in a relationship ( $n = 146$ ; 64 participants married) was recruited to directly assess whether participants mentally represented their dating or married relationship in terms of promotion or prevention concerns to evaluate whether these representations were actually available to be activated by our priming manipulations (Higgins, 1996). Participants were asked to use a 6-point scale (1 = *strongly disagree* to 6 = *strongly agree*) to respond to four statements: (a) "I think that my relationship with my current partner is now an aspiration or accomplishment," (b) "I think that my relationship with my current partner is now an obligation or a duty," (c) "There is something in the relationship that I want to achieve by staying in the relationship," and (d) "There is something in the relationship that I want to keep by staying in the relationship." The results showed that, on average, participants who were married moderately endorsed all four statements and gave ratings above the scale mid-point (3.5),  $M_s = 3.92\text{--}5.33$ ,  $t_s(63) > 2.22$ ,  $ps < .03$ . In contrast, participants who were dating did not endorse the idea that their relationship was a duty ( $M = 3.39$ ),  $t(81) = -0.70$ ,  $p = .49$ , although they endorsed the remaining three statements by rating above the scale mid-point (3.5),  $M_s = 4.45\text{--}5.16$ ,  $t_s(81) > 7.13$ ,  $ps < .001$ . Therefore, consistent with previous findings (Molden et al., 2009), participants in dating relationships did not generally represent their relationship as a duty or responsibility, which further justifies our use of only married participants in Study 4a.

Williams & Deci, 1996). Therefore, before proceeding with the analyses, we created separate scores of autonomous and controlled intentions to directly test their correlation. The autonomous intentions scale was calculated by the first part of the algorithm: (Intrinsic  $\times$  3) + (Integrated  $\times$  2) + (Identified  $\times$  1). The controlled intentions scale was calculated by the second part of the algorithm: (Introjected  $\times$  1) + (External  $\times$  2) + (Amotivation  $\times$  3). Given that autonomous (Study 4a:  $\alpha = .91$ ,  $M = 31.09$ ,  $SD = 7.27$ ; Study 4b:  $\alpha = .82$ ,  $M = 33.17$ ,  $SD = 4.81$ ) and controlled (Study 4a:  $\alpha = .79$ ,  $M = 16.74$ ,  $SD = 6.61$ ; Study 4b:  $\alpha = .73$ ,  $M = 15.91$ ,  $SD = 5.34$ ) intentions were only modestly related,  $r_{\text{Study 4a}}(51) = -.24$ ,  $p = .09$ ;  $r_{\text{Study 4b}}(83) = -.27$ ,  $p = .02$ , we followed the lead of previous studies and treated them as separate variables in subsequent analyses.

**Relationship quality.** Afterward, participants answered the 18-item relationship quality scale (Fletcher et al., 2000). As in Studies 2 and 3b, we averaged all the items to index overall relationship quality (Study 4a:  $\alpha = .93$ ,  $M = 5.72$ ,  $SD = 0.95$ ; Study 4b:  $\alpha = .94$ ,  $M = 6.05$ ,  $SD = 0.81$ ).

## Results and Discussion

**Preliminary analyses.** Initial regression analyses showed that, in Study 4a, activating promotion or prevention concerns (coded as  $-1 = \textit{prevention}$ , and  $1 = \textit{promotion}$ ) did not affect reported levels of autonomous intentions,  $\beta = .10$ ,  $t(49) = 0.69$ ,  $p = .50$ , and controlled intentions,  $\beta = .18$ ,  $t(49) = 1.28$ ,  $p = .21$ , to remain in the relationship. Similarly, in Study 4b, the manipulation did not affect levels of autonomous intentions,  $\beta = -.08$ ,  $t(81) = -0.73$ ,  $p = .47$ , and controlled intentions,  $\beta = .11$ ,  $t(81) = 1.02$ ,  $p = .31$ , to remain in the relationship. Marital status did not moderate the interactions presented in Study 4b ( $ps > .51$ ).

**Primary analyses.** We then conducted a hierarchical regression on relationship quality with participants' activated concerns ( $-1 = \textit{prevention}$ , and  $1 = \textit{promotion}$ ) and the standardized scores of autonomous and controlled intentions entered into the first step, followed by the two Activated Concerns  $\times$  Intention interactions into the second step. Consistent with our predictions, the results presented in Table 6 revealed that, in both studies, activation of promotion or prevention concerns qualified the association between autonomous intentions and relationship quality. The activation of different concerns did not qualify the association between controlled intentions and relationship quality.

**Study 4a.** As depicted in Panel A in Figure 6, simple-slope analyses revealed that autonomous intentions were more strongly associated with relationship quality among promotion-primed participants,  $\beta = .83$ ,  $t(45) = 4.27$ ,  $p < .001$ , than among prevention-primed participants,  $\beta = .37$ ,  $t(45) = 2.97$ ,  $p < .01$ . Furthermore, promotion-primed participants reported less relationship quality than prevention-primed participants when autonomous intentions were perceived as weak ( $-1$   $SD$  from the mean),  $\beta = -.32$ ,  $t(45) = -2.01$ ,  $p = .05$ , but not when autonomous intentions were perceived as strong ( $+1$   $SD$  from the mean),  $\beta = .14$ ,  $t(45) = 0.93$ ,  $p = .36$ .

**Study 4b.** As depicted in Panel B in Figure 6, simple-slope analyses revealed that autonomous intentions were more strongly associated with relationship quality among promotion-primed participants,  $\beta = .68$ ,  $t(77) = 6.26$ ,  $p < .001$ , than among prevention-primed participants,  $\beta = .35$ ,  $t(77) = 3.25$ ,  $p < .01$ . Furthermore,

Table 6  
*Hierarchical Regression Analyses on Relationship Quality in Studies 4a and 4b*

Predictor	Study 4a		Study 4b	
	$\beta$	$t$	$\beta$	$t$
Autonomous intentions	.51	4.73***	.51	6.56***
Controlled intentions	-.36	-3.33**	-.39	-5.00***
Prime (1 = Promotion, -1 = Prevention)	-.08	-0.79	-.10	-1.26
Prime $\times$ Autonomous Intentions	.23	1.99*	.17	2.16*
Prime $\times$ Controlled Intentions	.17	1.49	.13	1.63

*Note.* Degrees of freedom for  $t$  statistics in Study 4a: Step 1 (main effects) = 47; Step 2 (interactions) = 45; in Study 4b: Step 1 (main effects) = 79; Step 2 (interactions) = 77.

\*  $p \leq .05$ . \*\*  $p \leq .01$ . \*\*\*  $p \leq .001$ .

promotion-primed participants reported less relationship quality than prevention-primed participants when autonomous intentions were perceived as weak ( $-1$   $SD$  from the mean),  $\beta = -.26$ ,  $t(77) = -2.41$ ,  $p = .02$ , but not when autonomous intentions were perceived as strong ( $+1$   $SD$  from the mean),  $\beta = .07$ ,  $t(77) = 0.68$ ,  $p = .50$ .

Altogether, Studies 4a and 4b showed that activating relationship-specific promotion versus prevention concerns increased the association between autonomous intentions to remain in the relationship and relationship quality. In addition, we also found that promotion or prevention concerns did not moderate the association between controlled intentions to remain in the relationship and relationship well-being.

## Studies 5a and 5b: Chronic Promotion Concerns and the Value of Autonomous Intentions to Remain in a Relationship

To further generalize our previous results in Study 4a and 4b, participants completed a more direct measure of their autonomous intentions to remain in a relationship. Specifically, they simply reported how autonomous they felt in their choice to continue or not continue their current romantic relationship. In addition, they reported their chronic promotion and prevention concerns and their relationship well-being, as assessed by their commitment to the relationship (Studies 5a and 5b) and their behavioral intentions toward their partner (Study 5b).

Based on the primary hypothesis outlined at the outset, we predicted that as participants' chronic promotion concerns increased, they would show a stronger positive association between autonomous intentions to remain in the relationship and their commitment to and intentions toward their current relationship partner. As in Study 4, because concerns with growth and advancement should emphasize a focus on remaining aware of all possible opportunities for growth, and the perceived freedom to pursue these opportunities (Higgins, 1997; Molden et al., 2008), we expected that, when concerned with promotion, people would particularly value the relationship if they felt they were choosing to stay despite their perceived freedom to explore other opportunities.

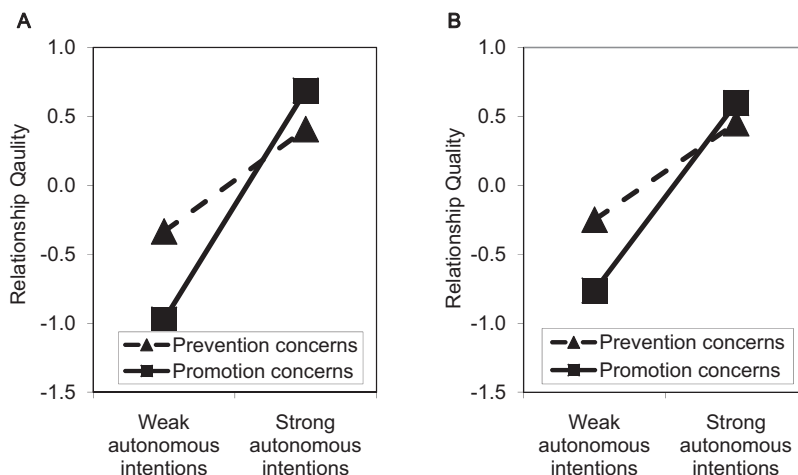


Figure 6. Relationship quality as a function of temporarily activated promotion or prevention concerns and autonomous intentions to remain in a relationship (Studies 4a and 4b in Panels A and B, respectively).

## Method

### Participants.

**Study 5a.** Fifty-four students at a private university in the United States (30 females,  $M_{\text{age}} = 19.19$ ,  $SD = 1.03$ ), who were all in heterosexual dating relationships, participated in exchange for course credit. Participants' relationships had lasted for an average of 14.09 months ( $SD = 12.74$ ).

**Study 5b.** Ninety-seven students at a private university in the United States (58 females,  $M_{\text{age}} = 18.92$ ,  $SD = 0.92$ ), who were all in heterosexual dating relationships, participated in exchange for course credit. Participants' relationships had lasted for an average of 18.52 months ( $SD = 15.26$ ).

**Materials and procedures.** In both studies, participants first performed a lexical decision task designed to measure their chronic promotion and prevention concerns. They then reported their perceived autonomy to continue their current relationship. Finally, they reported either their commitment to the relationship (Study 5a) or how they would react in a series of hypothetical positive or negative events that might occur within their relationship (Study 5b).

**Chronic concerns with promotion and prevention.** The lexical decision task designed to measure participants' chronic concerns with promotion or prevention was adapted from similar reaction-time measures used in previous research (Higgins et al., 1997; Shah, Brazy, & Higgins, 2004). These measures all assess how quickly participants respond to words related to both promotion and prevention concerns. These separate reaction times then serve as an index for the chronic accessibility of such concerns, and thus an index of motivational strength (see Fazio, 1990; Higgins et al., 1997).

For the task itself, each trial began with a fixation point (“+”) presented for 500 ms and then immediately followed by a word or a string of letters that was not a word. Participants were instructed to press the S-key for words and the L-key for non-words. To familiarize participants with the task, they performed 10 practice trials before proceeding to the 60 experimental trials. Among these 60 trials were 10 words related to promotion concerns (e.g., *eager*,

*gain*, *advance*, and *achievement*), 10 words related to prevention concerns (e.g., *vigilant*, *loss*, *safety*, and *protect*), 10 filler words (e.g., *candle*, *mountain*, *powder*, and *tree*), and 30 random letter-strings (see Lisjak, Molden, & Lee, 2012). The order of the 60 trials was randomized for each participant. Participants with stronger chronic promotion concerns should generally have these motivations more accessible and thus respond more quickly to the promotion-relevant words, whereas participants with stronger chronic prevention concerns should generally have these motivations more accessible and thus respond more quickly to the prevention-relevant words (see Fazio, 1990; Higgins et al., 1997).

**Autonomous intention to remain in the relationship.** Participants' autonomous intentions to remain in their current romantic relationship was measured using a single, face-valid question: “To what extent is your relationship something that you feel free to pursue (or not to pursue) based on your own personal choice?” Participants responded on either a 7-point (Study 5a:  $M = 5.50$ ,  $SD = 1.45$ ) or a 5-point (Study 5b:  $M = 4.07$ ,  $SD = 0.93$ ) scale anchored at *not at all* and *extremely*. A separate study was conducted using an independent sample of mTurk volunteers who were currently in a relationship ( $n = 120$ ) to examine the relationship between this measure and the couple motivation questionnaire (Blais et al., 1990) used in Study 4. The results showed that this autonomy measure was correlated highly positively with autonomous intentions,  $r(120) = .54$ ,  $p < .001$ , and moderately negatively with controlled intentions,  $r(120) = -.28$ ,  $p < .01$ . These results thus supported the validity of this one-item measure.

**Relationship commitment (Studies 5a and 5b).** Participants in Studies 5a and 5b answered two face-valid questions about their commitment to their current relationship: “How much do you INTEND to stay in your relationship with this person?” and “How much do you WANT to stay in your relationship with this person?” Participants responded on either a 7-point (Study 5a:  $M = 5.79$ ,  $SD = 1.38$ ) or a 5-point (Study 5b:  $M = 4.43$ ,  $SD = 0.85$ ) scale anchored at *not at all* and *extremely*.

**General forgiveness (Study 5b).** Participants in Study 5b were first presented with the same four hypothetical conflict scenarios,



as in Study 2. The subscales for accommodation ( $\alpha = .80$ ,  $M = 1.48$ ,  $SD = 1.81$ ) and forgiveness ( $\alpha = .82$ ,  $M = 6.34$ ,  $SD = 1.43$ ) were reliable. Given that accommodation and forgiveness were strongly related,  $r(97) = .65$ ,  $p < .001$ , we standardized and averaged the two scores to index general forgiveness, as we did in Study 2.

## Results and Discussion

### Calculation of concern strength and preliminary analyses.

The strength of participants' promotion and prevention concerns was separately calculated from all relevant lexical decision trials on which participants correctly identified the target as a word. Following previously established procedures to adjust for the skew that typically exists in reaction times, (a) any responses faster than 300 ms or slower than 1,500 ms were dropped, and (b) the remaining raw scores (95.27% and 95.54% of all the trials in Studies 5a and 5b, respectively) were log-transformed and averaged (Ratcliff, 1993). These average scores were then multiplied by  $-1$ , so that more positive scores (i.e., faster reaction times) represented stronger promotion or prevention concerns (Fazio, 1990).

Correlational analyses showed that participants' autonomous intentions to remain in their relationship were unrelated to their chronic promotion (Study 5a:  $r(54) = -.09$ ,  $p = .53$ ; Study 5b:  $r(97) = -.06$ ,  $p = .59$ ) and prevention concerns (Study 5a:  $r(54) = -.14$ ,  $p = .32$ ; Study 5b:  $r(97) = -.14$ ,  $p = .19$ ).

**Primary analyses.** We conducted hierarchical multiple regression analyses on each dependent variable with standardized scores of participants' concerns with promotion or prevention and their autonomy to stay in the relationship entered into the first step, followed by Promotion  $\times$  Autonomy and Prevention  $\times$  Autonomy interactions into the second step.

**Relationship commitment (Study 5a).** Consistent with our hypotheses, the results presented in Table 7 revealed that the association between autonomous intentions and relationship commitment was qualified by participants' promotion concerns and prevention concerns, in opposite ways. As depicted in Panel A in Figure 7, simple-slope analyses showed that autonomous intentions were positively associated with relationship commitment among participants with strong promotion concerns (+1  $SD$  from the mean),  $\beta = 1.16$ ,  $t(48) = 2.83$ ,  $p < .01$ , but not among participants with weak promotion concerns ( $-1$   $SD$  from the mean),  $\beta = -.33$ ,  $t(48) = -0.89$ ,  $p = .38$ . Furthermore, promotion

concerns were (marginally) negatively associated with commitment when autonomous intentions were low ( $-1$   $SD$  from the mean),  $\beta = -.90$ ,  $t(48) = -1.75$ ,  $p = .09$ , but not when autonomous intentions were high (+1  $SD$  from the mean),  $\beta = .59$ ,  $t(48) = 1.40$ ,  $p = .17$ .

In contrast, as depicted in Panel B in Figure 7, simple-slope analyses showed that autonomous intentions were positively associated with relationship commitment among participants with weak prevention concerns ( $-1$   $SD$  from the mean),  $\beta = 1.28$ ,  $t(48) = 3.13$ ,  $p < .01$ , but not among participants with strong prevention concerns (+1  $SD$  from the mean),  $\beta = -.45$ ,  $t(48) = -1.21$ ,  $p = .23$ . Furthermore, prevention concerns were positively associated with commitment when autonomous intentions were low ( $-1$   $SD$  from the mean),  $\beta = 1.13$ ,  $t(48) = 2.06$ ,  $p = .05$ , but not when autonomous intentions were high (+1  $SD$  from the mean),  $\beta = -.61$ ,  $t(48) = -1.52$ ,  $p = .14$ .

**Relationship commitment (Study 5b).** The results presented in Table 7 revealed that the qualification of the association between autonomous intentions and relationship commitment by participants' promotion concerns was only marginally significant. However, the simple-slope analyses reported below demonstrate that these results were generally consistent with our hypotheses. The association between autonomy and commitment was also qualified by participants' prevention concerns in the opposite direction. As depicted in Panel A in Figure 8, simple-slope analyses showed that autonomous intentions were more strongly associated with relationship commitment among participants with strong promotion concerns (+1  $SD$  from the mean),  $\beta = .91$ ,  $t(91) = 5.00$ ,  $p < .001$ , than among participants with weak promotion concerns ( $-1$   $SD$  from the mean),  $\beta = .46$ ,  $t(91) = 3.13$ ,  $p < .01$ . Furthermore, promotion concerns were (marginally) negatively associated with commitment when autonomous intentions were low ( $-1$   $SD$  from the mean),  $\beta = -.55$ ,  $t(91) = -2.73$ ,  $p < .01$ , but not when autonomous intentions were high (+1  $SD$  from the mean),  $\beta = -.10$ ,  $t(91) = -0.54$ ,  $p = .59$ .

In contrast, as depicted in Panel B in Figure 8, simple-slope analyses showed that autonomous intentions were more strongly associated with relationship commitment among participants with weak prevention concerns ( $-1$   $SD$  from the mean),  $\beta = 1.00$ ,  $t(91) = 5.19$ ,  $p < .001$ , than among participants with strong prevention concerns (+1  $SD$  from the mean),  $\beta = .37$ ,  $t(91) = 2.70$ ,  $p < .01$ . Furthermore, prevention concerns were positively associated with commitment when autonomous intentions were

Table 7  
Hierarchical Regression Analyses in Studies 5a and 5b

Predictor	Relationship commitment (Study 5a)		Relationship commitment (Study 5b)		General forgiveness (Study 5b)	
	$\beta$	$t$	$\beta$	$t$	$\beta$	$t$
Autonomous intentions	.38	2.82**	.62	7.21***	.17	1.60
Promotion	-.01	-0.02	-.28	-2.08*	.05	0.28
Prevention	.04	0.09	.24	1.73 <sup>†</sup>	-.16	-0.93
Promotion $\times$ Autonomous Intentions	.75	2.03*	.23	1.62	.57	3.58***
Prevention $\times$ Autonomous Intentions	-.87	-2.35*	-.31	-2.21*	-.66	-4.05***

Note. Degrees of freedom for  $t$  statistics in Study 5a: Step 1 (main effects) = 50; Step 2 (interactions) = 48; in Study 5b: Step 1 (main effects) = 93; Step 2 (interactions) = 91.

<sup>†</sup>  $p < .10$ . \*  $p \leq .05$ . \*\*  $p \leq .01$ . \*\*\*  $p \leq .001$ .

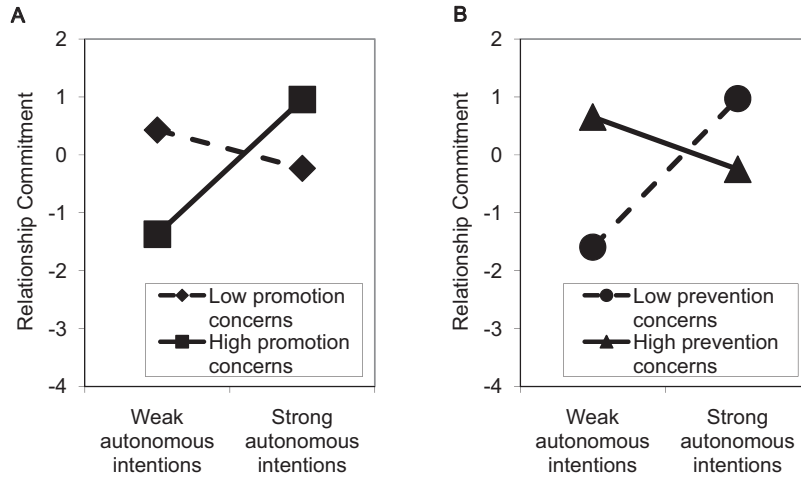


Figure 7. Relationship commitment as a function of chronic promotion (Panel A) or prevention (Panel B) concerns and autonomous intentions to remain in a relationship (Study 5a).

low ( $-1$  *SD* from the mean),  $\beta = .61$ ,  $t(91) = 2.82$ ,  $p < .01$ , but not when autonomous intentions were high ( $+1$  *SD* from the mean),  $\beta = -.01$ ,  $t(91) = -.06$ ,  $p = .95$ .

**General forgiveness (Study 5b).** Consistent with our hypotheses, Table 7 revealed that the association between autonomous intentions and general forgiveness was qualified by participants' promotion concerns and prevention concerns, again in opposite ways. As depicted in Panel A in Figure 9, simple-slope analyses showed that autonomous intentions were positively associated with forgiveness among participants with strong promotion concerns ( $+1$  *SD* from the mean),  $\beta = .88$ ,  $t(91) = 4.21$ ,  $p < .001$ , but not among participants with weak promotion concerns ( $-1$  *SD* from the mean),  $\beta = -.26$ ,  $t(91) = -1.57$ ,  $p = .12$ . Furthermore, promotion concerns were negatively associated with forgiveness when autonomous intentions were low ( $-1$  *SD* from the mean),  $\beta = -.61$ ,  $t(91) = -2.65$ ,  $p = .01$ , but were positively associated

with forgiveness when autonomous intentions were high ( $+1$  *SD* from the mean),  $\beta = .53$ ,  $t(91) = 2.49$ ,  $p = .01$ .

As depicted in Panel B in Figure 9, simple-slope analyses showed that autonomous intentions were positively associated with forgiveness among participants with weak prevention concerns ( $-1$  *SD* from the mean),  $\beta = .96$ ,  $t(91) = 4.38$ ,  $p < .001$ , but were negatively associated with forgiveness among participants with strong prevention concerns ( $+1$  *SD* from the mean),  $\beta = -.35$ ,  $t(91) = -2.19$ ,  $p = .03$ . Furthermore, prevention concerns were positively associated with forgiveness when autonomous intentions were low ( $-1$  *SD* from the mean),  $\beta = .63$ ,  $t(91) = 2.06$ ,  $p = .05$ , but were negatively associated with forgiveness when autonomous intentions were high ( $+1$  *SD* from the mean),  $\beta = -.68$ ,  $t(91) = -3.39$ ,  $p = .001$ .

Overall, Studies 5a and 5b thus provided consistent support for our hypotheses that as participants' chronic promotion concerns

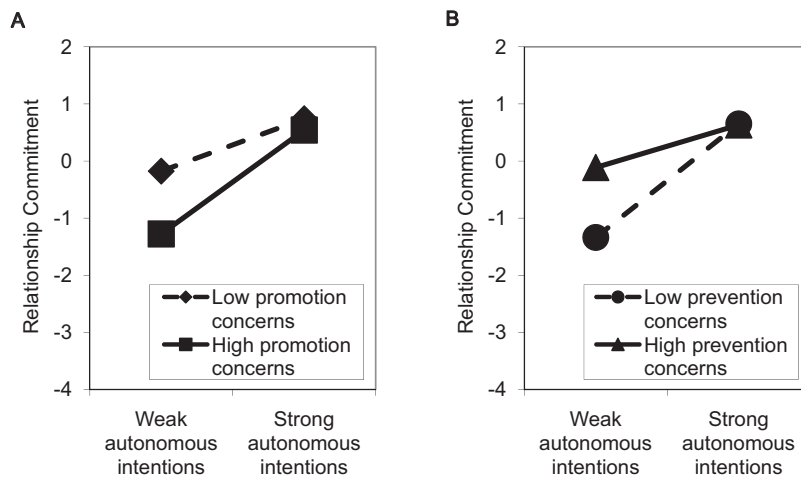


Figure 8. Relationship commitment as a function of chronic promotion (Panel A) or prevention (Panel B) concerns and autonomous intentions to remain in a relationship (Study 5b).

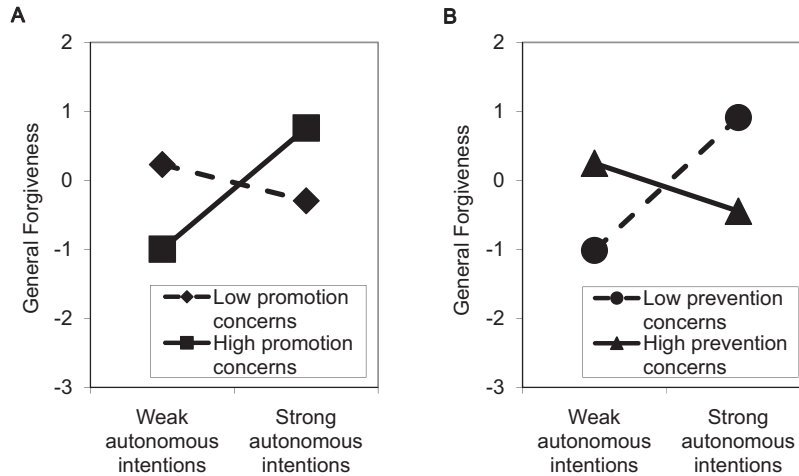


Figure 9. General forgiveness as a function of chronic promotion (Panel A) or prevention (Panel B) concerns and autonomous intentions to remain in a relationship (Study 5b).

increase, so too should the positive association of autonomous intentions to remain in the relationship with relationship well-being. Furthermore, in these studies, as participants' chronic prevention concerns increased, the positive association of autonomous intentions to remain in the relationship and relationship well-being decreased. Although broadly consistent with our hypotheses that increased autonomous intentions should uniquely predict relationship well-being among individuals predominantly concerned with promotion, but not individuals concerned with prevention, these latter results stand in contrast to our findings in the previous studies and we consider possible explanations for the discrepancy in the General Discussion.

### Meta-Analytic Summary

To better establish the overall pattern of the effects observed across all the studies reported here, we conducted several sets of meta-analyses on the main-effects of perceived autonomy and promotion concerns on relationship well-being, as well as their interaction. To conduct the meta-analyses, we first obtained the relevant  $\beta$ s and standard errors (*SE*s) from the regression analyses presented in Tables 1–7. Studies 2 and 5b reported two outcome measures, so for those studies, we averaged  $\beta$ s and *SE*s to obtain an overall effect size across measures. To calculate each meta-analytic  $\beta$ , we weighted the  $\beta$  for each effect from each study by the inverse of its variance. To calculate each meta-analytic *SE*, we took the square root of the reciprocal of the sum of the weights. To conduct hypothesis tests on our meta-analytic effects, we divided the meta-analytic  $\beta$  by the meta-analytic *SE*, which yielded a *Z* statistic (Borenstein, Hedges, Higgins, & Rothstein, 2009).

### Main Effects of Autonomy and Regulatory Focus

We conducted two sets of meta-analyses on the main effects of autonomy and regulatory focus on relationship well-being.

**Autonomy.** We first conducted separate meta-analyses for the two different operationalizations of autonomy experiences. In the first set of analyses, we examined the unique associations

of autonomy support with relationship well-being in Studies 2, 3a, and 3b after controlling for other important types of support (i.e., perceived partner responsiveness and support for other needs). Studies 1a and 1b did not include these additional controls, and, consequently, the simple-slopes do not necessarily represent the unique contribution of autonomy experiences and could involve inflated effect-sizes. Therefore, we excluded these two studies from the meta-analyses. In the second set of analyses, we examined the associations of autonomous intentions to remain in a relationship with relationship well-being in Studies 4a, 4b, 5a, and 5b. The meta-analyses showed that relationship well-being was significantly associated with autonomy support,  $\beta = .150$ , *SE* = .045, *Z* = 3.33, *p* < .001, and autonomous intentions,  $\beta = .463$ , *SE* = .049, *Z* = 9.42, *p* < .001.

**Regulatory focus.** We also conducted separate meta-analyses for chronic and experimentally induced promotion and prevention concerns. In the first set of analyses, we examined the separate main effects of chronic promotion and prevention concerns on relationship well-being in Studies 1a, 2, 3a, 5a, and 5b. In the second set of analyses, we examined the main effect of experimentally induced promotion or prevention on relationship well-being in Studies 1b, 3b, 4a, and 4b. The first meta-analysis showed that relationship well-being was not associated with chronic promotion concerns,  $\beta = -.024$ , *SE* = .050, *Z* = -0.48, *p* = .63, and chronic prevention concerns,  $\beta = .038$ , *SE* = .029, *Z* = 1.31, *p* = .19. Similarly, the second meta-analysis showed that experimental manipulations of promotion and prevention concerns did not influence relationship well-being,  $\beta = -.043$ , *SE* = .036, *Z* = -1.18, *p* = .24.

### Interaction Effects Between Autonomy and Promotion Concerns

We also conducted two sets of meta-analyses on the joint influence of autonomy and promotion concerns on relationship well-being. The first set examined the cumulative simple associations of autonomy with relationship well-being among indi-

viduals with stronger promotion concerns (i.e., 1 *SD* above the scale mean of promotion index in Studies 2, 3a, 5a, and 5b; the promotion condition in Studies 3b, 4a, and 4b) and individuals with weaker promotion concerns (i.e., 1 *SD* below the scale mean in Studies 2, 3a, 5a, and 5b; the prevention condition in Studies 3b, 4a, and 4b). The second set examined the simple effects of promotion concerns among individuals who experienced more (1 *SD* above the scale mean) or less (1 *SD* below the scale mean) autonomy in their relationships.

Separate meta-analyses were also conducted for the two different types of autonomy experiences. In the first set of analyses, we examined the unique associations of autonomy support with relationship well-being in Studies 2, 3a, and 3b after controlling for other important types of support. As described earlier, we excluded Studies 1a and 1b from the meta-analyses as they did not include additional controls. In the second set of analyses, we examined the associations of autonomous intentions to remain in a relationship with relationship well-being in Studies 4a, 4b, 5a, and 5b.

**Experiences of autonomy support.** The first set of meta-analyses revealed that, after controlling for perceived partner responsiveness and support for other basic needs (i.e., relatedness and competence), the cumulative association of perceived autonomy support with relationship well-being was significantly positive among participants with strong promotion concerns,  $\beta = .263$ ,  $SE = .064$ ,  $Z = 4.13$ ,  $p < .001$ , but not among participants with weak promotion concerns,  $\beta = -.035$ ,  $SE = .067$ ,  $Z = -0.51$ ,  $p = .61$ . These two associations were significantly different,  $Z = 3.29$ ,  $p = .001$ .

The second set of meta-analyses revealed that the cumulative association of promotion concerns with relationship well-being was significantly positive when autonomy support was high,  $\beta = .172$ ,  $SE = .057$ ,  $Z = 3.04$ ,  $p < .001$ , and was significantly negative when autonomy support was low,  $\beta = -.127$ ,  $SE = .052$ ,  $Z = -2.45$ ,  $p = .01$ . That is, individuals with strong versus weak promotion concerns showed less relationship well-being when autonomy support was low and greater relationship well-being when autonomy support was high.

**Autonomous intentions to remain in a relationship.** The first set of meta-analyses revealed that the cumulative association of autonomous intentions to remain in a relationship with relationship well-being was significantly positive both among participants with strong promotion concerns,  $\beta = .739$ ,  $SE = .093$ ,  $Z = 7.97$ ,  $p < .001$ , and among participants with weak promotion concerns,  $\beta = .335$ ,  $SE = .067$ ,  $Z = 4.97$ ,  $p < .001$ . However, the association was significantly stronger in the former group,  $Z = 2.12$ ,  $p = .03$ .

The second set of meta-analyses revealed that the cumulative association of promotion concerns with relationship well-being was non-significant when autonomous intentions were high,  $\beta = .097$ ,  $SE = .075$ ,  $Z = -1.30$ ,  $p = .19$ , and was significantly negative when autonomous intentions were low,  $\beta = -.330$ ,  $SE = .078$ ,  $Z = -4.26$ ,  $p < .001$ . That is, compared with individuals with weak promotion concerns, individuals with strong promotion concerns did not show greater relationship well-being when autonomous intentions were high but did show less relationship well-being when autonomous intentions were low.

## General Discussion

Of the many ways in which people evaluate their close relationships, their perceptions of how well these relationships support basic needs for self-direction and autonomy have been found to have particularly far-reaching effects on their attachment to and satisfaction with their relationship partners (La Guardia & Patrick, 2008). In the present studies, we also reliably found that, in general, the more people felt their autonomy needs were supported and fulfilled by a relationship, the greater was their relationship well-being. Yet, in addition, we demonstrated that the larger motivational context within which people evaluate a relationship can alter how much the perceived fulfillment of autonomy needs contributes to this well-being.

As summarized by the meta-analyses, the present studies demonstrated that consistent with previous research, perceived autonomy is generally an important predictor of relationship well-being. These analyses also revealed that there do not appear to be overall main effects of promotion or prevention concerns on relationship well-being (see also Molden & Winterheld, in press). However, as hypothesized, concerns with promotion increased the associations between experiences of autonomy and several different measures of relationship well-being, including relationship quality and forgiveness. This effect emerged regardless of whether the fulfillment of autonomy needs was assessed in terms of participants' (a) perceptions of support for autonomy needs within the relationship (Studies 1–3), or (b) their autonomous intentions to remain in a relationship (Studies 4 and 5). Thus, as befits the greater focus on self-direction and independence that comes with increased motivations for growth and achieving personal aspirations (Aaker & Lee, 2001; Lee et al., 2000), promotion concerns increased the judged relevance of experiences of autonomy for relationship well-being.

In contrast, these studies also showed that concerns with prevention and security did not increase the association between perceived autonomy and relationship well-being. Indeed, some evidence was even found in Study 5 to suggest that, at times, experiences of autonomy could be less associated with well-being when prevention concerns are strong. Although this result could be interpreted as an artifact of the single-item measure of autonomous intentions, we believe this to be unlikely given the strong correlations between this measure and a more established measure of autonomous intentions. Instead, we speculate that these discrepancies arose in Study 5 because feeling that one is free to leave a relationship at any time to pursue other opportunities (as opposed to merely having one's personal goals supported by one's partner or having more intrinsic or identified reasons for remaining) may directly undermine the perceived security and stability that the relationship provides (e.g., Bullens, van Harreveld, & Förster, 2011; Gilbert & Ebert, 2002; Hafner, White, & Handley, 2012). In the presence of the concerns about relationship maintenance that this particular experience of autonomy might bring, a greater focus on prevention could undermine the association these experiences and relationship well-being (Finkel, Molden, Johnson, & Eastwick, 2009; Johnson & Rusbult, 1989; Murray & Holmes, 2009). However, whether there is truly a distinction in the motivational consequences of different forms of autonomy is something that can only be determined by additional studies.

Several other aspects of the present findings are also worth noting. First, our results replicated not only when assessing participants' chronic concerns with promotion and prevention using self-report and reaction-time measures but also when these concerns were experimentally activated. Therefore, the present studies illustrate the potential value of considering the broader motivational context in which people evaluate their relationship for better understanding both how different individuals might come to distinct conclusions about their relationships and how different social environments or circumstances might alter the conclusions that most people are likely to reach.

Second, meta-analyses demonstrated that the strength of participants' promotion concerns influenced relationship well-being when autonomy support was high and low, but strength of participants' promotion concerns influenced relationship well-being only when autonomous intentions to remain in the relationship were low. That is, whereas individuals with either chronic or temporarily activated motivations for promotion displayed a relative deficit in well-being when they experienced low autonomy support or autonomous intentions to remain in the relationship, they displayed a relative boost in relationship well-being only when they experienced high autonomy support, not high autonomous intentions. These differences in the findings for autonomy support and autonomous intentions were intriguing. One tentative explanation for the absence of an additional effect of promotion concerns when autonomous intentions to remain in a relationship were high is perhaps that when promotion-focused within a relationship, people view these autonomous intentions as the status quo and, as such, only place additional importance on these intentions when they are low. This too needs to be confirmed by further research.

Third, across all studies, people's chronic or temporary concerns with promotion showed either null or weak associations with their perceptions of autonomy support or autonomous intentions to stay in a relationship. These findings are further evidence that such concerns do not simply create a more autonomous orientation in one's relationships or general goal pursuit (Moretti & Higgins, 1999a, 1999b). Instead, promotion concerns appear to create a context in which opportunities for autonomy or self-direction are more motivationally relevant, and thus have a greater impact on judgment and behavior (cf. Kunda, 1990; Molden & Higgins, 2012).

Fourth, the different manipulations of promotion concerns in Studies 2, 3b, 4a, and 4b provided convergent evidence that such concerns cause an increase in the association between perceived autonomy in a relationship and relationship well-being. We have interpreted this increased association as reflecting the extent to which people are judging well-being based on their perceptions of autonomy. In all of these studies, we measured perceived autonomy after the manipulations of promotion concerns. We designed the studies in this manner because our primary hypothesis was that the activation of different motivations would alter how people evaluated their relationships in light of their perceptions of autonomy. We therefore wanted to ensure these motivations were present before asking participants to consider their perceptions and evaluations. One limitation of this design is that it is possible to alternatively interpret the results of these studies as indicating that people with stronger promotion concerns more strongly infer the existence of autonomy in relationships in which they perceive high

well-being. However, given that, as noted above, stronger promotion concerns did not consistently influence perceived autonomy within a relationship, we find it less plausible that these concerns would produce such inferences. Nevertheless, whatever the explanation for the increased association between perceived autonomy and relationship well-being, our findings that illustrate the role of promotion concerns in this process provide an important extension to the current literature on the role of autonomy needs within relationships.

Finally, Study 3 provided evidence that not only do promotion concerns influence the judged relevance of autonomy needs for relationship well-being, prevention concerns may influence the relevance of relatedness needs. This ancillary hypothesis was supported in two studies, and the results were broadly consistent with our larger claims that promotion concerns evoke a greater focus on independence and self-direction whereas prevention concerns evoke a greater focus on interdependence (Aaker & Lee, 2001; Lee et al., 2000; Murray & Holmes, 2009). Although previous studies have illustrated this differential focus, the implications for close relationships have not been explored, and the present findings suggest that this could be an important topic for future research. These results together suggested that individuals with promotion concerns do not simply value general support for different basic needs within relationships more than do individuals with prevention concerns. Instead, individuals with promotion or prevention concerns value different types of need support (see Molden & Winterheld, in press).

### Implications for the Role of Autonomy Needs in Relationship Well-Being

Research has long shown that needs for autonomy and self-direction are a fundamental influence on people's general well-being (Ryan & Deci, 2000) and that feeling autonomous within a relationship is widely important for relationship well-being (Blais et al., 1990; Deci et al., 2006; La Guardia et al., 2000; Patrick et al., 2007). As noted above, the present studies all reaffirmed these previous findings and generally showed that experiences of autonomy contributed to greater relationship well-being. However, the present studies also showed that the size of this association is not constant and can be substantially modified by the presence of additional motivational concerns. When concerns that highlight the perceived importance of and benefits from autonomy were present, the association between the perceived presence of autonomy and relationship well-being was stronger than when these concerns were not present or when alternate concerns that did not highlight the importance of autonomy were more salient. That is, stronger concerns with promotion and advancement amplified the role of autonomy needs in experiences of relationship well-being, whereas stronger prevention concerns did not. Individuals concerned with promotion put more emphases on both a partner's support for the freedom to pursue their personal goals and their autonomy to stay in the relationship, whereas individuals concerned with prevention did not.

It is important to note, however, that our findings do not suggest that autonomy plays only a limited role in relationship well-being when promotion concerns are not salient. What our results do suggest is that these other sources of motivation can temporarily increase or diminish the size of these benefits based on the rele-

vance people place on autonomy for pursuing these additional motivations. When focused on growth, advancement, and attaining aspirations, for which self-direction is likely to be seen as vital facilitator, the presence of autonomy will become more strongly associated with relationship well-being. In contrast, when focused on safety, security, and maintaining responsibilities, for which self-direction is unlikely to be seen as a vital facilitator, the presence of autonomy will not become more strongly associated with relationship well-being.

### Implications for the Role of Concerns With Promotion or Prevention in Relationship Well-Being

In addition to extending research on the role of autonomy needs in close relationships, the present research also extends previous studies on the influence of concerns with promotion or prevention within such relationships as well (Bohns et al., 2013; Finkel et al., 2009; Molden & Finkel, 2010; Molden et al., 2009; Righetti & Kumashiro, 2012; Righetti, Rusbult, & Finkenauer, 2010; Winterheld & Simpson, 2011; see Molden & Winterheld, in press). Previous research has shown that concerns with promotion or prevention create a greater sensitivity for and direct attention toward aspects of a situation that are most motivationally relevant (e.g., Lee & Aaker, 2004; Werth & Förster, 2007), and studies have begun to explore the implications of these sensitivities for close relationships. For example, promotion concerns inspire more forgiveness toward relationship partners who apologize for spoiling opportunities for gain or whom one trusts to provide more of such opportunities in the future, whereas prevention concerns inspire forgiveness toward relationship partners who apologize for creating losses or in whom one is sufficiently invested to fear the consequences of withholding forgiveness (Molden & Finkel, 2010; Santelli, Struthers, & Eaton, 2009). In addition, relationship contexts that primarily highlight concerns with growth and advancement, such as when partners are still dating, have been found to focus people on perceived partner support for such growth when judging relationship well-being, whereas relationship contexts that also highlight safety and security, such as when partners are married, have been found to additionally focus people on perceived partner support for such security when judging well-being (Molden et al., 2009).

The present studies further extend the scope of the motivational sensitivities associated with promotion or prevention concerns, and reveal another important factor in relationships that may be differentially relevant for relationship well-being based on these concerns: fulfillment of autonomy or relatedness needs within the relationship. Future research could extend the implications of these specific sensitivities by examining how concerns with promotion or prevention might influence how people select and value partners who are perceived to be more instrumental for fulfilling autonomy or relatedness (cf. Fitzsimons & Fishbach, 2010; Fitzsimons & Shah, 2008), or who provide other promotion- or prevention-relevant types of support (see also Molden et al., 2009; Righetti et al., 2010). Also, recent reviews (Eastwick, 2009; Finkel & Eastwick, in press) have suggested that close relationships often serve multiple higher-order social goals (e.g., achievement and self-affirmation goals) that have no direct link to reproduction in evolutionary history, and further examining how concerns with

promotion or prevention can highlight certain types of goals over others could provide greater insight into the psychological functions of such relationships.

Another important direction for future research could be investigating how concerns with promotion or prevention influence the longitudinal and dyadic effects of perceived fulfillment of autonomy or relatedness needs on relationship development and stability. That is, although the present research identified differential sensitivities to support for distinct needs within a relationship, all of these studies were cross-sectional. Longitudinal studies could illustrate how a greater focus on autonomy versus relatedness affects the progress of a relationship and when and why fluctuations in relationship well-being occur.

### Conclusions

To conclude, close relationships can serve a variety of different needs, but those needs by which a particular relationship is primarily judged may fluctuate based on the larger motivational context in which this relationship is evaluated. In the present article, we demonstrated that autonomy needs are more strongly related to relationship well-being in contexts where individuals are concerned with growth and promotion than in contexts where individuals are concerned with security and prevention. This research thus demonstrates yet another means by which relationship partners actively construct their impressions of each other, and by which love depends on the eye of the beholder.

### References

- Aaker, J. L., & Lee, A. Y. (2001). "I" seek pleasures and "we" avoid pains: The role of self-regulatory goals in information processing and persuasion. *Journal of Consumer Research*, 28, 33–49. doi:10.1086/321946
- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Thousand Oaks, CA: Sage.
- Arndt, J., & Vess, M. (2008). Tales from existential oceans: Terror management theory and how the awareness of our mortality affects us all. *Social and Personality Psychology Compass*, 2, 909–928. doi:10.1111/j.1751-9004.2008.00079.x
- Aron, A., Steele, J. L., Kashdan, T. B., & Perez, M. (2006). When similars do not attract: Tests of a prediction from the self-expansion model. *Personal Relationships*, 13, 387–396. doi:10.1111/j.1475-6811.2006.00125.x
- Arriaga, X. B., & Agnew, C. R. (2001). Being committed: Affective, cognitive, and conative components of relationship commitment. *Personality and Social Psychology Bulletin*, 27, 1190–1203. doi:10.1177/0146167201279011
- Berscheid, E., & Hatfield, E. (1969). *Interpersonal attraction*. London, England: Addison-Wesley.
- Bijleveld, E., Custers, R., & Aarts, H. (2009). The unconscious eye opener: Pupil dilation reveals strategic recruitment of resources upon presentation of subliminal reward cues. *Psychological Science*, 20, 1313–1315. doi:10.1111/j.1467-9280.2009.02443.x
- Blais, M. R., Sabourin, S., Boucher, C., & Vallerand, R. J. (1990). Toward a motivational model of couple happiness. *Journal of Personality and Social Psychology*, 59, 1021–1031. doi:10.1037/0022-3514.59.5.1021
- Bohns, V., Lucas, G. M., Molden, D. C., Finkel, E. J., Coolsen, M. K., Kumashiro, M., . . . Higgins, E. T. (2013). Opposites fit: Regulatory focus complementarity and relationship well-being. *Social Cognition*, 31, 1–14. doi:10.1521/soco.2013.31.1.1

- Borenstein, M., Hedges, L. V., Higgins, J. P. T., & Rothstein, H. R. (2009). *Introduction to meta-analysis*. Chichester, United Kingdom: Wiley. doi:10.1002/9780470743386
- Bowlby, J. (1969). Attachment and loss: Vol. 1. *Attachment*. New York, NY: Basic Books.
- Buhrmester, M. D., Kwang, T., & Gosling, S. D. (2011). Amazon's Mechanical Turk: A new source of inexpensive, yet high-quality, data? *Perspectives on Psychological Science*, 6, 3–5. doi:10.1177/1745691610393980
- Bullens, L., van Harreveld, F., & Förster, J. (2011). Keeping ones options open: The detrimental consequences of decision reversibility. *Journal of Experimental Social Psychology*, 47, 800–805. doi:10.1016/j.jesp.2011.02.012
- Campbell, L., & Kashy, D. A. (2002). Estimating actor, partner, and interaction effects for dyadic data using PROC MIXED and HLM: A user-friendly guide. *Personal Relationships*, 9, 327–342. doi:10.1111/1475-6811.00023
- Coan, J. A., Schaefer, H. S., & Davidson, R. J. (2006). Lending a hand: Social regulation of the neural response to threat. *Psychological Science*, 17, 1032–1039. doi:10.1111/j.1467-9280.2006.01832.x
- Converse, B. A., & Fishbach, A. (2012). Instrumentality boosts appreciation: Helpers are more appreciated while they are useful. *Psychological Science*, 23, 560–566. doi:10.1177/0956797611433334
- Crowe, E., & Higgins, E. T. (1997). Regulatory focus and strategic inclinations: Promotion and prevention in decision-making. *Organizational Behavior and Human Decision Processes*, 69, 117–132. doi:10.1006/obhd.1996.2675
- Deci, E. L., La Guardia, J. G., Moller, A. C., Scheiner, M. J., & Ryan, R. M. (2006). On the benefits of giving as well as receiving autonomy support: Mutuality in close friendships. *Personality and Social Psychology Bulletin*, 32, 313–327. doi:10.1177/0146167205282148
- Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11, 227–268. doi:10.1207/S15327965PLI1104\_01
- Eastwick, P. W. (2009). Beyond the Pleistocene: Using phylogeny and constraint to inform the evolutionary psychology of human mating. *Psychological Bulletin*, 135, 794–821. doi:10.1037/a0016845
- Etcheverry, P. E., & Le, B. (2005). Thinking about commitment: Accessibility of commitment and prediction of relationship persistence, accommodation, and willingness to sacrifice. *Personal Relationships*, 12, 103–123. doi:10.1111/j.1350-4126.2005.00104.x
- Evans, L. M., & Petty, R. E. (2003). Self-guide framing and persuasion: Responsibly increasing message processing to ideal levels. *Personality and Social Psychology Bulletin*, 29, 313–324. doi:10.1177/0146167202250090
- Fazio, R. H. (1990). A practical guide to the use of response latency in social psychological research. In C. Hendrick & M. S. Clark (Eds.), *Review of personality and social psychology: Research methods in personality and social psychology* (Vol. 11, pp. 74–97). Newbury Park, CA: Sage.
- Feeney, B. C. (2004). A secure base: Responsive support of goal strivings and exploration in adult intimate relationships. *Journal of Personality and Social Psychology*, 87, 631–648. doi:10.1037/0022-3514.87.5.631
- Finkel, E. J., & Campbell, W. K. (2001). Self-control and accommodation in close relationships: An interdependence analysis. *Journal of Personality and Social Psychology*, 81, 263–277. doi:10.1037/0022-3514.81.2.263
- Finkel, E. J., & Eastwick, P. W. (in press). Interpersonal attraction: In search of a theoretical Rosetta Stone. In J. A. Simpson & J. F. Dovidio (Eds.), *Handbook of personality and social psychology: Interpersonal relations and group processes*. Washington, DC: American Psychological Association.
- Finkel, E. J., Molden, D. C., Johnson, S. E., & Eastwick, P. W. (2009). Regulatory focus and romantic alternatives. In J. P. Forgas, R. F. Baumeister, & D. M. Tice (Eds.), *Self-regulation: Cognitive, affective, and motivational processes* (pp. 319–335). New York, NY: Psychology Press.
- Fiske, S. T. (2008). Core social motivations, a historical perspective: Views from the couch, conscientiousness, classroom, computers, and collectives. In J. Y. Shah & W. L. Gardner (Eds.), *Handbook of motivation science* (pp. 3–22). New York, NY: Guilford Press.
- Fitzsimons, G. M., & Finkel, E. J. (2011). Outsourcing self-regulation. *Psychological Science*, 22, 369–375. doi:10.1177/0956797610397955
- Fitzsimons, G. M., & Fishbach, A. (2010). Shifting closeness: Interpersonal effects of personal goal progress. *Journal of Personality and Social Psychology*, 98, 535–549. doi:10.1037/a0018581
- Fitzsimons, G. M., & Shah, J. Y. (2008). How goal instrumentality shapes relationship evaluations. *Journal of Personality and Social Psychology*, 95, 319–337. doi:10.1037/0022-3514.95.2.319
- Fletcher, G. J. O., Simpson, J. A., & Thomas, G. (2000). Relationship quality components: A confirmatory factor analytic approach. *Personality and Social Psychology Bulletin*, 26, 340–354. doi:10.1177/0146167200265007
- Florack, A., Friese, M., & Scarabis, M. (2010). Regulatory focus and reliance on implicit preferences in consumption contexts. *Journal of Consumer Psychology*, 20, 193–204. doi:10.1016/j.jcps.2010.02.001
- Förster, J., Grant, H., Idson, L. C., & Higgins, E. T. (2001). Success/failure feedback, expectancies, and approach/avoidance motivation: How regulatory focus moderates classic relations. *Journal of Experimental Social Psychology*, 37, 253–260. doi:10.1006/jesp.2000.1455
- Förster, J., Higgins, E. T., & Bianco, A. T. (2003). Speed/accuracy decisions in task performance: Built-in trade-off or separate strategic concerns? *Organizational Behavior and Human Decision Processes*, 90, 148–164. doi:10.1016/S0749-5978(02)00509-5
- Frank, E., & Brandstatter, V. (2002). Approach versus avoidance: Different types of commitment in intimate relationships. *Journal of Personality and Social Psychology*, 82, 208–221. doi:10.1037/0022-3514.82.2.208
- Freitas, A. L., & Higgins, E. T. (2002). Enjoying goal-directed action: The role of regulatory fit. *Psychological Science*, 13, 1–6. doi:10.1111/1467-9280.00401
- Gable, S. L., & Impett, E. A. (2012). Approach and avoidance motives and close relationships. *Social and Personality Psychology Compass*, 6, 95–108. doi:10.1111/j.1751-9004.2011.00405.x
- Gaine, G. S., & La Guardia, J. G. (2009). The unique contributions of motivations to maintain a relationship and motivations toward relational activities to relationship well-being. *Motivation and Emotion*, 33, 184–202. doi:10.1007/s11031-009-9120-x
- Gilbert, D. T., & Ebert, J. E. J. (2002). Decisions and revisions: The affective forecasting of changeable outcomes. *Journal of Personality and Social Psychology*, 82, 503–514. doi:10.1037/0022-3514.82.4.503
- Hafner, R. J., White, M. P., & Handley, S. J. (2012). Spoilt for choice: The role of counterfactual thinking in the excess choice and reversibility paradoxes. *Journal of Experimental Social Psychology*, 48, 28–36. doi:10.1016/j.jesp.2011.06.022
- Haws, K. L., Dholakia, U. M., & Bearden, W. O. (2010). An assessment of chronic regulatory focus measures. *Journal of Marketing Research*, 47, 967–982. doi:10.1509/jmkr.47.5.967
- Hazlett, A., Molden, D. C., & Sackett, A. M. (2011). Hoping for the best or preparing for the worst: Regulatory focus and preferences for optimism and pessimism in predicting personal outcomes. *Social Cognition*, 29, 74–96. doi:10.1521/soco.2011.29.1.74
- Higgins, E. T. (1987). Self-discrepancy: A theory relating self and affect. *Psychological Review*, 94, 319–340. doi:10.1037/0033-295X.94.3.319
- Higgins, E. T. (1996). Knowledge activation: Accessibility, applicability, and salience. In E. T. Higgins & A. W. Kruglanski (Eds.), *Social psychology: Handbook of basic principles* (pp. 133–168). New York, NY: Guilford Press.

- Higgins, E. T. (1997). Beyond pleasure and pain. *American Psychologist*, 52, 1280–1300. doi:10.1037/0003-066X.52.12.1280
- Higgins, E. T., Friedman, R. S., Harlow, R. E., Idson, L. C., Ayduk, O. N., & Taylor, A. (2001). Achievement orientations from subjective histories of success: Promotion pride versus prevention pride. *European Journal of Social Psychology*, 31, 3–23. doi:10.1002/ejsp.27
- Higgins, E. T., Roney, C. J. R., Crowe, E., & Hymes, C. (1994). Ideal versus ought predilections for approach and avoidance: Distinct self-regulatory systems. *Journal of Personality and Social Psychology*, 66, 276–286. doi:10.1037/0022-3514.66.2.276
- Higgins, E. T., Shah, J., & Friedman, R. (1997). Emotional responses to goal attainment: Strength of regulatory focus as moderator. *Journal of Personality and Social Psychology*, 72, 515–525. doi:10.1037/0022-3514.72.3.515
- Higgins, E. T., & Tykocinski, O. (1992). Self-discrepancies and biographical memory: Personality and cognition at the level of psychological situation. *Personality and Social Psychology Bulletin*, 18, 527–535. doi:10.1177/0146167292185002
- Hui, C. M., & Molden, D. C. (2012). *Maintaining commitment in the presence of alternative opportunities: The role of motivations for promotion or prevention*. Unpublished manuscript.
- Idson, L. C., & Higgins, E. T. (2000). How current feedback and chronic effectiveness influence motivation: Everything to gain versus everything to lose. *European Journal of Social Psychology*, 30, 583–592. doi:10.1002/1099-0992(200007/08)30:4<583::AID-EJSP9>3.0.CO;2-S
- Idson, L. C., Liberman, N., & Higgins, E. T. (2000). Distinguishing gains from nonlosses and losses from nongains: A regulatory focus perspective on hedonic intensity. *Journal of Experimental Social Psychology*, 36, 252–274. doi:10.1006/jesp.1999.1402
- Impett, E. A., Gable, S. L., & Peplau, L. A. (2005). Giving up and giving in: The costs and benefits of daily sacrifice in intimate relationships. *Journal of Personality and Social Psychology*, 89, 327–344. doi:10.1037/0022-3514.89.3.327
- Impett, E. A., Gordon, A. M., Kogan, A., Oveis, C., Gable, S. L., & Keltner, D. (2010). Moving toward more perfect unions: Daily and long-term consequences of approach and avoidance goals in romantic relationships. *Journal of Personality and Social Psychology*, 99, 948–963. doi:10.1037/a0020271
- Impett, E. A., Strachman, A., Finkel, E. J., & Gable, S. L. (2008). Maintaining sexual desire in intimate relationships: The importance of approach goals. *Journal of Personality and Social Psychology*, 94, 808–823. doi:10.1037/0022-3514.94.5.808
- Jain, S. P., Lindsey, C., Agrawal, N., & Maheswaran, D. (2007). For better or for worse? Valenced comparative frames and regulatory focus. *Journal of Consumer Research*, 34, 57–65. doi:10.1086/513046
- Johnson, D. J., & Rusbult, C. E. (1989). Resisting temptation: Devaluation of alternative partners as a means of maintaining commitment in close relationships. *Journal of Personality and Social Psychology*, 57, 967–980. doi:10.1037/0022-3514.57.6.967
- Kenny, D. A., Kashy, D. A., & Cook, W. (2006). *Dyadic data analysis*. New York, NY: Guilford Press.
- Knee, C. R., Lonsbary, C., Canevello, A., & Patrick, H. (2005). Self-determination and conflict in romantic relationships. *Journal of Personality and Social Psychology*, 89, 997–1009. doi:10.1037/0022-3514.89.6.997
- Koestner, R., Otis, N., Powers, T. A., Pelletier, L., & Gagnon, H. (2008). Autonomous motivation, controlled motivation, and goal progress. *Journal of Personality*, 76, 1201–1230. doi:10.1111/j.1467-6494.2008.00519.x
- Koestner, R., Powers, T. A., Carbonneau, N., Milyavskaya, M., & Chua, S. N. (2012). Distinguishing autonomous and directive forms of goal support: Their effects on goal progress, relationship quality, and subjective well-being. *Personality and Social Psychology Bulletin*, 38, 1609–1620. doi:10.1177/0146167212457075
- Kunda, Z. (1990). The case for motivated reasoning. *Psychological Bulletin*, 108, 480–498. doi:10.1037/0033-2909.108.3.480
- Kurman, J., & Hui, C. M. (2012). Cultural regulatory fit and self-regulatory strategies after unsuccessful outcomes. *European Journal of Social Psychology*, 42, 482–489. doi:10.1002/ejsp.1838
- Kwang, T., & Swann, W. B., Jr. (2010). Do people embrace praise even when they feel unworthy? A review of critical tests of self-enhancement versus self-verification. *Personality and Social Psychology Review*, 14, 263–280. doi:10.1177/1088868310365876
- La Guardia, J. G., & Patrick, H. (2008). Self-determination theory as a fundamental theory of close relationships. *Canadian Psychology/Psychologie canadienne*, 49, 201–209. doi:10.1037/a0012760
- La Guardia, J. G., Ryan, R. M., Couchman, C. E., & Deci, E. L. (2000). Within-person variation in security of attachment: A self-determination theory perspective on attachment, need fulfillment, and well-being. *Journal of Personality and Social Psychology*, 79, 367–384. doi:10.1037/0022-3514.79.3.367
- Lee, A. Y., & Aaker, J. L. (2004). Bringing the frame into focus: The influence of regulatory fit on processing fluency and persuasion. *Journal of Personality and Social Psychology*, 86, 205–218. doi:10.1037/0022-3514.86.2.205
- Lee, A. Y., Aaker, J. L., & Gardner, W. L. (2000). The pleasures and pains of distinct self-construals: The role of interdependence in regulatory focus. *Journal of Personality and Social Psychology*, 78, 1122–1134. doi:10.1037/0022-3514.78.6.1122
- Li, A., Evans, J., Christian, M. S., Gilliland, S. W., Kausel, E. E., & Stein, J. H. (2011). The effects of managerial regulatory fit priming on reactions to explanations. *Organizational Behavior and Human Decision Processes*, 115, 268–282. doi:10.1016/j.obhdp.2011.01.003
- Liberman, N., Idson, L. C., Camacho, C. J., & Higgins, E. T. (1999). Promotion and prevention choices between stability and change. *Journal of Personality and Social Psychology*, 77, 1135–1145. doi:10.1037/0022-3514.77.6.1135
- Lisjak, M., Molden, D. C., & Lee, A. Y. (2012). Priming interference: The cognitive and behavioral costs of an incongruity between chronic and primed motivational orientations. *Journal of Personality and Social Psychology*, 102, 889–909. doi:10.1037/a0027594
- Maisel, N. C., Gable, S. L., & Strachman, A. (2008). Responsive behaviors in good times and in bad. *Personal Relationships*, 15, 317–338. doi:10.1111/j.1475-6811.2008.00201.x
- Markman, A. B., Baldwin, G. C., & Maddox, W. T. (2005). The interaction of payoff structure and regulatory focus in classification. *Psychological Science*, 16, 852–855. doi:10.1111/j.1467-9280.2005.01625.x
- Markman, A. B., Brendl, C. M., & Kim, K. (2007). Preference and the specificity of goals. *Emotion*, 7, 680–684. doi:10.1037/1528-3542.7.3.680
- Maslow, A. (1955). Deficiency motivation and growth motivation. In M. Jones (Ed.), *Nebraska Symposium on Motivation* (pp. 1–30). Lincoln: University of Nebraska Press.
- Molden, D. C. (2012). Motivated strategies for judgment: How preferences for particular judgment processes can affect judgment outcomes. *Social and Personality Psychology Compass*, 6, 156–169. doi:10.1111/j.1751-9004.2011.00424.x
- Molden, D. C., & Finkel, E. J. (2010). Motivations for promotion and prevention and the role of trust and commitment in interpersonal forgiveness. *Journal of Experimental Social Psychology*, 46, 255–268. doi:10.1016/j.jesp.2009.10.014
- Molden, D. C., & Higgins, E. T. (2004). Categorization under uncertainty: Resolving vagueness and ambiguity with eager versus vigilant strategies. *Social Cognition*, 22, 248–277. doi:10.1521/soco.22.2.248.35461
- Molden, D. C., & Higgins, E. T. (2008). How preferences for eager versus vigilant judgment strategies affect self-serving conclusions. *Journal of Experimental Social Psychology*, 44, 1219–1228. doi:10.1016/j.jesp.2008.03.009



- Molden, D. C., & Higgins, E. T. (2012). Motivated thinking. In K. Holyoak & B. Morrison (Eds.), *Oxford handbook of thinking and reasoning* (pp. 390–409). doi:10.1093/oxfordhb/9780199734689.013.0020
- Molden, D. C., & Hui, C. M. (2011). Promoting de-escalation of commitment: The regulatory focus perspective on sunk costs. *Psychological Science*, *22*, 8–12. doi:10.1177/0956797610390386
- Molden, D. C., Lee, A. Y., & Higgins, E. T. (2008). Motivations for promotion and prevention. In J. Y. Shah & W. L. Gardner (Eds.), *Handbook of motivation science* (pp. 169–187). New York, NY: Guilford Press.
- Molden, D. C., Lucas, G. M., Finkel, E. J., Kumashiro, M., & Rusbult, C. E. (2009). Perceived support for promotion-focused and prevention-focused goals: Effects on well-being in unmarried and married couples. *Psychological Science*, *20*, 787–793. doi:10.1111/j.1467-9280.2009.02362.x
- Molden, D. C., & Miele, D. B. (2008). The origins and influences of promotion-focused and prevention-focused achievement motivations. In M. Maher, S. Karabenick, & T. Urdan (Eds.), *Advances in motivation and achievement: Social psychological perspectives* (Vol. 15, pp. 81–118). Bingley, England: Emerald.
- Molden, D. C., & Winterheld, H. A. (in press). Motivations for promotion or prevention in close relationships. In J. A. Simpson & L. Campbell (Eds.), *The Oxford handbook of relationships*. New York, NY: Oxford University Press.
- Moretti, M. M., & Higgins, E. T. (1999a). Internal representations of others in self-regulation: A new look at a classic issue. *Social Cognition*, *17*, 186–208. doi:10.1521/soco.1999.17.2.186
- Moretti, M. M., & Higgins, E. T. (1999b). Own versus other standpoints in self-regulation: Developmental antecedents and functional consequences. *Review of General Psychology*, *3*, 188–223. doi:10.1037/1089-2680.3.3.188
- Murray, S. L., & Holmes, J. G. (2009). The architecture of interdependent minds: A motivation-management theory of mutual responsiveness. *Psychological Review*, *116*, 908–928. doi:10.1037/a0017015
- Oppenheimer, D. M., Meyvis, T., & Davidenko, N. (2009). Instructional manipulation checks: Detecting satisficing to increase statistical power. *Journal of Experimental Social Psychology*, *45*, 867–872. doi:10.1016/j.jesp.2009.03.009
- Paolacci, G., Chandler, J., & Ipeirotis, P. (2010). Running experiments on Amazon Mechanical Turk. *Judgment and Decision Making*, *5*, 411–419.
- Patrick, H., Knee, C. R., Canevello, A., & Lonsbary, C. (2007). The role of need fulfillment in relationship functioning and well-being: A self-determination theory perspective. *Journal of Personality and Social Psychology*, *92*, 434–457. doi:10.1037/0022-3514.92.3.434
- Peugh, J. L., & Enders, C. K. (2005). Using the SPSS mixed procedure to fit cross-sectional and longitudinal multilevel models. *Educational and Psychological Measurement*, *65*, 717–741. doi:10.1177/0013164405278558
- Pham, M. T., & Avnet, T. (2004). Ideals and oughts and the reliance on affect versus substance in persuasion. *Journal of Consumer Research*, *30*, 503–518. doi:10.1086/380285
- Pham, M. T., & Chang, H. H. (2010). Regulatory focus, regulatory fit, and the search and consideration of choice alternatives. *Journal of Consumer Research*, *37*, 626–640. doi:10.1086/655668
- Pittman, T. S., & Zeigler, K. R. (2007). Basic human needs. In A. W. Kruglanski & E. T. Higgins (Eds.), *Social psychology: Handbook of basic principles* (2nd ed., pp. 473–489). New York, NY: Guilford Press.
- Radel, R., & Clement-Guillotin, C. (2012). Evidence of motivational influences in early visual perception: Hunger modulates conscious access. *Psychological Science*, *23*, 232–234. doi:10.1177/0956797611427920
- Ratcliff, R. (1993). Methods for dealing with reaction time outliers. *Psychological Bulletin*, *114*, 510–532. doi:10.1037/0033-2909.114.3.510
- Reis, H. T., Clark, M. S., & Holmes, J. G. (2004). Perceived partner responsiveness as an organizing construct in the study of intimacy and closeness. In D. Mashek & A. Aron (Eds.), *Handbook of closeness and intimacy* (pp. 201–225). Mahwah, NJ: Erlbaum.
- Reis, H. T., Collins, W. A., & Berscheid, E. (2000). The relationship context of human behavior and development. *Psychological Bulletin*, *126*, 844–872. doi:10.1037/0033-2909.126.6.844
- Reis, H. T., Maniaci, M. R., Caprariello, P., Eastwick, P. W., & Finkel, E. J. (2011). Familiarity does indeed promote attraction in live interaction. *Journal of Personality and Social Psychology*, *101*, 557–570. doi:10.1037/a0022885
- Righetti, F., & Kumashiro, M. (2012). Interpersonal goal support in achieving ideals and oughts: The role of dispositional regulatory focus. *Personality and Individual Differences*, *53*, 650–654. doi:10.1016/j.paid.2012.05.019
- Righetti, F., Rusbult, C., & Finkenauer, C. (2010). Regulatory focus and the Michelangelo phenomenon: How close partners promote one another's ideal selves. *Journal of Experimental Social Psychology*, *46*, 972–985. doi:10.1016/j.jesp.2010.06.001
- Rusbult, C. E., & Buunk, B. P. (1993). Commitment processes in close relationships: An interdependence analysis. *Journal of Social and Personal Relationships*, *10*, 175–204. doi:10.1177/026540759301000202
- Rusbult, C. E., Finkel, E. J., & Kumashiro, M. (2009). The Michelangelo phenomenon. *Current Directions in Psychological Science*, *18*, 305–309. doi:10.1111/j.1467-8721.2009.01657.x
- Rusbult, C. E., Martz, J. M., & Agnew, C. R. (1998). The investment model scale: Measuring commitment level, satisfaction level, quality of alternatives, and investment size. *Personal Relationships*, *5*, 357–387. doi:10.1111/j.1475-6811.1998.tb00177.x
- Rusbult, C. E., Verette, J., Whitney, G. A., Slovick, L. F., & Lipkus, I. (1991). Accommodation processes in close relationships: Theory and preliminary empirical evidence. *Journal of Personality and Social Psychology*, *60*, 53–78. doi:10.1037/0022-3514.60.1.53
- Rusbult, C. E., Zembrodt, I. M., & Gunn, L. K. (1982). Exit, voice, loyalty, and neglect: Responses to dissatisfaction in romantic involvements. *Journal of Personality and Social Psychology*, *43*, 1230–1242. doi:10.1037/0022-3514.43.6.1230
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, *55*, 68–78. doi:10.1037/0003-066X.55.1.68
- Ryan, R. M., & Deci, E. L. (2006). Self-regulation and the problem of human autonomy: Does psychology need choice, self-determination, and will? *Journal of Personality*, *74*, 1557–1586. doi:10.1111/j.1467-6494.2006.00420.x
- Santelli, A. G., Struthers, C. W., & Eaton, J. (2009). Fit to forgive: Exploring the interaction between regulatory focus, repentance, and forgiveness. *Journal of Personality and Social Psychology*, *96*, 381–394. doi:10.1037/a0012882
- Scholer, A. A., & Higgins, E. T. (2008). Distinguishing levels of approach and avoidance: An analysis using regulatory focus theory. In A. J. Elliot (Ed.), *Handbook of approach and avoidance motivation* (pp. 489–503). New York, NY: Psychology Press.
- Shah, J. Y., Brazy, P. C., & Higgins, E. T. (2004). Promoting us or preventing them: Regulatory focus and manifestations of intergroup bias. *Personality and Social Psychology Bulletin*, *30*, 433–446. doi:10.1177/0146167203261888
- Shah, J., Higgins, E. T., & Friedman, R. S. (1998). Performance incentives and means: How regulatory focus influences goal attainment. *Journal of Personality and Social Psychology*, *74*, 285–293. doi:10.1037/0022-3514.74.2.285
- Sheldon, K. M., & Elliot, A. J. (1998). Not all personal goals are personal: Comparing autonomous and controlled reasons for goals as predictors of effort and attainment. *Personality and Social Psychology Bulletin*, *24*, 546–557. doi:10.1177/0146167298245010

- Sheldon, K. M., Elliot, A. J., Kim, Y., & Kasser, T. (2001). What is satisfying about satisfying events? Testing 10 candidate psychological needs. *Journal of Personality and Social Psychology, 80*, 325–339. doi:10.1037/0022-3514.80.2.325
- Slotter, E. B., & Finkel, E. J. (2009). The strange case of sustained dedication to an unfulfilling relationship: Predicting commitment and breakup from attachment anxiety and need fulfillment within relationships. *Personality and Social Psychology Bulletin, 35*, 85–100. doi:10.1177/0146167208325244
- Swann, W. B., Jr., Hixon, J. G., & De La Ronde, C. (1992). Embracing the bitter “truth”: Negative self-concepts and marital commitment. *Psychological Science, 3*, 118–121. doi:10.1111/j.1467-9280.1992.tb00010.x
- Touryan, S. R., Johnson, M. K., Mitchell, K. J., Frab, N., Cunningham, W. A., & Raye, C. L. (2007). The influence of self-regulatory focus on encoding of, and memory for, emotional words. *Social Neuroscience, 2*, 14–27. doi:10.1080/17470910601046829
- Werth, L., & Förster, J. (2007). How regulatory focus influences consumer behavior. *European Journal of Social Psychology, 37*, 33–51. doi:10.1002/ejsp.343
- Williams, G. C., & Deci, E. L. (1996). Internalization of biopsychosocial values by medical students: A test of self-determination theory. *Journal of Personality and Social Psychology, 70*, 767–779. doi:10.1037/0022-3514.70.4.767
- Williams, G. C., Grow, V. M., Freedman, Z. R., Ryan, R. M., & Deci, E. L. (1996). Motivational predictors of weight loss and weight-loss maintenance. *Journal of Personality and Social Psychology, 70*, 115–126. doi:10.1037/0022-3514.70.1.115
- Winterheld, H. A., & Simpson, J. A. (2011). Seeking security or growth: A regulatory focus perspective on motivations in romantic relationships. *Journal of Personality and Social Psychology, 101*, 935–954. doi:10.1037/a0025012

## Appendix

### Conflict Scenarios and Accommodation Strategies Used in Studies 2 and 5b

*Scenario 1.* Your current partner says something that hurts you.

- I would try to understand that s/he may not have intended to hurt me. (PC)
- I would give him/her “the cold shoulder” for a while. (PD)
- I would say something equally mean right back. (AD)
- I would ask him/her why s/he had hurt my feelings. (AC)
- I would forgive him/her.

*Scenario 2.* Your current partner cancels plans s/he has made with you in order to spend time with others.

- I would be okay with it, but I’d make sure we reschedule in the near future. (AC)
- I would say that if s/he wants to act that way, I’d be happier spending time with other friends. (AD)
- I would say nothing and conclude that his/her behavior wasn’t really a big deal. (PC)
- I would say nothing, but think about possible ways to annoy him/her later on. (PD)
- I would forgive him/her.

*Scenario 3.* Your current partner lies to you about something important.

- I would feel angry that s/he couldn’t be honest with me. (PD)
- I would come up with ways to get even with him/her. (AD)
- I would tell him/her that I’d like us to try to resolve the situation. (AC)
- I would try to understand the situation from his/her point of view. (PC)
- I would forgive him/her.

*Scenario 4.* Your current partner says something bad about you behind your back.

- I would get even by saying bad things about him/her behind his/her back. (AD)
- I would get over it because I’ve done similar things in the past. (PC)
- I would feel so irritated that I wouldn’t be able to deal with the situation. (PD)
- I would tell him/her that I hope we can work out this problem. (AC)
- I would forgive him/her.

*Note.* AC = active constructive; PC = passive constructive; AD = active destructive; PD = passive destructive.

Received August 29, 2012

Revision received March 4, 2013

Accepted March 4, 2013 ■