Journal of Personality and Social Psychology
1997, Vol. 72, No. 3, 515-525

0022-3514/97/$3.00

Emotional Responses to Goal Attainment: Strength of Regulatory Focus as Moderator

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Goals with a promotion focus versus a prevention focus are distinguished. *Chronic ideal goals* (hopes and aspirations) have a promotion focus, whereas *ought goals* (duties and responsibilities) have a prevention focus. The hypothesis that emotional responses to goal attainment vary as a function of promotion versus prevention goal strength (conceptualized as goal accessibility) was tested in correlational studies relating chronic goal attainment (self-congruencies or self-discrepancies) to emotional frequency and intensity (Studies 1–3) and in an experimental study relating immediate goal attainment (i.e., success or failure) to emotional intensity (Study 4). All studies found that goal attainment yielded greater cheerfulness–dejection responses when promotion focus was stronger and greater quiescence–agitation responses when prevention focus was stronger.

What makes people feel good or bad about something? Psychologists have recognized for a long time that a major determinant of the perceived value of an event is the extent to which it fulfills the perceiver's goals. If the event fulfills the perceiver's goals, the perceiver feels good. If it does not, the perceiver feels bad (e.g., James, 1890/1948; Lewin, 1935; Roseman, 1984; for a review, see Brendl & Higgins, 1996). Psychologists have also recognized that emotional responses to goal attainment include emotional responses to whether one's perceived actual self is congruent with or discrepant from one's desired self. When individuals' represented actual self fulfills their goals about who they would ideally like to be or believe they ought to be, they feel good. When it does not, they feel bad (e.g., Cooley, 1902/1964; James, 1890/1948; Rogers, 1961; Stein & Jewett, 1982; for a review, see Higgins, 1987).

There is little question that there is a relation between goal attainment and feeling good or bad. But this does not preclude the possibility that the strength of this relation could vary. Many people, for example, might hope to be physically fit, but the relation between success or failure at attaining this goal and feeling good or bad could be strong for only some of these people. What might moderate emotional responses to goal attainment? As a beginning to answering this question, it is useful to consider the more general question of what might moderate emotional responses.

In recent review chapters, Clore (1994) and Frijda (1996) concluded that psychologists studying emotions have paid, surprisingly, little attention either to emotional intensity in general or to how emotional intensity varies with goal attainment. Still, they hypothesized that goal importance or goal strength would function as a moderator of the relation between goal attainment and emotional intensity, with intensity increasing as goal strength increased (see Clore, 1994; Frijda, 1996; Frijda, Ortony, Sonnemans, & Clore, 1992).

Clore (1994) described some preliminary evidence, suggesting that emotional preoccupation over time is greater when goals are readily associated with an event. Emotional intensity in this sense is related to the extent to which goals are salient or readily activated. Thus, one potential moderator of the relation between goal attainment and emotional responses is the relative accessibility of different goals (for a review of accessibility and activation, see Higgins, 1996b). To our knowledge, however, there is as yet no direct evidence that the relation between goal attainment and emotional responses is moderated by goal accessibility.

There is another psychological literature that suggests that goal strength, conceptualized as goal accessibility, might be a reasonable candidate for moderator of the relation between goal attainment and emotional responses. A major issue, over the years, among attitude researchers has been to identify moderators of the relation between attitudes and attitude-related behaviors (see Zanna & Fazio, 1982; Zanna, Higgins, & Herman, 1982).

One moderator that has been proposed is attitude strength conceptualized as attitude accessibility, where greater chronic accessibility of an attitude object–evaluation association increases the likelihood that behaviors will be consistent with the attitude (see Fazio, 1986, 1995). Fazio (1986, 1995) proposed that greater attitude accessibility increased the likelihood that responses to the attitude object would reflect the evaluation associated with the attitude object. That is, across individuals varying in their attitude toward some object and varying in their attitude accessibility, the correlation between attitudes and behaviors should be higher for those individuals whose attitude accessibility is higher (see Fazio, 1986, 1995).

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This research was supported by National Institute of Mental Health Grant MH39429. Study 4 was conducted by Ronald Friedman, in partial fulfillment of the master of arts degree requirements at Columbia University.

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Analogous to the attitude accessibility notion, then, we expected that the relation between goal attainment and emotional responses would increase as goal accessibility increased. The accessibility of goals as self-regulatory knowledge, like any other kind of knowledge, can vary chronically or momentarily (see Higgins, 1996b). Chronic goal accessibility would be analogous to individual differences in chronic attitude accessibility, whereas momentary goal accessibility would be analogous to momentary increases in attitude accessibility from situational manipulations (see Fazio, 1986).

We hypothesized that *stronger goals,* conceptualized and operationalized as goals with higher accessibility, would relate to stronger emotional responses from goal attainment and that this would be true when goal accessibility was both chronically and momentarily higher. We also hypothesized that the type of goal that was stronger would determine the type of emotional response that was stronger. On the basis of earlier research on self-discrepancy theory (e.g., Higgins, 1989), a recent chapter distinguished between two types of goals, or desired end states, and related them to different kinds of emotional responses to goal attainment (Higgins, 1996a).

One type of goal was described as having a positive-outcome focus, concerned with obtaining the presence of positive outcomes from success and avoiding the absence of positive outcomes from failure. This type of goal involves a *promotion* focus on advancement, accomplishments, and aspirations (see Higgins, 1996c). Another type of goal was described as having a negative-outcome focus, concerned with obtaining the absence of negative outcomes from success and avoiding the presence of negative outcomes from failure. This type of goal involves a *prevention* focus on safety, responsibilities, and obligations (see Higgins, 1996c).

Attaining a goal with a promotion focus reflects the presence of positive outcomes underlying cheerfulness-related emotions, such as *happy* or *satisfied,* whereas not attaining a goal with a promotion focus reflects the absence of positive outcomes underlying dejection-related emotions, such as *disappointed* or *discouraged.* In contrast, attaining a goal with a prevention focus reflects the absence of negative outcomes underlying quiescence-related emotions, such as *calm* or *relaxed,* whereas not attaining a goal with a prevention focus reflects the presence of negative outcomes underlying agitation-related emotions, such as *tense* or *uneasy* (Higgins, 1996a). We hypothesized that stronger goals would relate to greater emotional responses (i.e., higher frequency or intensity) and, more important, that which type of goal focus was stronger would determine the type of emotional response that was greater.

Let us begin by considering the implications of our major hypothesis for chronic goals and chronic goal attainments. *Self-discrepancy theory* has been concerned with self-guides as chronic goals and actual-self matches and mismatches to self-guides as chronic goal attainments, that is, chronic successes and failures, respectively (see Higgins, 1989, 1996a). The theory postulates that when individuals' represented actual self is congruent with their self-guides, they feel good. When it is discrepant, they feel bad (cf. Carver & Scheier, 1990). Self-discrepancy theory distinguishes between two types of self-guide: (a) *ideal*-self-guides, which are people's representation of someone's (self or other) hopes, wishes, or aspirations for them, and (b) *ought*-self-guides, which are people's representations of someone's (self or other) beliefs about their duties, obligations, and responsibilities.

Self-discrepancy theory states that congruencies to ideals represent the presence of positive outcomes, whereas discrepancies represent the absence of positive outcomes. Thus, as ideal mismatches increasingly predominate over ideal matches, dejection-related emotions will increase, and cheerfulness-related emotions will decrease. The theory also states that congruencies to oughts represent the absence of negative outcomes, whereas discrepancies represent the presence of negative outcomes. Thus, as ought mismatches increasingly predominate over ought matches, agitation-related emotions will increase, and quiescence-related emotions will decrease. These basic predictions have received substantial empirical support (see Higgins, 1989, 1996a).

This is not the end of the story, however. Given that a promotion focus is concerned with aspirations and the presence and absence of positive outcomes, ideal self-guides involve a promotion focus. And given that a prevention focus is concerned with responsibilities and the absence and presence of negative outcomes, ought-self-guides involve a prevention focus. Thus, strength of promotion focus increases as strength of ideal-self-guides increases, and strength of prevention focus increases as strength of ought-self-guides increases.

This analysis leads to two specific predictions: (a) an interaction of ideal-self-guide strength and actual–ideal discrepancy, so that the correlation between actual–ideal discrepancy and dejection-related emotions (or actual–ideal congruency and cheerfulness-related emotions) would increase as the accessibility of ideal-self-guides increased; and (b) an interaction of ought-self-guide strength and actual–ought discrepancy, so that the correlation between actual–ought discrepancy and agitation-related emotions (or actual–ought congruency and quiescence-related emotions) would increase as the accessibility of ought-self-guides increased.

Note that these predictions are novel because they consider self-guide strength, as measured by self-guide accessibility, to be independent of magnitude of self-discrepancy, as measured by actual-self mismatches and matches to self-guides. It is this presumed independence that underlies the predicted interactions. This is not to say that these two variables have no relation to one another, however. Indeed, there are at least two possible relations that work in opposite directions.

First, people are more concerned with reducing discrepancies to strong than weak self-guides, and thus, stronger self-guides should relate to smaller self-discrepancies. Some support for this relation was found in a study by Newman, Higgins, and Vookles (1992), which compared the self-discrepancies of firstborns versus laterborns. Firstborns, whose socialization was hypothesized to produce stronger self-guides than the socialization of laterborns, were found to have smaller self-discrepancies. (In keeping with our major hypothesis, firstborns also suffered more from those self-discrepancies that remained!) Second, the larger a self-discrepancy, the more attention will be given to the problem it represents, and thus, larger self-discrepancies should relate to stronger (i.e., more accessible) self-guides. There is some support for this relation as well. In a study of self-knowledge interconnections, Higgins, Van Hook, and Dorfman (1988)

found stronger accessibility effects for self-discrepant attributes than self-congruent attributes. Beyond the conceptual independence of the two variables, then, self-guide strength and magnitude of self-discrepancy are unlikely to have a reliable relation to one another in any particular direction.

To test the two predictions of interactions between self-guide strength and self-discrepancies, we needed to develop a measure of the chronic accessibility or strength of self-guides. Once again we were inspired by Fazio's research on attitude accessibility or strength (see, e.g., Fazio, 1986, 1995). Fazio operationalized attitude accessibility through response times. He stated the following: "The latency with which people can respond to an inquiry about their attitudes is considered to be a reflection of the accessibility of the attitude" (Fazio, 1986, p. 215). This operationalization is eminently reasonable conceptually, given that accessibility is activation potential, and stored knowledge units with higher activation potentials should produce faster responses to knowledge-related inputs (see Higgins, 1996b). Fazio (1986, 1995) clearly demonstrated empirically the predictive power of this operationalization. In addition, Bassili (1995, 1996) provided convincing evidence for attitudes that the use of response latencies as an implicit measure of strength of predisposition is preferable to explicit measures, such as ratings of importance (see also Greenwald & Banaji, 1995). Our studies, then, considered the latency with which a participant responded to an inquiry about a self-guide to be a reflection of the chronic accessibility or strength of the self-guide.

Our major hypothesis was that stronger goals would relate to greater emotional responses and that which type of goal focus was stronger would determine the type of emotional response that was greater. The two predictions concern the implications of this hypothesis for chronic goals and chronic goal attainments and were tested in our first three studies. Our fourth study was designed to test the implications of this hypothesis for momentary goals and momentary goal attainments.

The strength of a momentary goal, conceptualized in terms of its accessibility, can be increased temporarily by situationally activating the goal. To increase the strength of a promotion-focus goal versus a prevention-focus goal, Study 4 used a framing technique that kept constant the actual consequences of attaining or not attaining the goal, as well as the criterion of success and failure, but varied the instructions to increase the accessibility of either a promotion focus or a prevention focus. For the promotion-focus framing, the instructions were about gains and nongains; for the prevention-focus framing, they were about losses and nonlosses. After performance of the task, the participants were given false feedback that they had either succeeded or failed on the task. In Study 4, therefore, strength of regulatory focus and goal attainment (discrepancy or congruency) were both manipulated and, thus, were experimentally independent.

The basic prediction was that attaining the goal (success feedback) would increase cheerfulness-related emotions (and decrease dejection-related emotions) when promotion focus had higher accessibility but would increase quiescence-related emotions (and decrease agitation-related emotions) when prevention focus had higher accessibility, and that not attaining the goal (failure feedback) would increase dejection-related emotions (and decrease cheerfulness-related emotions) when promotion focus had higher accessibility but would increase agitation-related emotions (and decrease quiescence-related emotions) when prevention focus had higher accessibility. Thus, an interaction was predicted between regulatory focus framing (promotion vs. prevention) and type of feedback-induced emotional change (cheerfulness–dejection related vs. quiescence–agitation related).

Study 1

Method

Participants

Fifty-nine Columbia University undergraduates (35 men and 24 women) were paid $5 each for their participation in the 30-min study. Note that no sex differences were found in the study. The participants were tested in groups of up to 7 people, with each participant sitting in a separate cubicle in front of an IBM XT personal computer. All participants indicated that they were native speakers of English.

Materials

A computer measure of actual-self and self-guide attributes was developed, which was similar to the original Selves Questionnaire (see Higgins, 1989). Like the original measure, the computer measure was an idiographic measure that asked participants to list attributes describing different self-representations from their own standpoint. Their ideal self and their ought self, from their own standpoint, were first defined. Their *ideal* self was defined as the type of person they ideally would like to be, the type of person they hoped, wished, or aspired to be. Their *ought* self was defined as the type of person they believed they ought to be, the type of person they believed it was their duty, obligation, or responsibility to be. The participants were told that they would be asked to provide attributes describing their ideal and ought selves. Unlike with the Selves Questionnaire, the participants were told that the set of ideal-self-attributes and the set of ought-self-attributes had to be different from each other, and they were asked to provide each attribute as quickly and accurately as possible. The participants practiced responding on the computer, by listing some actual-self-attributes that were unrelated to either their ideal or ought selves (i.e., actual-self nonmatches).

After the practice period, the participants first provided from three to five ideal-self-attributes. After each attribute, they rated the extent to which they would like ideally to possess that attribute (*ideal-self extent rating*), as well as the extent to which they believed they actually possessed that ideal attribute (*actual-self extent rating*). The participants then provided from three to five ought-self attributes. After each attribute, they rated the extent to which they believed they ought to possess that attribute (*ought-self extent rating*), as well as the extent to which they believed they actually possessed that ought attribute (*actual-self extent rating*). Each of the extent ratings was given on a 4-point scale, ranging from 1 (*slightly*) to 4 (*extremely*).

Self-discrepancy measure. A participant's actual–ideal discrepancy and actual–ought discrepancy were measured by comparing the extent rating of each self-guide attribute with the extent rating of the actual self for that attribute. To measure each participant's actual–ideal discrepancy, the participant's actual-self extent rating for each ideal-self-attribute listed was subtracted from that attribute's ideal-self extent rating, and the difference scores for all of the listed attributes were summed. Likewise, to measure each participant's actual–ought discrepancy, the participant's actual-self extent rating for each ought-self attribute listed was subtracted from that attribute's ought-self extent rating, and the difference scores for all of the listed attributes were summed.

Self-guide strength measure. For each self-guide attribute, the com-

puter measured three response times: (a) the time it took a participant to produce the self-guide attribute after being asked, (b) the time it took to make the self-guide extent rating for that attribute, and (c) the time it took to make the actual-self extent rating for that attribute. Because the response time distributions were positively skewed, all response times were transformed using a natural logarithmic transformation (see Judd & McClelland, 1989). For each self-guide attribute, a total response time was calculated by adding together these three response times.

The time it took to make the actual-self extent rating was included in the strength measure, along with the direct responses to self-guide attributes, because strong self-guides should function as strong reference points for self-evaluation (see Newman et al., 1992), which would be revealed in fast actual-self ratings in relation to self-guide attributes. Note also that the correlations between the response times of each actual-self rating (e.g., the response times of actual-self ratings for ideal-self-guide attributes) and the magnitude of its related self-discrepancy (e.g., the magnitude of actual–ideal discrepancies), controlling for the alternative self-rating and self-discrepancy (e.g., the response times of actual-self ratings for ought attributes and actual–ought discrepancies), were not significant in any of our studies (all $ps > .2$).

Ideal-self-guide strength was calculated by averaging the total response times for the first three ideal-self attributes. Ought-self-guide strength was calculated by averaging the total response times for the first three ought-self-attributes. The first three attributes were used because output primacy is one criterion for chronic accessibility (see Higgins, 1996b). (Note, however, that an analysis using all attributes produced by each participant yielded almost identical results.)

Emotional frequency questionnaire. After the participants responded to the questions on the computer, they completed a paper-and-pencil checklist questionnaire, containing eight emotional frequency items. They were asked to indicate how often they had felt each emotion during the last week, on a 5-point scale ranging from 0 (*almost never*) to 4 (*almost always*). The questionnaire contained four dejection-related items—*disappointed, discouraged, low,* and *sad*—and four agitation-related items—*agitated, on edge, uneasy,* and *tense.* A dejection-related emotional frequency score and an agitation-related emotional frequency score were calculated, by summing the four dejection-related items and summing the four agitation-related items, respectively.

Procedure

Up to 7 participants were tested at a time. The participants were placed in separate cubicles, each with its own computer and paper-and-pencil questionnaire, which was facedown. The participants first completed the computer questions measuring self-discrepancies and self-guide strength and then filled out the paper-and-pencil measure of emotional frequency during the last week.

Results and Discussion

Analysis Overview

Two participants failed to answer just one item on the emotions checklist and were assigned the average score for that item. All self-discrepancy scores, self-guide strength scores, and emotional frequency scores were first standardized, to reduce any collinearity among the independent variables (see Cohen & Cohen, 1983). Hierarchical multiple regressions were then performed separately for the dejection-related emotional frequency score and for the agitation-related emotional frequency score.

Because significant interrelations are typically found in our studies between dejection-related and agitation-related emotional frequency scores and between actual–ideal discrepancy and actual–ought discrepancy scores, and because a significant interrelation was also expected between ideal-self-guide strength scores and ought-self-guide strength scores (and, indeed, was found in this study, $r = .73$, $p < .001$), the unique relations between a specific type of self-guide strength or self-discrepancy and a specific type of emotional frequency were determined, controlling for the alternative type of self-guide strength or self-discrepancy and the alternative type of emotional frequency. Thus, each emotional frequency score was regressed on the other emotional frequency score, ideal-self-guide strength, actual–ideal discrepancy, the interaction of these two ideal-self measures, ought-self-guide strength, actual–ought discrepancy, and the interaction of these two ought-self measures.

To facilitate interpreting the direction of the obtained effects in the regression analyses, the participants were divided by median splits into those high and low in ideal-self-guide strength and those high and low in ought-self-guide strength. The unique relations (i.e., controlling for the alternative type of discrepancy and type of emotional frequency) between actual–ideal discrepancy and dejection and between actual–ought discrepancy and agitation were then determined for these distinct groups varying in self-guide strength.

Relation Between Self-Guide Strength and Self-Discrepancy Magnitude

It was noted earlier that a novel aspect of our predictions was the fact that they considered self-guide strength, as measured by self-guide accessibility, to be independent of magnitude of self-discrepancy, as measured by actual-self mismatches and matches to self-guides. In this study, the partial correlation between ideal-self-guide strength and actual–ideal discrepancy (controlling for ought-self-guide strength and actual–ought discrepancy) and the partial correlation between ought-self-guide strength and actual–ought discrepancy (controlling for ideal-self-guide strength and actual–ideal discrepancy) were both nonsignificant ($pr = .08$, and $pr = .07$, respectively).

Ideal-Self-Guide Strength as a Moderator of the Ideal Discrepancy–Dejection Relation

The hierarchical multiple regression analysis on the frequent dejection scores revealed only one significant effect. The interaction of ideal-self-guide strength and actual–ideal discrepancy had a significant positive partial correlation with frequent dejection ($pr = .35$), $F(1, 50) = 7.01$, $p = .01$. In comparison, the interaction of ought-self-guide strength and actual–ought discrepancy had a nonsignificant negative partial correlation with frequent dejection ($pr = -.08$). The median split analysis revealed that the unique relation between actual–ideal discrepancy and frequent dejection was significant for participants high in ideal-self-guide strength ($pr = .41$), $F(1, 25) = 4.91$, $p < .05$, but was not significant for participants low in ideal-self-guide strength ($pr = -.10$, $F < 1$).

To check on whether the interaction obtained between ideal-self-guide strength and actual–ideal discrepancy might be influenced by the extremity of the participants' extent ratings, the multiple regression was performed again, including a measure

of response extremity. This measure added together each participant's extent ratings for the ideal-self-guide attributes and the actual-self extent ratings in relation to those attributes. The interaction remained significant when this response extremity variable was included in the regression.

Ought-Self-Guide Strength as a Moderator of the Ought Discrepancy–Agitation Relation

The hierarchical multiple regression analysis on the frequent agitation scores revealed only one significant effect. The interaction of ought-self-guide strength and actual–ought discrepancy had a significant positive partial correlation with frequent agitation ($pr = .31$), $F(1, 50) = 5.31$, $p < .05$. In comparison, the interaction of ideal-self-guide strength and actual–ideal discrepancy had a nonsignificant negative partial correlation with frequent agitation ($pr = -.19$, $F < 1$). The median split analysis revealed that the unique relation between actual–ought discrepancy and frequent agitation was significant for participants high in ought-self-guide strength ($pr = .47$), $F(1, 26) = 7.38$, $p = .01$, but was not significant for participants low in ought-self-guide strength ($pr = -.32$), $F(1, 25) = 2.80$, $p > .10$.

Once again, to check on whether the interaction obtained between ought-self-guide strength and actual–ought discrepancy might be influenced by response extremity, the multiple regression was performed again, including an extremity measure that added together each participant's extent ratings for the ought-self-guide attributes and the actual-self extent ratings in relation to those attributes. The interaction remained significant.

Finally, to check on whether the obtained effects on dejection and agitation were unique to interactions involving the same self-guide (i.e., the relation of dejection to the interaction of ideal strength and ideal discrepancy and the relation of agitation to the interaction of ought strength and ought discrepancy), additional analyses were performed for the interactions involving different self-guides (i.e., the interaction of ideal strength and ought discrepancy and the interaction of ought strength and ideal discrepancy). There were no significant effects on either dejection or agitation for these crossed interactions (all $ps > .15$).

In Study 1, we tested the following two predictions: (a) a predicted interaction of actual–ideal discrepancy and ideal-self-guide strength, so that the unique relation between possessing an actual–ideal discrepancy and experiencing dejection-related emotions would increase as the accessibility of ideal-self-guides increased and (b) a predicted interaction of actual–ought discrepancy and ought-self-guide strength, so that the unique relation between possessing an actual–ought discrepancy and experiencing agitation-related emotions would increase as the accessibility of ought-self-guides increased. The results of Study 1 supported both of these predictions.

The basic purpose of Study 2 was simply to replicate these findings with an independent sample. The method used in Study 2 was almost identical to that used in Study 1. The only differences were that the emotional frequency items were presented on the computer rather than on the paper-and-pencil questionnaire used in Study 1 and that they included items from the positive ends of the dejection–cheerfulness and agitation–quiescence dimensions, as well as from the negative ends of these dimensions.

Study 2

Method

Participants

One hundred and thirty-eight Columbia University undergraduates (63 men and 75 women) were paid $5 each for their participation in the 30-min study. Note that no sex differences were found in the study. The participants were tested in groups of up to 7 people, with each participant sitting in a separate cubicle in front of an IBM XT personal computer. All participants indicated that they were native speakers of English.

Materials

All materials were identical to those described in Study 1, with the exception of the emotional frequency questionnaire. In Study 2, the emotional frequency questions were presented on the computer. After the participants responded to the self-guide questions on the computer, they responded to 12 emotional frequency items. They were asked to indicate how often they had felt each emotion during the last week, on a 5-point scale ranging from 0 (*almost never*) to 4 (*almost always*). The questionnaire contained six dejection–cheerfulness-related items—*disappointed, discouraged, low, sad, happy,* and *satisfied*—and six agitation–quiescence-related items—*agitated, on edge, uneasy, tense, calm,* and *relaxed.*

An overall dejection-related emotional frequency score and a separate agitation-related emotional frequency score were calculated, by summing the four dejection-related items and the two cheerfulness-related items (reversed scored) and by summing the four agitation-related items and the two quiescence-related items (reversed scored), respectively. Note that when the analyses described below were performed with valence of emotion (i.e., positive vs. negative) as an additional variable, there were no effects of emotional valence (all $Fs < 1$). Thus, the findings could be described in terms of greater actual–ideal congruency relating to greater cheerfulness rather than greater actual–ideal discrepancy relating to greater dejection, or greater actual–ought congruency relating to greater quiescence rather than greater actual–ought discrepancy relating to greater agitation.

Procedure

As in Study 1, up to 7 participants were tested at a time. The participants were placed in separate cubicles, each with its own computer and paper. The participants first completed the computer questions measuring self-discrepancies and self-guide strength and then answered the computer questions about their emotional frequency during the last week.

Results and Discussion

One male participant was dropped from the analysis because his responses to the ideal-self-guide attributes were interrupted, which produced an ideal-self-guide strength score that was over 4 standard deviations above the sample mean. As in Study 1, hierarchical multiple regressions were performed separately for the dejection-related emotional frequency score and for the agitation-related emotional frequency score.

Relation Between Self-Guide Strength and Self-Discrepancy Magnitude

As in Study 1, the partial correlations between ideal-self-guide strength and actual–ideal discrepancy and between ought-self-guide strength and actual–ought discrepancy were both nonsignificant ($pr = .06$, and $pr = -.15$, respectively).

Ideal-Self-Guide Strength as a Moderator of the Ideal Discrepancy–Dejection Relation

The hierarchical multiple regression analysis on the frequent dejection scores revealed only one significant effect. The interaction of ideal-self-guide strength and actual–ideal discrepancy had a significant positive partial correlation with frequent dejection ($pr = .20$), $F(1, 128) = 4.75$, $p < .05$. (As in Study 1, this interaction remained significant when the response extremity variable was included in the regression.) In comparison, the interaction of ought-self-guide strength and actual–ought discrepancy had a nonsignificant negative partial correlation with frequent dejection ($pr = -.07$, $F < 1$). The median split analysis revealed that the unique relation between actual–ideal discrepancy and frequent dejection was significant for participants high in ideal-self-guide strength ($pr = .28$), $F(1, 64) = 4.04$, $p < .05$, but was not significant for participants low in ideal-self-guide strength ($pr = -.15$), $F(1, 64) = 1.0$, $p > .30$.

Ought-Self-Guide Strength as a Moderator of the Ought Discrepancy–Agitation Relation

The hierarchical multiple regression analysis on the frequent agitation scores revealed only two significant effects. As predicted, the interaction of ought-self-guide strength and actual–ought discrepancy had a significant positive partial correlation with frequent agitation ($pr = .19$), $F(1, 128) = 4.80$, $p < .05$. (As in Study 1, this interaction remained significant when the response extremity variable was included in the regression.) In comparison, the interaction of ideal-self-guide strength and actual–ideal discrepancy had a significant negative partial correlation with frequent agitation ($pr = -.22$), $F(1, 128) = 6.33$, $p < .05$. The median split analysis revealed that the unique relation between actual–ought discrepancy and frequent agitation was significant for participants high in ought-self-guide strength ($pr = .27$), $F(1, 63) = 5.54$, $p < .05$, but was not significant for participants low in ought-self-guide strength ($pr = -.16$), $F(1, 65) = 1.42$, $p > .20$.

Although the negative relation between frequent agitation and the interaction of ideal strength and ideal discrepancy was not predicted, such a relation could be understood in terms of a promotion focus inhibiting a prevention focus and thus inhibiting the emotional responses associated with that focus (i.e., agitation-related responses). In a study on emotional sensitivity to varying gains and losses, for example, Brendl and Higgins (1996) found evidence suggesting that a promotion focus and a prevention focus can inhibit one another, thereby reducing emotional sensitivity.

As in Study 1, additional analyses were performed for the crossed interactions of ideal strength with ought discrepancy and ought strength with ideal discrepancy. Once again, these crossed interactions had no significant effects on either dejection or agitation (all $Fs < 1$).

Study 2 retested the predicted interactions relating ideal strength and ideal discrepancy to dejection and ought strength and ought discrepancy to agitation and again found support for both unique relations. Study 3 was conducted during the second session of a larger investigation, involving two sessions separated by at least 1 week. This larger investigation was concerned with different questions about motivation and performance, but it allowed the findings of Studies 1 and 2 to be replicated and extended because the second session (Study 3) included measures of self-guide strength, self-discrepancies, and emotions.

Studies 1 and 2 tested whether self-guide strength moderates the relation between self-discrepancies and emotional frequency. In terms of Frijda et al.'s (1992) discussion of the parameters of subjective emotional awareness (also called *parameters of subjective intensity*), Studies 1 and 2 were concerned with the degree of recurrence of the different types of emotions. Study 3 was concerned with a different parameter of subjective emotional awareness: overall felt intensity. Thus, this study permitted a test of whether self-guide strength moderates the relation between self-discrepancies and emotional intensity as well as the relation between self-discrepancies and emotional recurrence. Rather than asking participants to report on how often they felt different emotions during the previous week, Study 3 asked participants to report on how intensely they felt different emotions during the experimental session.

Study 3 also modified the measure of self-guide strength to make it more equivalent for ideal-self-guides and ought-self-guides. In Studies 1 and 2, the participants responded to all of the ideal-self-guide attributes before responding to the ought-self-guide attributes. Although this measure was the same for all participants and did not produce any obvious asymmetry in the findings, it was possible that this procedure could reduce the power of measuring ought-self-guide strength in relation to measuring ideal-self-guide strength. Therefore, in Study 3, participants responded to ideal- and ought-self-guide attributes in an apparently random order.

Study 3

Method

Participants

Ninety-five Columbia University undergraduates (40 men and 55 women) were paid $6 each for their participation in a 30-min study. Note that no sex differences were found in the study. The participants were tested in groups of up to 7 people, with each participant sitting in a separate cubicle in front of an IBM XT personal computer. All participants indicated that they were native speakers of English.

Materials

The computer method for measuring self-discrepancies and self-guide strength was basically the same as that used in Studies 1 and 2, with two modifications. First, the participants were not given practice responding on the computer by having them list some actual-self-attributes that were unrelated to either their ideal or ought selves (i.e., actual-self-nonmatches). This part of the procedure was eliminated both to save time and to avoid any possible interference of the practice session on

subsequent responses. Second, rather than listing all ideal-self-guide attributes before listing ought-self-guide attributes, the participants were asked to list an ideal attribute, then two ought attributes, another ideal attribute, a final ought attribute, and a final ideal attribute. The participants were not told of this response order beforehand, and subsequent debriefing indicated that, as intended, they perceived the order as random.

Self-discrepancy and self-guide strength measures. These measures were calculated the same way as in Studies 1 and 2.

Emotional intensity measure. This measure was given on the computer, as was the emotional frequency measure used in Study 2. The participants reported on a 9-point scale, ranging from 0 (*not at all*) to 8 (*extremely*), how intensely they currently felt the following emotions: *discouraged, happy, tense,* and *relaxed.* An overall dejection-related emotional intensity score and a separate agitation-related emotional intensity score were calculated, by summing the dejection-related item and the cheerfulness-related item (reversed scored) and by summing the agitation-related item and the quiescence-related item (reversed scored), respectively.

Note again that when the analyses described below were performed with valence of emotion (i.e., positive vs. negative) as an additional variable, there were no effects of emotional valence (all $Fs < 1$). Once again, therefore, the findings could be described in terms of greater actual–ideal congruency relating to greater cheerfulness rather than greater actual–ideal discrepancy relating to greater dejection, or greater actual–ought congruency relating to greater quiescence rather than greater actual–ought discrepancy relating to greater agitation.

Procedure

When the participants first arrived at the experiment, they began by answering the emotional intensity questions on the computer, supposedly because we were concerned that their current mood might influence their subsequent behaviors in the study. They were then given instructions for, and practiced, a paired-associate task. For reasons not germane to the predictions of Study 3, the participants were randomly assigned to experimental conditions whose purpose was to influence performance on the task, although no evaluative feedback was provided. Following the instructions and practice, but before starting the actual task, the participants answered the emotional intensity questions a second time. The self-discrepancy and self-guide strength measures were obtained at the end of the session.

Not surprisingly, there was little change in emotional intensity between the two measurements. Indeed, the correlation between the two measures of current emotional intensity was very high for both the dejection-related mood score ($r = .70$, $p < .001$) and the agitation-related mood score ($r = .73$, $p < .001$). Given this, the two measures of current emotional intensity were combined in the analyses, to increase the reliability of our emotional intensity measure. Two additional points should be emphasized, however. First, both the experimental conditions for the tasks and participants' performance on the practice items were included in the analyses as covariates when testing the predictions of Study 3, to control for any possible effects that they might have. Second, when the predictions were tested for the first measure of current emotional intensity only, that is, before the experimental instructions or practice occurred, the results of the study remained basically the same.

Results and Discussion

As in Studies 1 and 2, hierarchical multiple regressions were performed separately for the dejection-related emotional intensity score and for the agitation-related emotional intensity score.

Relation Between Self-Guide Strength and Self-Discrepancy Magnitude

As in Studies 1 and 2, the partial correlations between ideal-self-guide strength and actual–ideal discrepancy and between ought-self-guide strength and actual–ought discrepancy were both nonsignificant ($pr = .06$ and $pr = .08$, respectively).

Ideal-Self-Guide Strength as a Moderator of the Ideal Discrepancy–Dejection Relation

The hierarchical multiple regression analysis on the dejection intensity scores revealed only two significant effects. The interaction of ideal-self-guide strength and actual–ideal discrepancy had a significant positive partial correlation with dejection intensity ($pr = .22$), $F(1, 80) = 4.00$, $p < .05$. (As in Studies 1 and 2, this interaction remained significant when the response extremity variable was included in the regression.) In comparison, the interaction of ought-self-guide strength and actual–ought discrepancy had a significant negative partial correlation with dejection intensity ($pr = -.26$), $F(1, 8) = 5.60$, $p < .05$. The median split analysis revealed that the unique relation between actual–ideal discrepancy and dejection intensity was borderline significant for participants high in ideal-self-guide strength ($pr = .20$), $F(1, 39) = 1.65$, $p = .10$, but was not significant for participants low in ideal-self-guide strength ($pr = -.13$, $F < 1$).

Although the negative relation between dejection intensity and the interaction of ought strength and ought discrepancy was not predicted, such a relation could be understood, as suggested earlier, in terms of a prevention focus inhibiting a promotion focus and thus inhibiting the emotional responses associated with that focus (i.e., dejection-related responses).

Ought-Self-Guide Strength as a Moderator of the Ought Discrepancy–Agitation Relation

The hierarchical multiple regression analysis on the agitation intensity scores revealed only one significant effect. The interaction of ought-self-guide strength and actual–ought discrepancy had a significant positive partial correlation with agitation intensity ($pr = .23$), $F(1, 80) = 4.41$, $p < .05$. (As in Studies 1 and 2, this interaction remained significant when the response extremity variable was included in the regression.) In comparison, the interaction of ideal-self-guide strength and actual–ideal discrepancy had a nonsignificant negative partial correlation ($pr = -.07$, $F < 1$). The median split analysis revealed that the unique relation between actual–ought discrepancy and agitation intensity was significant for participants high in ought-self-guide strength ($pr = .44$), $F(1, 38) = 8.99$, $p < .01$, but was not significant for participants low in ought-self-guide strength ($pr = -.07$, $F < 1$).

As in Studies 1 and 2, additional analyses were performed for the crossed interactions of ideal strength with ought discrepancy and ought strength with ideal discrepancy. And once again, these crossed interactions had no significant effects on either dejection or agitation (all $Fs < 1$).

Study 3 retested the predicted interactions relating ideal strength and ideal discrepancy to dejection and ought strength

and ought discrepancy to agitation and again found support for both unique relations. In addition, Study 3 extended the findings of the previous two studies by measuring emotional intensity rather than emotional frequency.

Studies 1–3 supported our major hypothesis that stronger goals would relate to stronger emotional responses and that which type of goal focus was stronger would determine the type of emotional response that was stronger. These studies tested this hypothesis for chronic goals and chronic goal attainments. Study 4 was designed to test the implications of this hypothesis for momentary goals and momentary goal attainments. The strength of a momentary goal, again conceptualized in terms of its accessibility, can be increased temporarily by situationally activating the goal. Study 4 used a framing technique to increase the strength of a promotion-focus goal versus a prevention-focus goal while keeping constant the criterion for success and failure and the consequences of success and failure. After performance of the task, the participants were given false feedback that they had either succeeded or failed on the task. An advantage of Study 4's concern with momentary goals and their attainment, therefore, was that both regulatory focus and goal attainment (discrepancy or congruency) could be experimentally manipulated.

The basic prediction was that attaining the goal (success feedback) would increase cheerfulness-related emotions (and decrease dejection-related emotions) when promotion focus had higher accessibility but would increase quiescence-related emotions (and decrease agitation-related emotions) when prevention focus had higher accessibility and that not attaining the goal (failure feedback) would increase dejection-related emotions (and decrease cheerfulness-related emotions) when promotion focus had higher accessibility but would increase agitation-related emotions (and decrease quiescence-related emotions) when prevention focus had higher accessibility. Thus, an interaction was predicted between regulatory focus framing (promotion vs. prevention) and type of feedback-induced emotional change (cheerfulness–dejection-related vs. quiescence–agitation-related).

Study 4

Method

Participants

Ninety-two Columbia University undergraduates (42 men and 50 women) were recruited, by flyers, for a study in which payment was contingent on performance. Note that no sex differences were found in the study. All participants indicated that they were native speakers of English.

Procedure

When they arrived for the experimental session, the participants were seated at computer terminals. The procedure of the study was computerized. All participants were given the same general instructions for the task. They were told that a series of letter strings (trigraphs) would be presented to them on their screen, one at a time, and that their task was to read and study each string in preparation for a subsequent test of rote memorization of the strings. They were also told that each trigraph would remain on the screen for as long as they wanted. They were told that after the memory test, the computer, supposedly, would calculate and display their level of performance on the test, showing them where they stood in relation to other college students who had participated in the experiment.

After these general instructions about the nature of the task, the participants were randomly assigned to either the promotion-focus or prevention-focus framing condition. In the promotion-framing condition, the participants received the following additional task instructions:

> We want your performance to exceed the 70th percentile of students who have participated in this study. Thus, although we have set the payment at $5 for completion of this part, it is possible to gain $1.
>
> If you score above the 70th percentile, that is, if you remember a lot of letter strings, then you will gain $1. However, if you don't score above the 70th percentile, that is, if you don't remember a lot of letter strings, then you will not gain $1.

In the prevention-framing condition, the participants received the following additional task instructions:

> We want your performance to exceed the 70th percentile of students who have participated in this study. Thus, although we have set the payment at $6 for completion of this part, it is possible to lose $1.
>
> If you score above the 70th percentile, that is, if you don't forget a lot of letter strings, then you won't lose $1. However, if you don't score above the 70th percentile, that is, if you do forget a lot of letter strings, then you will lose $1.

The above instructions mention the consequences of success first and the consequences of failure second. Half of the participants in each framing condition were randomly assigned to this order, and the other half received the alternate order. The analyses revealed that there was no effect of order of instructions.

Note that the criterion for success at the task was the same for all participants: exceeding the 70th percentile of students who had participated in the study. This criterion, or reference point, established the same desired end state for all participants (see Carver & Scheier, 1990). In addition, the prospective outcomes or objective consequences of success and failure were also the same for all participants: $6 for success versus $5 for failure.

After the participants received the task instructions, they responded to a four-item emotional intensity questionnaire. They were asked to indicate how *happy, tense, discouraged,* and *relaxed* they were at the current time, on a 9-point scale ranging from 0 (*not at all*) to 8 (*extremely*). They were also asked to indicate what they believed their performance level would be on the following trial. They answered this *expectancy* question on a 7-point scale ranging from 1 (*very low performance*) to 7 (*very high performance*). This question was included to check on whether the two framing manipulations induced different performance expectancies that, in turn, might influence emotional responses to success and failure feedback.

The participants next performed the memory task. Twenty trigraphs were randomly presented, 1 at a time, to the participants. The list of trigraphs was designed so that no letter appeared more than once in the same ordinal position (e.g., the letter *Z* could not appear last in more than 1 trigraph) and no letter appeared in more than 3 trigraphs, regardless of ordinal position. The trigraphs were all pretested for intelligibility and familiarity, and none could be readily associated with an established word or acronym, such as IBM or NBC. Each trigraph remained on the screen until the participant pressed a key to go on. When all 20 trigraphs had been viewed, the computer administered a free-recall test of them. There was no time limit on this expected free-recall test. The computer recorded each participant's trigraph entries.

After completing the recall test, the participants waited several sec-

onds while the computer supposedly calculated their recall score and compared it with those of the previous participants. They then received feedback about their performance level. On the basis of random assignment, half of the participants in each framing condition were told that they had reached the goal of scoring above the 70th percentile (success feedback), and the other half were told that they had not reached this goal (failure feedback).

After the performance feedback, the participants again filled out the four-item emotional intensity questionnaire. The participants were then told that the study was over. They were asked questions to check whether they had believed that their payment for the study depended on their performance. They were then fully debriefed and thanked for their participation.

Results and Discussion

Analysis Overview

One participant was dropped from the analysis for having a change in mood that was over 3 standard deviations above the general mean. Eight of the participants expressed suspicions during debriefing about whether their payment for the study depended on their performance. These participants were excluded from the analyses. (Note, however, that the hypothesized results remained significant when these participants were included in the analyses.) Overall, then, 83 of the 92 original participants were included in the analyses.

The major hypothesis concerned different types of feedback-induced emotional change as a function of strength of regulatory focus. *Feedback-consistent* emotional change involved feeling better after success feedback and feeling worse after failure feedback. With stronger promotion focus, participants should feel more cheerful (and less dejected) after success and more dejected (and less cheerful) after failure. With stronger prevention focus, participants should feel more quiescent (and less agitated) after success and more agitated (and less quiescent) after failure. Feedback-consistent emotional change scores were calculated separately for the *cheerfulness–dejection* dimension and for the *quiescence–agitation* dimension.

For the *cheerfulness–dejection* dimension, feedback-consistent emotional change scores were calculated as follows: (a) for success feedback, sum of postfeedback *happy* minus initial *happy* and (reversed scored) postfeedback *discouraged* minus initial *discouraged;* (b) for failure feedback, sum of postfeedback *discouraged* minus initial *discouraged* and (reversed scored) postfeedback *happy* minus initial *happy.* For the *quiescence–agitation* dimension, feedback-consistent emotional change scores were calculated as follows: (a) for success feedback, sum of postfeedback *relaxed* minus initial *relaxed* and (reversed scored) postfeedback *tense* minus initial *tense;* (b) for failure feedback, sum of postfeedback *tense* minus initial *tense* and (reversed scored) postfeedback *relaxed* minus initial *relaxed.*

Note again that when the analyses described below were performed with valence of emotion (i.e., positive vs. negative) as an additional variable, there were no effects of emotional valence (all Fs < 1). Thus, the findings reflected changes in the positive emotions as much as changes in the negative emotions.

Results

The major prediction was that feedback-consistent emotional change would be different in the promotion-framing versus prevention-framing conditions. Feedback-consistent change on the *cheerfulness–dejection* dimension would be greater for participants in the promotion-framing condition than those in the prevention-framing condition, whereas feedback-consistent change on the *quiescence–agitation* dimension would be greater for participants in the prevention-framing condition than those in the promotion-framing condition. A Regulatory Focus Framing (promotion vs. prevention) × Type of Feedback-Consistent Emotional Change (cheerfulness–dejection vs. quiescence–agitation) analysis of variance on participants' feedback-consistent emotional change scores was performed, to test this prediction. As shown in Table 1, the predicted interaction was obtained, $F(1, 78) = 8.2$, $p < .01$. When controlling for change in the alternative emotional dimension, the effect of regulatory focus framing on feedback-consistent emotional change was significant for both the *cheerfulness–dejection* dimension, $F(1, 76) = 3.8$, $p < .05$, and the *quiescence–agitation* dimension, $F(1, 76) = 6.5$, $p = .01$.

As evident from Table 1, there was also a significant main effect for type of feedback-consistent emotional change, $F(1, 78) = 7.57$, $p < .01$, reflecting the fact that there was more feedback-consistent emotional change overall for the *cheerfulness–dejection* dimension than for the *quiescence–agitation* dimension. Finally, note that regulatory focus framing had no effect on (a) participants' prefeedback emotions ($F < 1$); (b) participants' prefeedback performance on the task ($F < 1$); and (c) participants' performance expectancy ($F < 1$).

General Discussion

All four studies found that stronger regulatory focus was related to stronger emotional responses to goal attainment, with stronger promotion focus relating to stronger cheerfulness–dejection-related emotions and stronger prevention focus relating to stronger quiescence–agitation-related emotions. The first three correlational studies found these effects for chronic goals and chronic congruencies and discrepancies to these goals, on measures of both emotional frequency (Studies 1 and 2) and emotional intensity (Study 3). Specifically, the following two predictions were supported: (a) The unique relation between actual–ideal discrepancy (or congruency) and dejection-related (or cheerfulness-related) emotions increased as the accessibility of ideal-self-guides increased, and (b) the unique relation between actual–ought discrepancy (or congruency) and agitation-related (or quiescence-related) emotions increased as the accessibility of ought-self-guides increased. Study 4, which experimentally manipulated regulatory focus through framing and goal

Table 1
Mean Feedback-Consistent Emotional Change as a Function of Regulatory Focus Framing and Emotional Dimension

	Emotional dimension	
Regulatory focus framing	Cheerfulness–dejection	Quiescence–agitation
Promotion	1.07	−0.52
Prevention	0.78	0.68

attainment through feedback, found parallel effects on a measure of emotional intensity for momentary goals and momentary success or failure.

These findings are important for a number of reasons. To begin with, they provide support for a central proposal of self-discrepancy theory that has not previously been tested directly, namely, that self-guide strength conceptualized as self-guide accessibility is an important variable that influences emotional responses and is independent of the magnitude of self-discrepancy per se (see Higgins, 1989). Previous tests of self-discrepancy theory have been concerned mainly with distinguishing between the emotional effects of actual–ideal and actual–ought discrepancies as different types of goal discrepancy. The present research tests the effects of strength of goal. Our studies found that type of goal discrepancy and strength of goal are independent, both in the sense that they are uncorrelated as chronic variables and in the sense that they can be independently manipulated.

The present studies found that the emotional effects of goal attainment (discrepancy or congruency) were greater when a self-guide or, more generally, a regulatory focus was stronger. What implications does this have for our previous findings relating self-discrepancies to emotional problems? Because of the independence of magnitude of self-discrepancy and self-guide strength, both high-discrepancy samples and low-discrepancy samples will include individuals with strong and with weak self-guides. The results of the present studies suggest that it was the individuals with relatively strong self-guides that contributed most to the emotional effects of self-discrepancies found in our previous correlational studies (see also Newman et al., 1992). There was an additional factor, however, in our previous experimental studies (e.g., Higgins, Bond, Klein, & Strauman, 1986; Strauman, 1989; Strauman & Higgins, 1987). These studies primed the self-guides in individuals' self-discrepancies in order to activate the self-discrepancies. But the self-guide priming would also have increased self-guide accessibility, thereby activating individuals' self-discrepancies and increasing the strength of regulatory focus. This type of priming, then, should have, and does have, strong effects on emotional responses.

Note also that the development of a measure of self-guide strength that is independent of self-discrepancy magnitude opens up possibilities for several new lines of research, because self-guide strength directly reflects strength of regulatory focus, whereas magnitude of self-discrepancy does not. In recent studies, for example, we found that strength of ideal- and ought-self-guides predicts task performance better than does magnitude of ideal- or ought-self-discrepancies per se. Moreover, we also obtained evidence that strength of ideal-self-guides (promotion focus) and ought-self-guides (prevention focus) predicts relative sensitivity to the emotional significance of different attitude objects, such as individuals' speed of evaluating how happy different objects make them (promotion related) versus how relaxed the same objects make them (prevention related), respectively.

The results of the present studies also have implications beyond self-discrepancy theory for an important issue in the emotional literature more generally. Self-guides function as chronic goals, and self-guide strength was conceptualized and operationalized as self-guide accessibility. Self-discrepancies and congruencies represent chronic goal attainment. Our studies, then, test the notion that chronic goal accessibility or strength can moderate emotional responses to chronic goal attainment. This notion has been proposed by major theorists in the emotional literature (see Clore, 1994; Frijda, 1996; Frijda, Ortony, Sonnemans, & Clore, 1992), but it has rarely been investigated. The results of the present studies provide direct support for this notion.

Not only do the results of the present studies provide such evidence, they go further by explicitly distinguishing between types of chronic goals and types of emotional responses to goal attainment. The results clearly indicate that the chronic accessibility of ideal goals can moderate cheerfulness–dejection-related responses to the attainment of such goals, and that the chronic accessibility of ought goals can moderate quiescence–agitation-related responses to the attainment of such goals. Moreover, these moderating effects were found on measures of both emotional frequency and emotional intensity.

The present studies, then, significantly extend and expand the theoretial and empirical implications of self-discrepancy theory for some important emotional and motivational issues. But the present studies also go beyond self-discrepancy theory by explicitly considering how strength of regulatory focus per se influences emotional responses to goal attainment. Only by considering regulatory focus strength as a distinct variable would Study 4 have been conducted.

The findings of Study 4 closely parallel the findings of the other three studies, but this study does not concern individuals' self-guides and actual-self relations to self-guides. The parallel between Study 4 and the other studies derives from the hypothesized effects of regulatory focus strength on emotional responses to goal attainment. These effects are not derivable from self-discrepancy theory per se. What the present studies demonstrate is that the hypothesized effects of regulatory focus strength apply to both chronic and momentary goals and to both chronic and momentary goal attainment. Thus, regulatory focus strength influences motivation and emotion more generally than self-discrepancies per se. Just how general are the effects of regulatory focus strength is an exciting question for future research.

References

Bassili, J. N. (1995). Response latency and the accessibility of voting intentions: What contributes to accessibility and how it affects vote choice. *Personality and Social Psychology Bulletin, 21,* 686–695.

Bassili, J. N. (1996). Meta-judgmental versus operative indexes of psychological attributes: The case of measures of attitude strength. *Journal of Personality and Social Psychology, 71,* 637–653.

Brendl, C. M., & Higgins, E. T. (1996). Principles of judging valence: What makes events positive or negative? In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 28, pp. 95–160). New York: Academic Press.

Carver, C. S., & Scheier, M. F. (1990). Principles of self-regulation: Action and emotion. In E. T. Higgins & R. M. Sorrentino (Eds.), *Handbook of motivation and cognition: Foundations of social behavior* (Vol. 2, pp. 3–52). New York: Guilford Press.

Clore, G. L. (1994). Why emotions vary in intensity. In P. Ekman & R. J. Davidson (Eds.), *The nature of emotion: Fundamental questions* (pp. 386–393). Oxford, England: Oxford University Press.

Cohen, J., & Cohen, P. (1983). *Applied multiple regression/correlation analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.

Cooley, C. H. (1964). *Human nature and the social order.* New York: Schocken Books. (Original work published 1902)

Fazio, R. H. (1986). How do attitudes guide behavior? In R. M. Sorrentino & E. T. Higgins (Eds.), *Handbook of motivation and cognition: Foundations of social behavior* (pp. 204–243). New York: Guilford Press.

Fazio, R. H. (1995). Attitudes as object–evaluation associations: Determinants, consequences, and correlates of attitude accessibility. In R. E. Petty & J. A. Krosnick (Eds.), *Attitude strength: Antecedents and consequences* (pp. 247–282). Mahwah, NJ: Erlbaum.

Frijda, N. H. (1996). Passions: Emotion and socially consequential behavior. In R. D. Kavanaugh, B. Zimmerberg, & S. Fein (Eds.), *Emotion: Interdisciplinary perspectives* (pp. 1–27). Mahwah, NJ: Erlbaum.

Frijda, N. H., Ortony, A., Sonnemans, J., & Clore, G. (1992). The complexity of intensity. In M. Clark (Ed.), *Emotion: Review of personality and social psychology* (Vol. 13, pp. 60–89). Beverly Hills, CA: Sage.

Greenwald, A. G., & Banaji, M. R. (1995). Implicit social cognition: Attitudes, self-esteem, and stereotypes. *Psychological Review, 102,* 4–27.

Higgins, E. T. (1987). Self-discrepancy: A theory relating self and affect. *Psychological Review, 94,* 319–340.

Higgins, E. T. (1989). Self-discrepancy theory: What patterns of self-beliefs cause people to suffer? In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 22, pp. 93–136). New York: Academic Press.

Higgins, E. T. (1996a). Emotional experiences: The pains and pleasures of distinct regulatory systems. In R. D. Kavanaugh, B. Zimmerberg, & S. Fein (Eds.), *Emotion: Interdisciplinary perspectives* (pp. 203–241). Mahwah, NJ: Erlbaum.

Higgins, E. T. (1996b). 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: Guilford Press.

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

Higgins, E. T., Bond, R. N., Klein, R., & Strauman, T. (1986). Self-discrepancies and emotional vulnerability: How magnitude, accessibility, and type of discrepancy influence affect. *Journal of Personality and Social Psychology, 51,* 5–15.

Higgins, E. T., Van Hook, E., & Dorfman, D. (1988). Do self attributes form a cognitive structure? *Social Cognition, 6,* 177–207.

James, W. (1948). *Psychology.* New York: World Book. (Original publication, 1890).

Judd, C. M., & McClelland, G. H. (1989). *Data analysis: A model-comparison approach.* Orlando, FL: Harcourt Brace Jovanovich.

Lewin, K. (1935). *A dynamic theory of personality.* New York: McGraw-Hill.

Newman, L. S., Higgins, E. T., & Vookles, J. (1992). Self-guide strength and emotional vulnerability: Birth order as a moderator of self–affect relations. *Personality and Social Psychology Bulletin, 18,* 402–411.

Rogers, C. R. (1961). *On becoming a person.* Boston: Houghton Mifflin.

Roseman, I. J. (1984). Cognitive determinants of emotion: A structural theory. *Review of Personality and Social Psychology, 5,* 11–36.

Stein, N. L., & Jewett, J. L. (1982). A conceptual analysis of the meaning of negative emotions: Implications for a theory of development. In C. E. Izard (Ed.), *Measuring emotions in infants and children* (pp. 401–443). New York: Cambridge University Press.

Strauman, T. J. (1989). Self-discrepancies in clinical depression and social phobia: Cognitive structures that underlie emotional disorders? *Journal of Abnormal Psychology, 98,* 14–22.

Strauman, T. J., & Higgins, E. T. (1987). Automatic activation of self-discrepancies and emotional syndromes: When cognitive structures influence affect. *Journal of Personality and Social Psychology, 53,* 1004–1014.

Zanna, M. P., & Fazio, R. H. (1982). The attitude–behavior relation: Moving toward a third generation of research. In M. P. Zanna, E. T. Higgins, & C. P. Herman (Eds.), *Consistency in social behavior: The Ontario Symposium* (Vol. 2, pp. 283–301). Hillsdale, NJ: Erlbaum.

Zanna, M. P., Higgins, E. T., & Herman, C. P. (Eds.). (1982). *Consistency in social behavior: The Ontario Symposium* (Vol. 2). Hillsdale, NJ: Erlbaum.

Received January 31, 1996
Revision received July 12, 1996
Accepted July 19, 1996 ■