

# PROMOTION AND PREVENTION: REGULATORY FOCUS AS A MOTIVATIONAL PRINCIPLE

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## I. Introduction

The hedonic principle that people approach pleasure and avoid pain has been *the* basic motivational principle throughout the history of psychology, with ancient roots that can be traced at least to Plato's *Protagoras*. This principle underlies motivational models across all levels of analysis in psychology, from the biological to the social. Biological models have distinguished between the appetitive system involving approach and the defensive or aversive system involving avoidance (e.g., Gray, 1982; Konorski, 1967; Lang, 1995). Models in personality and social psychology have distinguished between the motive to move toward desired end states and the motive to move away from undesired end states (e.g., Atkinson, 1964; Bandura, 1986; Carver & Scheier, 1981, 1990; Lewin, 1935, 1951; McClelland, Atkinson, Clark, & Lowell, 1953; Roseman, 1984; Roseman, Spindel, & Jose, 1990). It is clear from these models and the empirical support for them that people are motivated to approach pleasure and avoid pain. But is the hedonic principle sufficient to understand human strategic behavior? Indeed, is the hedonic principle sufficient to understand approach and avoidance?

It is my belief that it is precisely because the hedonic principle is so basic that it is limited as an explanatory variable. Almost any area of motivation can be discussed in terms of the hedonic principle. People avoid the pain of hunger and avoid the pain of thirst, but this does not tell us much about how hunger and thirst differ from one another. More germane to the present paper, people can approach the pleasure of serenity or approach the pleasure of accomplishment. Does this mean that these two motivations are the same?

I am not suggesting that the hedonic principle is not important. In fact, I am suggesting precisely the opposite. It is so important that there must

be alternative ways in which it operates. Indeed, I propose that *how* the hedonic principle operates might be as important in motivation as the fact that it does operate. Specifically, I describe in this paper two different ways in which the hedonic principle operates— with a *promotion focus* versus a *prevention focus*. Evidence is presented that these different ways of regulating pleasure and pain, called *regulatory focus*, have a major impact on people's feelings, thoughts, and actions that is independent of the hedonic principle per se. Before describing regulatory focus as a motivational principle, however, some background information about another regulatory variable, regulatory reference, must first be considered.

#### A. REGULATORY REFERENCE AND APPROACHING DESIRED END STATES

Inspired by earlier work on cybernetics and control processes (e.g., Miller, Galanter, & Pribram, 1960; Powers, 1973; Wiener, 1948), Carver and Scheier (1981, 1990) distinguish between self-regulatory systems that have positive versus negative reference values. A self-regulatory system with a positive reference value has a desired end state as the reference point. The system is discrepancy reducing and involves attempts to move the currently perceived actual-self-state as close as possible to the desired reference point. In contrast, a self-regulatory system with a negative reference value has an undesired end state as the reference point. This system is discrepancy amplifying and involves attempts to move the currently perceived actual-self-state as far away as possible from the undesired reference point.

Carver and Scheier (1981, 1990) suggest that self-regulation with a negative reference value is inherently unstable and relatively rare. Their research, therefore, emphasized self-regulation with a positive reference value. Miller et al.'s (1960) famous TOTE model also emphasized positive reference values involving the execution of operations to reduce existing incongruities or discrepancies. This emphasis is evident throughout the self-regulatory literature because most theories and research concern movement toward goals, which are positive reference values (see, e.g., Gollwitzer & Bargh, 1996; Pervin, 1989). Another reason that self-regulation with a negative reference value has received less attention is that several models describe it in terms of behavioral inhibition rather than in terms of behavioral production (e.g., Atkinson, 1964; Gray, 1982). In the classic learning literature, as well, behavioral production associated with positive end states received greater emphasis than did behavioral suppression associated with negative end states (e.g., Estes, 1944; Skinner, 1953; Thorndike, 1935).

Consistent with this emphasis in the previous literature, this paper begins by considering self-regulation with positive reference values; that is, motivated movement in reference to desired end states. The critical characteristic of such motivation according to the literature is the direction of its movement— *approach*. Consistent with the basic hedonic principle, animal learning/biological models (e.g., Gray, 1982; Hull, 1952; Konorski, 1967; Lang, 1995; Miller, 1944; Mowrer, 1960), cybernetic-control models (e.g., Carver & Scheier, 1990; Powers, 1973), and dynamic models (e.g., Atkinson, 1964; Lewin, 1935; McClelland et al., 1953) all highlight the distinction between approaching desired end states versus avoiding undesired end states. In contrast to these models, self-discrepancy theory (Higgins, 1987, 1989a) also distinguishes between different types of approaching desired end states. This distinction is considered next.

## B. SELF-REGULATION IN RELATION TO IDEAL AND OUGHT DESIRED END STATES

It is the common property of desired end states to motivate general approach processes that has been stressed in the psychological literature. Little attention, however, has been paid to identifying basic types of desired end states that might themselves be motivationally distinct and influence *how* approach occurs. Indeed, the same behavioral prediction has been made for desired end states even when different types of desired end states have been considered, such as Gray's (1982) approach system for both "reward" and "nonpunishment." In contrast, self-discrepancy theory (Higgins, 1987, 1989a) distinguishes between two types of desired end states and describes two distinct ways to regulate pleasure and pain.

The desired end states in self-discrepancy theory are referred to as "self-guides." Two types of self-guides are distinguished: (1) *ideal* self-guides, which are individuals' representations of the attributes that someone (themselves or another person) would like them ideally to possess, someone's hopes, wishes, or aspirations for them; and (2) *ought* self-guides, which are individuals' representations of the attributes that someone believes they should or ought to possess, someone's beliefs about their duties, obligations, or responsibilities.

Like control theories, self-discrepancy theory conceptualizes people's motivation to approach ideal and ought self-guides in terms of reducing discrepancies between their current state, that is, their represented actual self or self-concept, and these desired end states (see Higgins, 1987, 1989a). Self-discrepancy theory shares the common assumption that people are motivated to attain both ideal and ought self-guides as desired end states.

But beyond this commonality, self-discrepancy theory proposes that self-regulation in relation to ideals as one type of desired end state is motivationally distinct from self-regulation in relation to oughts as another type of desired end state. Indeed, the theory predicts that self-regulation in relation to ideal and ought self-guides, despite both involving attempts to attain desired end states, involves different predilections for approach and avoidance strategies of discrepancy reduction.

In the next section, evidence is presented to support the proposal that regulation in relation to ideals versus oughts as desired end states is motivationally distinct. Then, the principle of regulatory focus is introduced more fully and ideal versus ought self-regulation is related to promotion focus versus prevention focus, respectively. The subsequent section reviews how situational variability in regulatory focus can also influence people's thoughts, feelings, and actions independent of self-guide discrepancies or congruencies per se. The final section considers more fully the strategic differences between a prevention focus and a promotion focus and the implications of these differences for decision making and problem solving.

## **II. Ideals and Oughts as Motivationally Distinct Desired End States**

This section reviews evidence that regulation in relation to ideals versus oughts as desired end states is motivationally distinct. The distinct motivational nature of ideal self-regulation and ought self-regulation will be described for: (1) sensitivity for events reflecting different psychological situations; (2) strategic inclinations and tactical preferences; and (3) emotional vulnerabilities and emotional memories.

### **A. SENSITIVITY FOR EVENTS REFLECTING DIFFERENT PSYCHOLOGICAL SITUATIONS**

The distinction between ideal and ought self-regulation in self-discrepancy theory was initially described in terms of differences in the psychological situations represented by discrepancies and congruencies involving ideal versus ought self-guides (see Higgins, 1989a, 1989b). Actual-self-congruencies to hopes, wishes, or aspirations represent the presence of positive outcomes, whereas discrepancies represent the absence of positive outcomes. Thus, the psychological situations involved in ideal self-regulation are the presence and absence of positive outcomes.

The hopes, wishes, and aspirations represented in ideal self-guides function like maximal goals. In contrast, the duties, obligations, and responsibilities represented in ought self-guides function more like minimal goals (see Brendl & Higgins, 1996). These are goals that a person must attain or standards that must be met. When strong enough, such as biblical commandments, oughts can even function like necessities. Discrepancies to such minimal goals represent the presence of negative outcomes, whereas congruencies represent the absence of negative outcomes (see Gould, 1939; Rotter, 1982). Thus, the psychological situations involved in ought self-regulation are the absence and presence of negative outcomes.

This distinction between ideal and ought self-regulation suggests that sensitivity to events involving the presence and absence of positive outcomes should be greater when ideal concerns predominate, whereas sensitivity to events involving the absence and presence of negative outcomes should be greater when ought concerns predominate. Like Kelly's (1955) personal construct systems that individuals use as a scanning pattern that sweeps back and forth across the perceptual field and "picks up blips of meaning" (p. 145), such chronic sensitivities should influence how stimulus information is processed and remembered. Higgins and Tykocinski (1992) tested this prediction at the chronic level of ideal versus ought concerns.

Undergraduate participants were selected on the basis of their self-discrepancy scores. Self-discrepancies are measured using the Selves Questionnaire (see Higgins, Bond, Klein, & Strauman, 1986). The Selves Questionnaire asks respondents to list up to eight or ten attributes for each of a number of different self-states, including their actual self and their self-guides. It is a spontaneous, idiographic measure (see Moretti & Higgins, 1990). On the first page of the questionnaire the actual, ideal, and ought self-states are defined (as described earlier). On each subsequent page there is a question about a different self-state, such as "Please list the attributes of the type of person *you* think you *actually* are" or "Please list the attributes of the type of person *you* would *ideally* like to be, i.e., your hopes, wishes, and aspirations for yourself." The respondents are also asked to rate for each listed attribute the extent to which they actually possessed that attribute, ought to possess that attribute, or ideally wanted to possess that attribute. The procedure for calculating the magnitude of an actual/ideal or actual/ought self-discrepancy involves comparing the actual self-attributes to the attributes listed in either an ideal self-guide or an ought self-guide to determine which attributes in the actual self match or mismatch the attributes of that particular self-guide. The self-discrepancy score is basically the number of mismatches minus the number of matches (see Higgins et al., 1986).

Using participants' responses to the Selves Questionnaire, median splits were performed on the actual/ideal discrepancy scores and on the actual/ought discrepancy scores. Participants were then selected who either were predominant actual/ideal discrepancy persons (i.e., possessed high actual/ideal discrepancies and low actual/ought discrepancies) or were predominant actual/ought discrepancy persons (i.e., possessed high actual/ought discrepancies and low actual/ideal discrepancies).

A few weeks after the selection procedure, all participants read the same essay about the life of a target person in which events reflecting the four different types of psychological situations occurred, such as: (1) "I found a 20-dollar bill on the pavement of Canal street near the paint store." (the presence of positive outcomes); (2) "I've been wanting to see this movie at the 8th Street Theatre for some time, so this evening I went there straight after school to find out that it's not showing anymore." (the absence of positive outcomes); (3) "I was stuck in the subway for 35 minutes with at least 15 sweating passengers breathing down my neck." (the presence of negative outcomes); and (4) "This is usually my worst school day. Awful schedule, class after class with no break. But today is election day— no school!" (the absence of negative outcomes).

Ten minutes after reading the essay the participants were asked to reproduce the essay word for word. The study found, as predicted, that predominant actual/ideal discrepancy subjects tended to remember target events representing the presence and absence of positive outcomes better than did predominant actual/ought discrepancy subjects, whereas predominant actual/ought discrepancy subjects tended to remember target events representing the absence and presence of negative outcomes better than did predominant actual/ideal discrepancy subjects. No other interactions were significant and the obtained interaction was independent of participants' pre-mood, post-mood, or change in mood.

The results of the Higgins and Tykocinski (1992) study support the proposal that self-regulation in relation to an ideal as a desired end state is motivationally distinct from self-regulation to an ought as a desired end state. The results of studies by Higgins, Roney, Crowe, and Hymes (1994) also support this general proposal, and, in addition, indicate that ideal and ought self-regulation differ in their predilection for approach versus avoidance strategies and tactics. This evidence is considered next.

## B. STRATEGIC INCLINATIONS AND TACTICAL PREFERENCES

From a control theory viewpoint, as mentioned earlier, self-regulation in relation to ideals and oughts involves approaching desired end states at

the system level by reducing discrepancies between current states and desired end states. But within such approach at the system level, there can still be either approach or avoidance inclinations at the strategic level. Specifically, individuals can increase the likelihood that they will attain (or maintain) a desired end state, that is, reduce discrepancies, by either approaching matches to that end state or avoiding mismatches to that end state (see Higgins et al., 1994). For example, a person who wants to get a good grade on a quiz (a desired end state) could either study hard at the library the day before the quiz (approaching a match to the desired end state) or turn down an invitation to go out drinking with friends the night before the quiz (avoiding a mismatch to the desired end state).

As discussed earlier, self-regulation in relation to ideal self-guides is concerned with positive outcomes (their presence and absence). This would naturally engender an inclination to approach matches to hopes and aspirations as a strategy for ideal self-regulation. In contrast, self-regulation in relation to ought self-guides is concerned with negative outcomes (their absence and presence), and this would naturally engender an inclination to avoid mismatches to duties and obligations as a strategy for ought self-regulation. These predictions were tested in a series of studies by Higgins et al. (1994).

One study asked undergraduate participants to report either on how their hopes and goals have changed over time (activating ideal self-guides) or on how their sense of duty and obligation has changed over time (activating ought self-guides). To reveal strategic predilections, this study used a free-recall technique similar to that used in the Higgins and Tykocinski (1992) study. The participants read about several episodes that occurred over a few days in the life of another student. In each of the episodes where the target was trying to experience a desired end state, the target used either the strategy of approaching a match to the desired end state or the strategy of avoiding a mismatch to the desired end state, as in the following examples: (1) "Because I wanted to be at school for the beginning of my 8:30 psychology class, which is usually excellent, I woke up early this morning." (approaching a match to a desired end state); and (2) "I wanted to take a class in photography at the community center, so I didn't register for a class in Spanish that was scheduled at the same time." (avoiding a mismatch to a desired end state).

It was predicted that activating ideal or ought self-regulation by priming ideal or ought self-guides, respectively, would increase participants' predilection for particular regulatory strategies, and this in turn would increase recall for those episodes that exemplified those particular strategies. The results were consistent with this prediction. As shown in Table I, the participants remembered episodes that exemplified approaching a match to a

TABLE I  
 MEAN NUMBER OF EPISODES RECALLED AS A FUNCTION OF TYPE OF STRATEGY EXEMPLIFIED  
 AND TYPE OF SELF-GUIDE PRIMED

Type of self-guide primed	Approaching match to desired end state	Avoiding mismatch to desired end state
Ideal self-guide	1.75	1.37
Ought self-guide	1.19	1.96

desired end state significantly better when ideal self-regulation was activated than when ought self-regulation was activated, whereas they remembered episodes that exemplified avoiding a mismatch to a desired end state significantly better when ought self-regulation was activated than when ideal self-regulation was activated.

Another study by Higgins et al. (1994) examined the possibility that individuals varying chronically in their predominant self-regulatory concerns would prefer different tactics reflecting strategies of either approaching matches to desired end states or avoiding mismatches to desired end states. As in the Higgins and Tykocinski (1992) study, predominant ideal concerns was operationalized by predominant actual/ideal discrepancies, and predominant ought concerns was operationalized by predominant actual/ought discrepancies. An initial phase of the study elicited undergraduates' spontaneous strategies for friendship by either asking them what their strategy would be if they wanted to be a good friend in their close relationships, which was intended to elicit tactics reflecting a strategy of approaching matches, or asking them what their strategy would be if they believed they should try not to be a poor friend in their close relationships, which was intended to elicit tactics reflecting a strategy of avoiding mismatches.

The initial phase of the study was successful at identifying three tactics that reflected a strategy of approaching matches and that were uniquely and commonly given in response to the first question, as follows: (1) "Be generous and willing to give of yourself"; (2) "Be supportive to your friends. Be emotionally supportive"; and (3) "Be loving and attentive." Three tactics that reflected a strategy of avoiding mismatches and that were uniquely and commonly given in response to the second question were also identified, as follows: (1) "Stay in touch. Don't lose contact with friends"; (2) "Try to make time for your friends and not neglect them"; and (3) "Keep the secrets friends have told you and don't gossip about friends." A second phase of the study confirmed that undergraduates were more likely to select the former set of tactics than the latter (and vice versa)

when the strategic goal of friendship was experimentally framed in terms of approaching matches (“When you think about strategies for *being a good friend* in your close relationships, which THREE of the following would you choose?”) versus avoiding mismatches (“When you think about strategies for *not being a poor friend* in your close relationship, which THREE of the following would you choose?”). Thus, the former set of tactics clearly reflected a strategy of approaching matches, whereas the latter reflected a strategy of avoiding mismatches.

The main phase of the study used responses to the Selves Questionnaire to select participants who were either predominant actual/ideal discrepancy persons or predominant actual/ought discrepancy persons. The study took place weeks later. During the study, each participant was asked the *same* general question about friendship, as follows: “When you think about strategies for *friendship*, which THREE of the following strategies would you choose?” This question was followed by the same six choices of strategies used in the experimental framing study. It was predicted that friendship tactics reflecting a strategy of approaching matches would be spontaneously selected more by individuals with chronic ideal self-regulatory concerns than by individuals with chronic ought self-regulatory concerns, whereas friendship tactics reflecting a strategy of avoiding mismatches would be selected more by individuals with chronic ought self-regulatory concerns than by individuals with chronic ideal self-regulatory concerns. This prediction was confirmed.

The results of the Higgins and Tykocinski (1992) study indicate that ideal and ought self-regulation are associated with differential sensitivity to events reflecting the presence and absence of positive outcomes versus the absence and presence of negative outcomes, respectively. In addition, the results of the studies by Higgins et al. (1994) indicate that ideal self-regulation is associated with a predilection for strategies involving approaching matches to desired end states, whereas ought self-regulation is associated with a predilection for strategies involving avoiding mismatches to desired end states.

Together, these studies clearly support the proposal that ideal and ought self-regulation are motivationally distinct even though they both involve attempts to attain desired end states. Indeed, although both of these types of self-regulation involve hedonic approach at the system level they differ in their inclination for approach or avoidance at the strategic level. This highlights a limitation of the hedonic principle in predicting whether people will have an approach or an avoidance inclination.

The studies reviewed here and elsewhere (see Higgins, 1987, 1989a) provide substantial evidence that ideal and ought self-regulation are motivationally distinct. Given this, one would expect that the emotional conse-

quences of self-regulatory failures, that is, actual-self-discrepancies to ideal versus ought self-guides, would also be distinct. Evidence supporting this prediction is considered next.

### C. EMOTIONAL VULNERABILITIES AND EMOTIONAL MEMORIES

Historically, the literature on self-regulation has generally not considered whether different emotions are produced by discrepancies to different types of desired end states. Different specific emotions have typically been explained in terms of attributional processes that occur after feedback that there is a discrepancy or failure (e.g., Carver & Scheier, 1981; Hoffman, 1986; Srull & Wyer, 1986; Weiner, 1982, 1986). When the emotional consequences of just the discrepancy per se are described, usually only general terms have been used, such as negative affect or negative self-evaluation (e.g., Bandura, 1986; Duval & Wicklund, 1972; Carver & Scheier, 1981; Mandler, 1975). The literature has been mostly silent on whether different specific emotions are produced by discrepancies to different types of desired end states. Despite this, a review of the literature reveals that discrepancies to different types of desired end states have been described by various observers and the discrepancies to these different types of desired end states appear to be associated with different kinds of emotional distress.

Two basic types of desired selves have been mentioned in the literature. The literature describes an ideal self representing one's own or a significant other's hopes, wishes, and aspirations for oneself (e.g., Colby, 1968; Cooley, 1902/1964; Festinger, 1942; Lewin, Dembo, Festinger, & Sears, 1944; Rogers, 1961; Rotter, 1942; Schafer, 1967; Piers & Singer, 1971). The literature also describes an ought self representing one's own or a significant other's beliefs about one's moral responsibilities and who one should or ought to be (Colby, 1968; James, 1890/1948; Freud, 1923/1961; Rogers, 1961; Schafer, 1967; Piers & Singer, 1971).

Observations have also been made that individuals possessing a discrepancy from their hopes or ideals, or the absence of positive outcomes, tend to experience *dejection-related emotions*, such as disappointment, dissatisfaction, or sadness (e.g., Durkheim, 1951; Duval & Wicklund, 1972; Horney, 1950; James, 1890/1948; Kemper, 1978; Lazarus, 1968; Rogers, 1961; Roseman, 1984; Roseman et al., 1990; Stein & Jewett, 1982; Wierzbicka, 1972). Other observations have been made that individuals possessing a discrepancy from their moral standards, norms, or oughts tend to experience *agitation-related emotions*, such as feeling uneasy, threatened, or afraid (e.g., Ausubel, 1955; Erikson, 1950/1963; Freud, 1923/1961; Horney, 1939;

James, 1890/1948; Kemper, 1978; Lewis, 1979; Piers & Singer, 1971; Sullivan, 1953).

These general observations in the literature, then, suggest that the emotional consequences of self-regulatory failures to ideals versus oughts are distinct. If so, this would support the proposal that self-regulation in relation to ideals as one type of desired end state is motivationally distinct from self-regulation in relation to oughts as another type of desired end state. But these observations are not sufficient because the relations among individuals' actual/ideal and actual/ought discrepancies and their dejection-related and agitation-related emotions were not examined in the same study, nor were any experimental tests of the proposed distinct relations performed. To fill this void, my colleagues and I have conducted a series of studies to test whether self-regulation in relation to ideals versus oughts as desired end states produces distinct emotions. Some illustrative studies will be reviewed here.

If self-regulation in relation to ideal selves is motivationally distinct from self-regulation in relation to ought selves as desired end states, then it should be possible to activate one or the other of these types of desired end states and produce the distinct emotions associated with actual self-discrepancies from them. Moreover, this should be possible even for individuals who possess *both* actual/ideal discrepancies and actual/ought discrepancies. This hypothesis was first tested in a study by Higgins et al. (1986, Study 2). Undergraduate participants completed the Selves Questionnaire weeks before the experiment. Individuals who had *both* actual/ideal and actual/ought discrepancies were recruited for the study, as well as individuals who had *neither* type of self-discrepancy.

The supposed purpose of the study was to obtain the self-reflections of a youth sample for a life-span developmental study. Half of the participants were randomly assigned to an Ideal priming condition in which they were asked to describe the kind of person that they and their parents would ideally like them to be and to discuss whether there had been any change over the years in these hopes and aspirations for them. The other half of the participants were assigned to an Ought priming condition in which they were asked to describe the kind of person that they and their parents believed they ought to be and whether there had been any change over the years in these beliefs about their duties and obligations.

Before and after the priming manipulation, the participants filled out a mood questionnaire that included both dejection-related and agitation-related emotions. As predicted, individuals with both actual/ideal and actual/ought discrepancies, but *not* individuals with neither discrepancy, experienced distinct kinds of discomfort depending on which type of self-discrepancy had been primed—an increase in dejection-related emotions

with Ideal priming and an increase in agitation-related emotions with Ought priming.

A study by Strauman and Higgins (1987) replicated and extended this study by testing whether priming just a single desirable attribute contained in either an ideal or ought self-guide would activate these distinct desired end states and produce the specific emotions associated with discrepancies to them. This study also measured other characteristics of the distinct emotional syndromes associated with actual/ideal versus actual/ought discrepancies.

As in the Higgins and Tykocinski (1992) study, two groups of undergraduate participants were selected on the basis of their responses to the Selves questionnaire obtained weeks earlier— individuals with predominant actual/ideal discrepancies and individuals with predominant actual/ought discrepancies. A covert, idiographic priming technique was used to activate self-attributes in a task supposedly investigating the “physiological effects of thinking about other people.” The participants were given phrases of the form, “An X person\_\_\_\_\_” (where X was a trait adjective such as “friendly” or “intelligent”), and were asked to complete each sentence as quickly as possible. For each sentence, each subject’s total verbalization time and skin conductance amplitude were recorded. The participants also reported their dejection-related and agitation-related emotions at the beginning and at the end of the session.

There were three priming conditions: (1) “nonmatching” priming, where the trait adjectives were attributes that appeared in an individual’s self-guide but not in his or her actual self; (2) “mismatching” priming, where the trait adjectives were attributes that appeared in an individual’s self-guide and his or her actual self was discrepant from them; and (3) “yoked (mismatching)” priming, where the trait adjectives were attributes that did not appear in either an individual’s self-guide or actual self but were the *same* attributes that were used for some other participant in the “mismatching” priming condition.

As predicted, the study found that in the “mismatching” priming condition *only*, individuals with predominant actual/ideal discrepancies experienced a dejection-related syndrome (i.e., increased dejected mood, lowered standardized skin conductance amplitude, decreased total verbalization time), whereas individuals with predominant actual/ought discrepancies experienced an agitation-related syndrome (i.e., increased agitated mood, raised standardized skin conductance amplitude, increased total verbalization time).

Strauman (1990) extended this research by investigating whether presenting self-guide attributes as retrieval cues would elicit autobiographical memories that varied in their emotional content when the self-guide was an ideal versus an ought. As in Strauman and Higgins (1987), both “mismatching”

priming and “yoked (mismatching)” priming were used. Thus, the attribute cues were always desired end states but varied in whether they were actual self-discrepant or “mismatching” attributes contained in the participants’ own self-guides or were actual self-discrepant attributes contained in the self-guides of other persons. The self-guide cues also varied in whether they were contained in ideal or ought self-guides as desired end states.

As shown in Table II, Strauman (1990) found that childhood memories with dejection-related content were more likely to be retrieved spontaneously when the “mismatching” attributes were taken from participants’ own ideal self-guides than when they were taken from their ought self-guides. Similarly, childhood memories with agitation-related content were more likely to be retrieved when the “mismatching” cues were taken from participants’ own ought self-guides than when they were taken from their ideal self-guides. The “yoked” ideal and ought attribute cues generally yielded memories with little dejection-related or agitation-related content (less than 5 percent overall).

In sum, there is substantial evidence that regulation in relation to ideals versus oughts as desired end states is motivationally distinct. The distinct motivational nature of ideal self-regulation and ought self-regulation has been found regarding: (1) differential sensitivity for events reflecting different psychological situations; (2) different strategic inclinations and tactical preferences; and (3) different emotional vulnerabilities and emotional memories. The next section introduces the principle of regulatory focus, and ideal versus ought self-regulation is related to strength of promotion focus versus prevention focus, respectively.

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### References

- Atkinson, J. W. (1964). *An introduction to motivation*. Princeton, NJ: D. Van Nostrand.
- Atkinson, J. W. (1974a). The mainsprings of achievement-oriented activity. In J. W. Atkinson & J. O. Raynor (Eds.), *Motivation and achievement* (pp. 13–41). New York: Wiley.
- Atkinson, J. W. (1974b). Strength of motivation and efficiency of performance. In J. W. Atkinson and J. O. Raynor (Eds.), *Motivation and achievement* (pp. 193–218). New York: Wiley.
- Ausubel, D. P. (1955). Relationships between shame and guilt in the socializing process. *Psychological Review*, *62*, 378–390.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Bargh, J. A., Chaiken, S., Govender, R., & Pratto, F. (1992). The generality of the automatic attitude activation effect. *Journal of Personality and Social Psychology*, *62*, 893–912.
- 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.
- Bowlby, J. (1969). *Attachment (Attachment and loss, Vol. 1)*. New York: Basic Books.
- Bowlby, J. (1973). *Separation: Anxiety and anger (Attachment and loss, Vol. 2)*. New York: Basic Books.
- 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.
- Brendl, C. M., Higgins, E. T., & Lemm, K. M. (1995). Sensitivity to varying gains and losses: The role of self-discrepancies and event framing. *Journal of Personality and Social Psychology*, 69, 1028–1051.
- Bruner, J. S., Goodnow, J. J., & Austin, G. A. (1956). *A study of thinking*. New York: Wiley.
- Buss, D. (1996). The evolutionary psychology of human social strategies. In E. T. Higgins & A. W. Kruglanski (Eds.), *Social psychology: Handbook of basic principles* (pp. 3–38). New York: Guilford.
- Carver, C. S., & Scheier, M. F. (1981). *Attention and self-regulation: A control-theory approach to human behavior*. New York: Springer-Verlag.
- 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, Volume 2* (pp. 3–52). New York: Guilford.
- 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).
- Colby, K. M. (1968). A programmable theory of cognition and affect in individual personal belief systems. In R. P. Abelson, E. Aronson, W. J. McGuire, T. M. Newcomb, M. J. Rosenberg, & P. H. Tannenbaum (Eds.), *Theories of cognitive consistency: A source book* (pp. 520–525). Chicago: Rand McNally.
- Cooley, C. H. (1964). *Human nature and the social order*. New York: Schocken Books. (Original work published 1902.)
- 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.
- Durkheim, E. (1951). *Suicide: A study in sociology*. New York: The Free Press.
- Duval, S., & Wicklund, R. A. (1972). *A theory of objective self-awareness*. New York: Academic Press.
- Erikson, E. H. (1963). *Childhood and society* (Rev. ed. Orig. ed. 1950). New York: W. W. Norton & Co.
- Estes, W. K. (1944). An experimental study of punishment. *Psychological Monographs*, 57, No. 263.
- 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.
- 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.
- Fazio, R. H., Sanbonmatsu, D. M., Powell, M. C., & Kardes, F. R. (1986). On the automatic activation of attitudes. *Journal of Personality and Social Psychology*, 50, 229–238.
- Feather, N. T. (1982). Actions in relation to expected consequences: An overview of a research program. In N. T. Feather (Ed.), *Expectations and actions: Expectancy-value models in psychology* (pp. 53–95). Hillsdale, NJ: Erlbaum.

- Festinger, L. (1942). A theoretical interpretation of shifts in level of aspiration. *Psychological Review*, *49*, 235–250.
- Freud, S. (1961). The ego and the id. In J. Strachey (Ed. and Trans.), *Standard edition of the complete psychological works of Sigmund Freud* (Vol. 19, pp. 3–66). London: Hogarth Press. (Orig. work published 1923.)
- 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.
- Gollwitzer, P. M., and Bargh, J. A. (Eds.). (1996). *The psychology of action: Linking cognition and motivation to behavior*. New York: Guilford.
- Gould, R. (1939). An experimental analysis of “level of aspiration.” *Genetic Psychology Monographs*, *21*, 3–115.
- Gray, J. A. (1982). *The neuropsychology of anxiety: An enquiry into the functions of the septo-hippocampal system*. New York: Oxford University Press.
- Higgins, E. T. (1987). Self-discrepancy: A theory relating self and affect. *Psychological Review*, *94*, 319–340.
- Higgins, E. T. (1989a). 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. (1989b). Continuities and discontinuities in self-regulatory and self-evaluative processes: A developmental theory relating self and affect. *Journal of Personality*, *57*, 407–444.
- 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: Guilford.
- 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., Roney, C., 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.
- 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.
- 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.
- Hoffman, M. L. (1986). Affect, cognition, and motivation. In R. M. Sorrentino & E. T. Higgins (Eds.), *Handbook of motivation and cognition: Foundations of social behavior* (Vol. 1, pp. 244–280). New York: Guilford.
- Horney, K. (1939). *New ways in psychoanalysis*. New York: W. W. Norton.
- Horney, K. (1950). *Neurosis and human growth*. New York: W. W. Norton.
- Houston, D. A. (1990). Empathy and the self: Cognitive and emotional influences on the evaluation of negative affect in others. *Journal of Personality and Social Psychology*, *59*, 859–868.
- Hull, C. L. (1952). *A behavior system: An introduction to behavior theory concerning the individual organism*. New Haven: Yale University Press.

- James, W. (1948). *Psychology*. New York: The World Publishing Company. (Orig. publication, 1890.)
- Kelly, G. A. (1955). *The psychology of personal constructs*. New York: W. W. Norton.
- Kemper, T. D. (1978). *A social interactional theory of emotions*. New York: Wiley.
- Konorski, J. (1967). *Integrative activity of the brain: An interdisciplinary approach*. Chicago: University of Chicago Press.
- Lang, P. J. (1995). The emotion probe: Studies of motivation and attention. *American Psychologist*, *50*, 372–385.
- Lang, P. J., Bradley, M. M., & Cuthbert, B. N. (1990). Emotion, attention, and the startle reflex. *Psychological Review*, *97*, 377–395.
- Lazarus, A. A. (1968). Learning theory and the treatment of depression. *Behavior Research and Therapy*, *6*, 83–89.
- Lewin, K. (1935). *A dynamic theory of personality*. New York: McGraw Hill.
- Lewin, K. (1951). *Field theory in social science*. New York: Harper.
- Lewin, K., Dembo, T., Festinger, L., & Sears, P. S. (1944). Level of aspiration. In J. McHunt (Ed.), *Personality and the behavior disorders* (Vol. 1, pp. 333–378). New York: Ronald Press.
- Lewis, H. B. (1979). Shame in depression and hysteria. In C.E. Izard (Ed.), *Emotions in personality and psychopathology* (pp. 371–396). New York: Plenum.
- Locke, E. A., & Latham, G. P. (1990). *A theory of goal setting and task performance*. Englewood Cliffs, NJ: Prentice-Hall.
- Mandler, G. (1975). *Mind and emotion*. New York: Wiley.
- McClelland, D. C., Atkinson, J. W., Clark, R. A., & Lowell, E. L. (1953). *The achievement motive*. New York: Appleton-Century-Crofts.
- Mead, G. H. (1934). *Mind, self, and society*. Chicago: University of Chicago Press.
- Mikulincer, M., Kedem, P., & Paz, D. (1990). The impact of trait anxiety and situational stress on the categorization of natural objects. *Anxiety Research*, *2*, 85–101.
- Miller, G. A., Galanter, E., & Pribram, K. H. (1960). *Plans and the structure of behavior*. New York: Holt, Rinehart, & Winston.
- Miller, N. E. (1944). Experimental studies of conflict. In J. McV. Hunt (Ed.), *Personality and the behavior disorders* (Vol. 1, pp. 431–465). New York: Ronald Press.
- Moretti, M. M., & Higgins, E. T. (1990). Relating self-discrepancy to self-esteem: The contribution of discrepancy beyond actual-self ratings. *Journal of Experimental Social Psychology*, *26*, 108–123.
- Mowrer, O. H. (1960). *Learning theory and behavior*. New York: Wiley.
- Pervin, L. A. (Ed.). (1989). *Goal concepts in personality and social psychology*. Hillsdale, NJ: Erlbaum.
- Piers, G., & Singer, M. B. (1971). *Shame and guilt*. New York: W. W. Norton.
- Powers, W. T. (1973). *Behavior: The control of perception*. Chicago: Aldine.
- Rogers, C. R. (1961). *On becoming a person*. Boston: Houghton Mifflin Company.
- Roney, C. J. R., Higgins, E. T., & Shah, J. (1995). Goals and framing: How outcome focus influences motivation and emotion. *Personality and Social Psychology Bulletin*, *21*, 1151–1160.
- Roseman, I. J. (1984). Cognitive determinants of emotion: A structural theory. *Review of Personality and Social Psychology*, *5*, 11–36.
- Roseman, I. J., Spindel, M. S., & Jose, P. E. (1990). Appraisals of emotion-eliciting events: Testing a theory of discrete emotions. *Journal of Personality and Social Psychology*, *59*, 899–915.
- Rotter, J. B. (1942). Level of aspiration as a method of studying personality: 1. A critical review of methodology. *Psychological Review*, *49*, 463–474.

- Rotter, J. B. (1982). Some implications of a social learning theory for the practice of psychotherapy. In J. B. Rotter (Ed.), *The development and applications of social learning theory* (pp. 237–262). New York: CBS Educational and Professional Publishing.
- Ruebush, B. K. (1960). Interfering and facilitating effects of test anxiety. *Journal of Abnormal and Social Psychology*, *60*, 205–212.
- Safer, D., & Higgins, E. T. (1997). *Preferences for luxurious or reliable products: Promotion and prevention focus as moderator*. Unpublished manuscript, Columbia University, New York.
- Schafer, R. (1967). Ideals, the ego ideal, and the ideal self. In R. R. Holt (Ed.), *Motives and thought: Psychoanalytic essays in honor of David Rapaport*. *Psychological Issues*, *5* (2–3), 131–174.
- Shah, J., & Higgins, E. T. (1998). *Emotional evaluations of self and other attitude objects: Distinct sensitivities from regulatory focus*. Unpublished manuscript, Columbia University, New York.
- Shah, J., & Higgins, E. T. (in press). Expectancy X value effects: Regulatory focus as determinant of magnitude and direction. *Journal of Personality and Social Psychology*, *73*, 447–458.
- Shah, J., Higgins, E. T., & Friedman, R. (in press). Performance incentives and means: How regulatory focus influences goal attainment. *Journal of Personality and Social Psychology*.
- Skinner, B. F. (1953). *Science and human behavior*. New York: Macmillan.
- Strull, T. K., & Wyer, R. S. (1986). The role of chronic and temporary goals in social information processing. In R. M. Sorrentino & E. T. Higgins (Eds.), *Handbook of motivation and cognition: Foundations of social behavior* (Vol. 1, pp. 503–549). New York: Guilford.
- 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.
- Stepper, S., Strack F., & Higgins, E. T. (1997). *The memory system: A self-regulatory perspective*. Unpublished manuscript, Wurzburg University.
- 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. (1990). Self-guides and emotionally significant childhood memories: A study of retrieval efficiency and incidental negative emotional content. *Journal of Personality and Social Psychology*, *59*, 869–880.
- 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.
- Strauman, T. J., & Higgins, E. T. (1988). Self-discrepancies as predictors of vulnerability to distinct syndromes of chronic emotional distress. *Journal of Personality*, *56*, 685–707.
- Sullivan, H. S. (1953). *The collected works of Harry Stack Sullivan (Vol. 1): The interpersonal theory of psychiatry*. Edited by H. S. Perry & M. L. Gawel. New York: W. W. Norton.
- Tanner, W. P., Jr., & Swets, J. A. (1954). A decision-making theory of visual detection. *Psychological Review*, *61*, 401–409.
- Thorndike, E. L. (1935). *The psychology of wants, interests, and attitudes*. New York: Appleton-Century-Crofts.
- Tolman, E. C. (1955). Principles of performance. *Psychological Review*, *62*, 315–326.
- Trope, Y., & Liberman, A. (1996). Social hypothesis testing: Cognitive and motivational mechanisms. In E. T. Higgins & A. W. Kruglanski (Eds.), *Social psychology: Handbook of basic principles* (pp. 239–270). New York: Guilford.
- Vroom, V. H. (1964). *Work and motivation*. New York: Wiley.
- Weiner, B. (1982). The emotional consequences of causal attributions. In M. S. Clark & S. T. Fiske (Eds.), *Affect and cognition* (pp. 185–209). Hillsdale, NJ: Erlbaum.

- Weiner, B. (1986). Attribution, emotion, and action. In R. M. Sorrentino & E. T. Higgins (Eds.), *Handbook of motivation and cognition: Foundations of social behavior* (Vol. 1, pp. 281–312). New York: Guilford.
- Wiener, N. (1948). *Cybernetics: Control and communication in the animal and the machine*. Cambridge, MA: M. I.T. Press.
- Wierzbicka, A. (1972). *Semantic primitives*. Frankfurt: Athenäum.