Beyond Pleasure and Pain

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People approach pleasure and avoid pain. To discover the true nature of approach–avoidance motivation, psychologists need to move beyond this hedonic principle to the principles that underlie the different ways that it operates. One such principle is regulatory focus, *which distinguishes self-regulation with a* promotion focus *(accomplishments and aspirations) from self-regulation with a* prevention focus *(safety and responsibilities). This principle is used to reconsider the fundamental nature of approach–avoidance, expectancy–value relations, and emotional and evaluative sensitivities. Both types of regulatory focus are applied to phenonomena that have been treated in terms of either promotion (e.g., well-being) or prevention (e.g., cognitive dissonance). Then, regulatory focus is distinguished from* regulatory anticipation *and* regulatory reference, *2 other principles underlying the different ways that people approach pleasure and avoid pain.*

It seems that our entire psychical activity is bent upon *procuring pleasure* and *avoiding pain,* that it is automatically regulated by the PLEASURE-PRINCIPLE. (Freud, 1920/1952, p. 365)

People are motivated to approach pleasure and avoid pain. From the ancient Greeks, through 17th- and 18th-century British philosophers, to 20th-century psychologists, this hedonic or pleasure principle has dominated scholars' understanding of people's motivation. It is the basic motivational assumption of theories across all areas of psychology, including theories of emotion in psychobiology (e.g., Gray, 1982), conditioning in animal learning (e.g., Mowrer, 1960; Thorndike, 1935), decision making in cognitive and organizational psychology (e.g., Dutton & Jackson, 1987; Edwards, 1955; Kahneman & Tversky, 1979), consistency in social psychology (e.g., Festinger, 1957; Heider, 1958), and achievement motivation in personality (e.g., Atkinson, 1964). Even when Freud (1920/1952) talked about the ego becoming controlled by the reality principle, and in this sense developing "beyond the pleasure principle," he made it clear that the reality principle "at bottom also seeks pleasure—although a delayed and diminished pleasure" (p. 365). Environmental demands simply modify the pleasure principle such that avoiding pain becomes almost equal in importance to gaining pleasure. Thus, Freud's proposal to move beyond the pleasure principle did not move beyond the hedonic principle of seeking pleasure and avoiding pain.

The problem with the hedonic principle is not that it is wrong but that psychologists have relied on it too heavily as an explanation for motivation. After many centuries, it continues to be the dominant way to conceptualize approach versus avoidance. This dominance has taken attention away from other approach–avoidance principles. Is people's entire psychical activity controlled by the hedonic principle, as Freud (1920/1952) wondered, or might there be other self-regulatory principles that underlie both its operation and other psychical activities? If there are, then psychologists' understanding of the hedonic principle itself would be increased by understanding more about these other principles. Moreover, these other ways of conceptualizing approach versus avoidance could have implications beyond the hedonic principle. It's time for the study of motivation to move beyond the simple assertion of the hedonic principle that people approach pleasure and avoid pain. It's time to examine how people approach pleasure and avoid pain in substantially different strategic ways that have major consequences. It's time to move beyond the hedonic principle by studying the approach–avoidance principles that underlie it and have motivational significance in their own right.

This article begins by introducing the concept of *regulatory focus,* a principle that underlies the hedonic principle but differs radically in its motivational consequences. I describe how viewing motivation from the perspective of regulatory focus sheds light on the fundamental nature of approach–avoidance, expectancy–value relations, and emotional and evaluative sensitivities. I discuss how relying on the hedonic principle alone

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constrains and limits research and theory development, and I provide examples of the potential benefits of considering both promotion and prevention when studying phenomena that have been considered mainly in terms of either promotion (e.g., well-being) or prevention (e.g., cognitive dissonance). I then distinguish regulatory focus from regulatory anticipation and regulatory reference, two other principles underlying how people approach pleasure and avoid pain. I briefly consider how a deeper understanding of these principles, alone and in combination with regulatory focus, might increase psychologists' understanding of approach–avoidance motivation still further beyond the hedonic principle.

Regulatory Focus as a Motivational Principle

The notion that people are motivated to approach pleasure and avoid pain is well accepted, but what exactly does this entail? The hedonic principle is often discussed as if it were unitary. There is more than one account of this principle in the psychological literature, however. By considering these different accounts, it is possible to identify distinct principles that underlie hedonic self-regulation.

One of the earliest uses of the hedonic principle was as a lawful description of orderly event patterns. Careful observations indicated that when a situated behavior produced pleasure it was more likely to be repeated in that situation, whereas when a behavior produced pain it was less likely to be repeated in that situation. These observed events led to summary statements like "pleasure stamps in" and "pain stamps out," as Thorndike (1911) did in his law of effect. This postulated "hedonism of the past," whether confirmed as a law or not, provided a description of events rather than an understanding of underlying processes. Thorndike (1935) later dropped the pain-stamps-out notion, leaving just the pleasure-stamps-in description of how situated behaviors are strengthened. Around the same time, Skinner (1938) proposed the law that the occurrence of operant behaviors increases when they are followed by a reinforcer. This "pleasure principle" also basically describes a pattern of observed events.

There are other accounts of the hedonic principle that provide more than descriptions of observed-event patterns. These other accounts describe specific kinds of approach and avoidance processes that underlie the operation of the hedonic principle. I begin this article by discussing the new concept of regulatory focus as one such approach–avoidance principle. Later, I discuss the concepts of regulatory anticipation and regulatory reference, which have a longer history in psychology as approach–avoidance principles. Regulatory focus receives the most attention in this article because its motivational consequences reveal most clearly why it is necessary to move beyond the hedonic principle in order to discover the true nature of approach–avoidance motivation.

My discussion of regulatory focus concentrates on self-regulation toward desired end-states because this is the kind of self-regulation that has been emphasized in the literature (see, e.g., Carver & Scheier, 1981, 1990; Gollwitzer & Bargh, 1996; G. A. Miller, Galanter, & Pribram, 1960; Pervin, 1989; von Bertalanffy, 1968; cf. Elliot & Church, 1997; Elliot & Harackiewicz, 1996). The critical characteristic of such self-regulation is its *approach motivation,* the attempt to reduce discrepancies between current states and desired end-states. Although animal learning–biological models (e.g., Gray, 1982; Hull, 1952; Konorski, 1967; Lang, 1995; N. E. Miller, 1944; Mowrer, 1960), cybernetic-control models (e.g., Carver & Scheier, 1990; Powers, 1973), and dynamic models (e.g., Atkinson, 1964; Lewin, 1935; McClelland, Atkinson, Clark, & Lowell, 1953) all distinguish approaching desired end-states from avoiding undesired end-states, they do not distinguish between different ways of approaching desired end-states. They also do not identify different types of desired end-states that relate to different means of approach. Indeed, influential models such as that proposed by Gray explicitly treat approaching "reward" and approaching "nonpunishment" as equivalent. In contrast, regulatory focus proposes that there are different ways of approaching different types of desired end-states.

The theory of self-regulatory focus begins by assuming that the hedonic principle should operate differently when serving fundamentally different needs, such as the distinct survival needs of nurturance (e.g., nourishment) and security (e.g., protection). Human survival requires adaptation to the surrounding environment, especially the social environment (see Buss, 1996). To obtain the nurturance and security that children need to survive, children must establish and maintain relationships with caretakers who provide them with nurturance and security by supporting, encouraging, protecting, and defending them (see Bowlby, 1969, 1973). To make these relationships work, children must learn how their appearance and behaviors influence caretakers' responses to them (see Bowlby, 1969; Cooley, 1902/1964; Mead, 1934; Sullivan, 1953). As the hedonic principle suggests, children must learn how to behave in order to approach pleasure and avoid pain. But what is learned about regulating pleasure and pain can be different for nurturance and security needs. Regulatory-focus theory proposes that nurturance-related regulation and security-related regulation differ in regulatory focus. Nurturance-related regulation involves a promotion focus, whereas security-related regulation involves a prevention focus.

In earlier articles on self-discrepancy theory (e.g., Higgins, 1987, 1989a), I described how certain modes of caretaker–child interaction increase the likelihood that children will acquire strong desired end-states. These desired end-states represent either their own or significant others' hopes, wishes, and aspirations for them (strong ideals) or their own or significant others' beliefs about their duties, obligations, and responsibilities (strong oughts). Regulatory-focus theory proposes that self-regulation in relation to strong ideals versus strong oughts differs in regulatory focus. Ideal self-regulation involves a promotion focus, whereas ought self-regulation in-

volves a prevention focus. To illustrate the difference between these two types of regulatory focus, let us briefly consider how children's experiences of pleasure and pain and what they learn about self-regulation vary when their interactions with caretakers involve a promotion focus versus a prevention focus.

Consider first caretaker–child interactions that involve a promotion focus. The child experiences the pleasure of the presence of positive outcomes when caretakers, for example, hug and kiss the child for behaving in a desired manner, encourage the child to overcome difficulties, or set up opportunities for the child to engage in rewarding activities. The child experiences the pain of the absence of positive outcomes when caretakers, for example, end a meal when the child throws food, take away a toy when the child refuses to share it, stop a story when the child is not paying attention, or act disappointed when the child fails to fulfill their hopes for the child. Pleasure and pain from these interactions are experienced as the presence and the absence of positive outcomes, respectively. In both cases, the caretakers' message to the child is that what matters is attaining accomplishments or fulfilling hopes and aspirations, and it is communicated in reference to a state of the child that does or does not attain the desired end-state—either "this is what I would ideally like you to do" or "this is not what I would ideally like you to do." The regulatory focus is one of promotion—a concern with advancement, growth, and accomplishment.

Consider next caretaker–child interactions that involve a prevention focus. The child experiences the pleasure of the absence of negative outcomes when caretakers, for example, childproof the house, train the child to be alert to potential dangers, or teach the child to "mind your manners." The child experiences the pain of the presence of negative outcomes when caretakers, for example, behave roughly with the child to get his or her attention, yell at the child when he or she doesn't listen, criticize the child for making a mistake, or punish the child for being irresponsible. Pleasure and pain from these interactions are experienced as the absence and the presence of negative outcomes, respectively. In both cases, the caretakers' message to the child is that what matters is insuring safety, being responsible, and meeting obligations, and it is communicated in reference to a state of the child that does or does not attain the desired end-state—either "this is what I believe you ought to do" or "this is not what I believe you ought to do." The regulatory focus is one of prevention—a concern with protection, safety, and responsibility.

These socialization differences illustrate how regulatory focus distinguishes between different kinds of self-regulation in relation to desired end-states. Children learn from interactions with their caretakers to regulate themselves in relation to promotion-focus ideals or in relation to prevention-focus oughts (see Higgins & Loeb, in press). In later life phases, these significant others could be friends, spouses, coworkers, employers, or other persons rather than caretakers. More generally, regulatory-focus theory distinguishes between the following two kinds of desired end-states: (a) aspirations and accomplishments (promotion focus) and (b) responsibilities and safety (prevention focus).

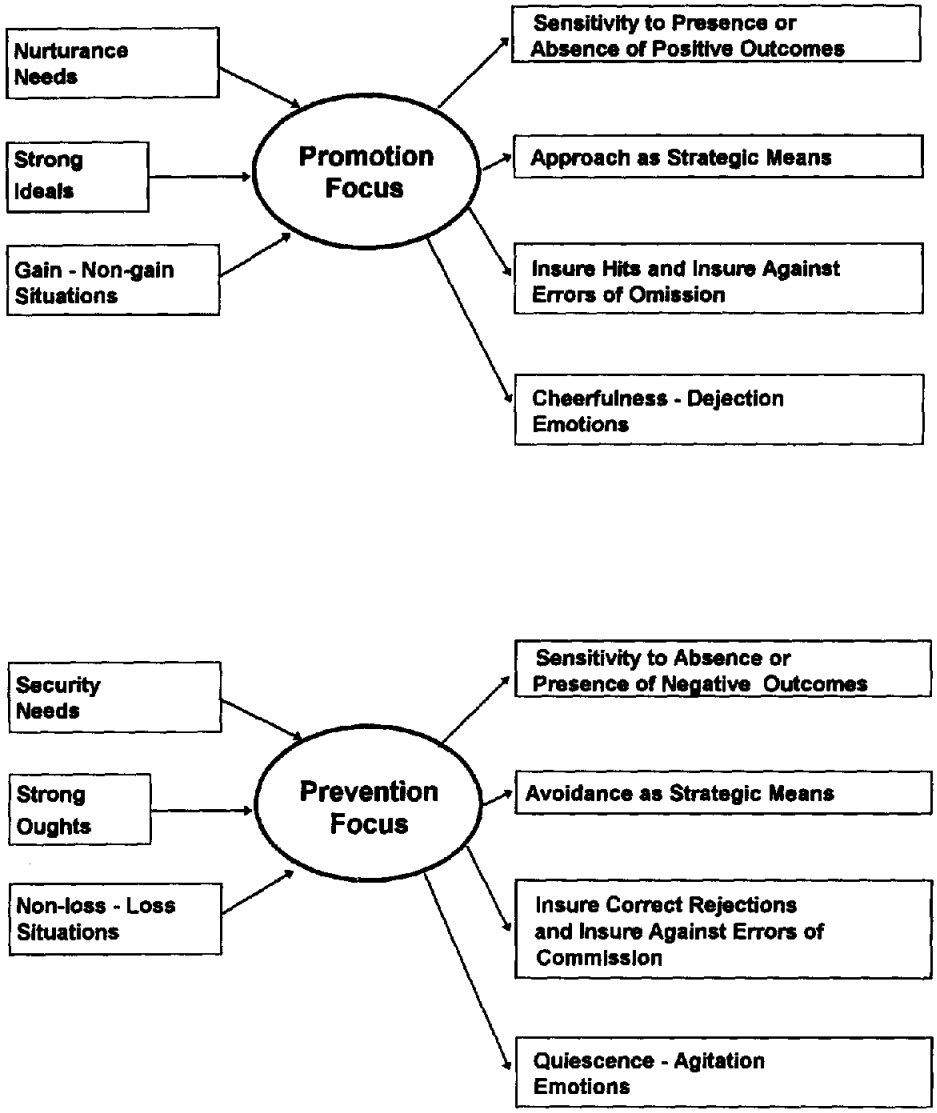
Momentary situations are also capable of temporarily inducing either a promotion focus or a prevention focus. Just as the responses of caretakers to their children's actions communicate to the children about how to attain desired end-states, feedback from a boss to an employee or from a teacher to a student is a situation that can communicate gain–nongain information (promotion-related outcomes) or nonloss–loss information (prevention-related outcomes). Task instructions that present task contingency or "if–then" rules concerning which actions produce which consequences also can communicate either gain–nongain (promotion) or nonloss–loss (prevention) information. Thus, the concept of regulatory focus is broader than just socialization of strong promotion-focus ideals or prevention-focus oughts. Regulatory focus also can be induced temporarily in momentary situations.

People are motivated to approach desired end-states, which could be either promotion-focus aspirations and accomplishments or prevention-focus responsibilities and safety. But within this general approach toward desired end-states, regulatory focus can induce either approach or avoidance strategic inclinations. Because a promotion focus involves a sensitivity to positive outcomes (their presence and absence), an inclination to approach matches to desired end-states is the natural strategy for promotion self-regulation. In contrast, because a prevention focus involves a sensitivity to negative outcomes (their absence and presence), an inclination to avoid mismatches to desired end-states is the natural strategy for prevention self-regulation (see Higgins, Roney, Crowe, & Hymes, 1994).

Figure 1 summarizes the different sets of psychological variables discussed thus far that have distinct relations to promotion focus and prevention focus (as well as some variables to be discussed later). On the input side (the left side of Figure 1), nurturance needs, strong ideals, and situations involving gain–nongain induce a promotion focus, whereas security needs, strong oughts, and situations involving nonloss–loss induce a prevention focus. On the output side (the right side of Figure 1), a promotion focus yields sensitivity to the presence or absence of positive outcomes and approach as strategic means, whereas a prevention focus yields sensitivity to the absence or presence of negative outcomes and avoidance as strategic means.

Regulatory focus is concerned with how people approach pleasure and avoid pain in different ways. It implies that differences in performance, emotions, decision making, and so on could occur as a function of regulatory focus independent of the hedonic principle per se. It even implies that some phenomena traditionally interpreted in hedonic terms might be reconceptualized in terms of regulatory focus. These implications are considered next.

Figure 1
Psychological Variables With Distinct Relations to Promotion Focus and Prevention Focus



When the Hedonic Principle Is Not Enough

This section reviews research on regulatory focus that examines a variety of psychological phenomena traditionally treated in hedonic terms. I begin with the phenomena of approach and avoidance that are central to the hedonic principle. Evidence is presented that promotion focus and prevention focus involve distinct approach–avoidance strategies, and these different ways of regulating pleasure and pain are shown to have important motivational consequences in their own right. Next, research on Expectancy × Value effects is described that has found different effects for promotion focus and prevention focus that cannot be explained in simple hedonic terms. The role of regulatory focus in emotional and evaluative sensitivities is then considered. Evidence is presented that people's emotional experiences of the objects and events in their lives involve different kinds of pleasure and different kinds of pain depending on their regulatory focus, a variability not covered by the hedonic principle.

Approach and Avoidance

The hedonic principle asserts that people approach pleasure and avoid pain. It is silent, however, on how people do this. But how people approach pleasure and avoid pain, what strategies they use, has important motivational

consequences. This section reviews some of these consequences.

Approaching matches versus avoiding mismatches as strategic means. Individuals can increase the likelihood that they will attain a desired end-state (i.e., reduce discrepancies) by either approaching matches or avoiding mismatches to that end-state. Higgins et al. (1994) tested the prediction that a strategic inclination to approach matches is more likely for promotion-focus regulation whereas a strategic inclination to avoid mismatches is more likely for prevention-focus regulation.

In one study (Higgins et al., 1994), undergraduate participants were asked to report on either how their hopes and goals had changed over time (priming promotion-focus ideals) or how their sense of duty and obligation had changed over time (priming prevention-focus oughts). A free-recall technique was used to reveal strategic inclinations (see also Higgins & Tykocinski, 1992). The participants read about several episodes that occurred over a few days in the life of another student. In each of the episodes, the target was trying to experience a desired end-state and used either the strategy of approaching a match or the strategy of avoiding a mismatch, as in the following examples: (a) "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 (b) "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 inducing either a promotion focus or a prevention focus (operationalized by priming either ideals or oughts, respectively) would increase participants' inclinations for different regulatory strategies, which would be revealed by their recalling better those episodes that exemplified their strategic inclination. Consistent with this prediction, the participants remembered better the episodes exemplifying approaching a match to a desired end-state than those exemplifying avoiding a mismatch when a promotion focus versus a prevention focus was induced, whereas the reverse was true when a prevention focus versus a promotion focus was induced.

Higgins et al. (1994) also examined the possibility that individuals with chronic promotion focus versus prevention focus would use different strategies for friendship. An initial phase of the study elicited undergraduates' strategies for friendship and identified both tactics reflecting a strategy of approaching matches, such as "be supportive to your friends," and tactics reflecting a strategy of avoiding mismatches, such as "stay in touch and don't lose contact with friends." In the main phase of the study, participants were selected on the basis of their responses to the Selves Questionnaire. This questionnaire asks the respondent to list attributes for each of a number of different self-states, including the respondent's actual self and his or her ideals and oughts from different standpoints. It is administered in two sections, the first involving the respondent's own standpoint and the second involving the standpoints of the respondent's significant others (e.g., mother, father, best friend). The magnitude of self-discrepancy between the actual self and an end-state is calculated by summing the total number of mismatches and subtracting the total number of matches. The questionnaire responses were used to select participants with promotion-focus concerns (operationalized as participants with predominantly ideal discrepancies) and participants with prevention-focus concerns (operationalized as participants with predominantly ought discrepancies). The study found that, as predicted, friendship tactics reflecting a strategy of approaching matches were selected more by individuals with promotion-focus concerns whereas friendship tactics reflecting a strategy of avoiding mismatches were selected more by individuals with prevention-focus concerns.

The hedonic principle is totally silent about differences in strategic inclinations. The results of these studies indicate that it is important to distinguish between approach and avoidance strategies of attaining desired end-states because these strategies underlie what people consider significant in their lives. If so, then these different strategic inclinations also should influence the motivational significance of different incentives and performance means. This possibility is considered next.

Approach–avoidance and strategic compatibility. The literature reports inconsistent effects of incentives on performance (for a review, see Locke & Latham, 1990). One determinant of the perceived value of an incentive is its relevance to goal attainment (for a review, see Brendl & Higgins, 1996). Individuals with strong promotion goals are strategically inclined to approach matches to the goals. An incentive that is compatible with this strategic inclination should be perceived as more goal-relevant than one that is not. For individuals with strong prevention goals, however, an incentive that is compatible with the strategic inclination to avoid mismatches to the goals should be perceived as more goal-relevant than one that is not. Shah, Higgins, and Friedman (in press) tested this hypothesis.

In Shah et al.'s (in press) study, the participants performed an anagrams task and were given the goal of identifying 90% of the possible words. The promotion framed condition emphasized the strategy of approaching a match to the goal by telling participants that they would earn an extra dollar (from $4 to $5) by finding 90% or more of the words. In contrast, the prevention framed condition emphasized the strategy of avoiding a mismatch to the goal by telling participants that they would avoid losing a dollar (keep their $5) by not missing more than 10% of the words. Shah et al. measured participants' strength of promotion focus and strength of prevention focus (operationalized in terms of the accessibility of their ideals and oughts, respectively). Consistent with previous work on attitude accessibility (see Bassili, 1995, 1996; Fazio, 1986, 1995), the accessibility of ideals and oughts was measured through participants' response la-

tencies when answering questions on the computer about their ideals and oughts.

The prediction was that participants with a strong regulatory focus would perform better on the anagrams task when the strategic framing of the incentive was compatible with their chronic focus. This prediction was confirmed. As individuals' strength of promotion focus increased, performance was better with the framed incentive of approaching a match than avoiding a mismatch, and as individuals' strength of prevention focus increased, performance was better with the framed incentive of avoiding a mismatch than approaching a match. These results suggest that strategic compatibility between incentives and people's goals increases motivation and performance. What about strategic compatibility between incentives, people's goals, and the strategic means by which the goals are attained? Shah et al. (in press) examined this issue in another study using the same basic paradigm.

Participants varying in promotion and prevention strength performed an anagrams task for a monetary incentive that was framed with either an approaching-a-match promotion focus or an avoiding-a-mismatch prevention focus. The anagrams were the same as those used in the first study but were divided into "red" and "green" subsets. The participants were told that when they found all the possible solutions for an anagram, they would gain a point if it was green and would not lose a point if it was red. Solving green anagrams (approaching a match) was compatible with a strong promotion focus, and solving red anagrams (avoiding a mismatch) was compatible with a strong prevention focus.

Shah et al. (in press) created a single variable representing the difference between participants' standardized ideal strength and standardized ought strength. They performed a median split on this difference variable, thus identifying a predominant ideal-strength group and a predominant ought-strength group. They found, as predicted, that strong promotion-focus individuals (predominant ideal strength) performed better than strong prevention-focus individuals (predominant ought strength) when working on the green anagrams in the promotion framing condition whereas strong prevention-focus individuals performed better than strong promotion-focus individuals when working on the red anagrams in the prevention framing condition.

These results suggest that motivation and performance are enhanced when the strategic nature of the means for attaining the goal is compatible with performers' regulatory focus while working on the task. Together, the results of both studies suggest that regulatory differences in strategic inclinations influence the impact of other motivational variables (i.e., incentives and means). To understand these effects, it is necessary to go beyond the hedonic principle that people approach desired end-states and recognize that they can do so by either approaching matches (promotion focus) or avoiding mismatches (prevention focus).

But this is not the end of the story. Bruner, Goodnow, and Austin (1956) noted years ago that a strategy "refers to a pattern of decisions in the acquisition, retention, and utilization of information that serves to meet certain objectives, i.e., to insure certain forms of outcome and to insure against certain others" (p. 54). Thus, not only can people strategically approach desired end-states by either approaching matches or avoiding mismatches, but both of these different strategies include tendencies to insure certain forms of outcome and insure against certain others. I now consider what these tendencies might be.

Strategic tendencies to insure certain forms of outcome and insure against certain others. Individuals in a promotion focus, who are strategically inclined to approach matches to desired end-states, should be eager to attain advancement and gains. In contrast, individuals in a prevention focus, who are strategically inclined to avoid mismatches to desired end-states, should be vigilant to insure safety and nonlosses. One would expect this difference in self-regulatory state to be related to differences in strategic tendencies. In signal-detection terms (e.g., Tanner & Swets, 1954; see also Trope & Liberman, 1996), individuals in a state of eagerness from a promotion focus should want, especially, to accomplish *hits* and to avoid errors of omission or *misses* (i.e., a loss of accomplishment). In contrast, individuals in a state of vigilance from a prevention focus should want, especially, to attain *correct rejections* and to avoid errors of commission or *false alarms* (i.e., making a mistake). Therefore, the strategic tendencies in a promotion focus should be to insure hits and insure against errors of omission, whereas in a prevention focus, they should be to insure correct rejections and insure against errors of commission (see Figure 1).

It should be noted that the promotion-focus tendency to insure against errors of omission is in the service of approaching matches and need not involve response suppression. A person in a promotion focus, for example, might persist on a difficult anagram rather than quitting to insure against omitting a possible word. Such persistence approaches a match to the goal of finding all solutions. It also should be noted that the prevention-focus tendency to insure correct rejections is in the service of avoiding mismatches. A person in a prevention focus, for example, might correctly reject a distractor in a recognition memory task by saying, "No, I haven't seen that word before." Such rejection avoids a mismatch to the goal of accuracy.

The difference between a promotion focus and a prevention focus in strategic tendencies has direct implications for the kind of decision making that has been examined in signal-detection tasks. In these tasks, a signal is either presented or not presented, and a respondent says either yes (a signal was detected) or no (no signal was detected). There are, therefore, four possible outcomes for a signal-detection trial: (a) a hit—saying yes when a signal was presented, (b) a miss—saying no when a signal was presented, (c) a false alarm—saying yes when there was no signal, and (d) a correct rejection—

saying no when there was no signal. The strategic tendencies of individuals in a promotion focus are to insure hits and insure against errors of omission. These individuals, then, should want to insure hits (successfully recognizing a true target) and insure against misses (omitting a true target). They should try to recognize as many items as possible, producing an inclination to say yes (a risky bias). Individuals in a prevention focus, in contrast, have strategic tendencies to insure correct rejections and insure against errors of commission and thus should want to insure correct rejections (successfully avoiding a false distractor) and insure against false alarms (failing to avoid a false distractor). They should try not to commit mistakes, producing an inclination to say no (a conservative bias).

A study by Crowe and Higgins (1997) tested these predictions. When the participants arrived for the study, they were told that they first would perform a recognition memory task and then would be assigned a second, final task. A liked and a disliked activity had been selected earlier for each participant to serve as the final task. There were four experimental framing conditions in which participants were told that which of the alternative final tasks they would work on at the end of the session depended on their performance on the initial recognition memory task. The relation between the initial memory task and the final task was described as contingent for everyone, but the framing varied in different conditions as a function of both regulatory focus (promotion vs. prevention) and valence (self-regulation working [pleasure] vs. self-regulation not working [pain]). Valence was included as a variable to test whether regulatory focus influences decision making beyond any simple hedonic effects of pleasure versus pain framing.

The participants were told that first they would be given a word recognition memory task. The instructions then varied across conditions: (a) promotion working—"If you do well on the word recognition memory task, you will get to do the [liked task] instead of the other task"; (b) promotion not working—"If you don't do well on the word recognition memory task, you won't get to do the [liked task] but will have to do the other task instead"; (c) prevention working—"As long as you don't do poorly on the word recognition memory task, you won't have to do the [disliked task] and will do the other task instead"; and (d) prevention not working—"If you do poorly on the word recognition memory task, you will have to do the [disliked task] instead of the other task." Crowe and Higgins (1997) found, as predicted, that participants in the promotion-focus condition had a risky bias of saying yes in the recognition memory task whereas participants in the prevention-focus condition had a conservative bias of saying no. Valence of framing had no effect whatsoever. Thus, regulatory focus had strategic consequences beyond the hedonic principle.

The difference in strategic tendencies between promotion and prevention focus also should produce differences in generating alternatives when problem solving. Some tasks, such as sorting, allow people to produce few or many alternatives without penalty. For example, one could use color as the criterion to sort both fruits and vegetables, or one could use color for vegetables and shape for fruit. The only requirement is that the sorting criterion be consistent across all members within a category. Individuals in a vigilant state from a prevention focus want to avoid errors of commission and thus should be inclined to stick to or repeat a criterion across categories, thereby simplifying the task and reducing the likelihood of making mistakes. In contrast, individuals in an eager state from a promotion focus want to insure against omitting alternatives and thus should use alternative criteria across categories. The other prediction is that when sorting the members of a single category according to some criterion, individuals in a promotion focus should be motivated to generate many alternative subgroups to insure hits and insure against omissions. In contrast, individuals in a prevention focus should be motivated to generate few subgroups to simplify the task and avoid committing mistakes.

Using the same basic framing paradigm as in the recognition memory study, Crowe and Higgins (1997) examined the effects of regulatory focus on participants' sorting of fruits and vegetables. They found, as predicted, that participants in the prevention-focus framing condition were more likely to repeat their sorting criteria across both fruits and vegetables than were participants in the promotion-focus framing condition. They also found that when sorting within a category, prevention-focus participants were more likely than promotion-focus participants to use the most extreme form of simplification in which category members are sorted into just two subgroups, "X" and "not X," in relation to a single alternative (e.g., "green" and "not green" vegetables). In this study as well, the effects of regulatory focus were independent of valence of framing (which itself had no effects).

The regulatory-focus difference in strategic tendencies also should produce differences in responding to difficulties during problem solving. When a task becomes difficult, promotion-focus individuals should be eager to find hits and insure against omitting any possible hits. In contrast, prevention-focus individuals should be vigilant against mistakes and insure against committing the error of producing them. When a task becomes difficult, then, one would expect promotion-focus individuals to persevere and prevention-focus individuals to quit more readily. Crowe and Higgins (1997) tested these predictions with three additional tasks.

One task was to solve anagrams. In this task, success at finding a word is a correct acceptance or hit, whereas failure to find a word is an error of omission. On this task, then, the promotion-focus individuals should be eager to find words (hits) and to avoid omitting any possible words. This should yield high persistence and a strong desire to find words following a failure to find any. In contrast, the prevention-focus individuals should be vigilant against nonwords and want to avoid committing the error of producing them. When individuals are experiencing difficulty, this orientation might motivate them to quit

to avoid explicitly committing an error (see also Roney, Higgins, & Shah, 1995). The two other tasks were an especially difficult hidden figure in an embedded-figures task and a counting-backward task that had a difficult sequence following an easy sequence. As predicted, participants in the promotion-focus framing condition, as compared with those in the prevention-focus framing condition, solved more anagrams after experiencing difficulty on an unsolvable anagram, persisted longer on the especially difficult hidden figure, and performed better on the difficult counting-backward sequence. Once again, these effects of regulatory focus were independent of valence of framing (which itself had no effects).

The results of these studies by Crowe and Higgins (1997) highlight the need to go beyond the simple assertion of the hedonic principle that people approach pleasure and avoid pain. Not only can people generally approach desired end-states using different strategic means, but the promotion strategic inclination to approach matches involves tendencies to both insure hits and insure against errors of omission, and the prevention strategic inclination to avoid mismatches involves tendencies to both insure correct rejections and insure against errors of commission.

The next section considers how regulatory focus also can increase understanding of the nature of classic Expectancy × Value effects in motivation beyond the hedonic principle. I describe how expectancy and value can interact positively or negatively depending on regulatory focus, a finding that the hedonic principle does not predict.

Expectancy × Value Effects

Expectancy–value models of motivation assume not only that expectancy and value have an impact on goal commitment as independent variables but also that they combine multiplicatively (Lewin, Dembo, Festinger, & Sears, 1944; Tolman, 1955; Vroom, 1964; for a review, see Feather, 1982). The multiplicative assumption is that as either expectancy or value increases, the impact of the other variable on commitment increases. For example, it is assumed that the effect on goal commitment of higher likelihood of goal attainment is greater for goals of higher value. This assumption reflects the notion that the goal commitment involves a motivation to maximize the product of value and expectancy, as is evident in a positive interactive effect of value and expectancy. This maximization prediction is compatible with the hedonic or pleasure principle because it suggests that people are motivated to attain as much pleasure as possible.

Despite the almost universal belief in the positive interactive effect of value and expectancy, not all studies have found this effect empirically (see Shah & Higgins, 1997b). Shah and Higgins proposed that differences in the regulatory focus of decision makers might underlie the inconsistent findings in the literature. They suggested that making a decision with a promotion focus is more likely to involve the motivation to maximize the product of value and expectancy. A promotion focus on goals as accomplishments should induce an approach-matches strategic inclination to pursue highly valued goals with the highest expected utility, which maximizes Value × Expectancy. Thus, the positive interactive effect of value and expectancy assumed by classic expectancy–value models should increase as promotion focus increases.

But what about a prevention focus? A prevention focus on goals as security or safety should induce an avoid-mismatches strategic inclination to avoid all unnecessary risks by striving to meet only responsibilities that are clearly necessary. This strategic inclination creates a different interactive relation between value and expectancy. As the value of a prevention goal increases, the goal becomes a necessity, like the moral duties of the Ten Commandments or the safety of one's child. When a goal becomes a necessity, one must do whatever one can to attain it, regardless of the ease or likelihood of goal attainment. That is, expectancy information becomes less relevant as a prevention goal becomes more like a necessity. With prevention goals, motivation would still generally increase when the likelihood of goal attainment is higher, but this increase would be smaller for high-value goals (i.e., necessities) than low-value goals. Thus, the second prediction was that the positive interactive effect of value and expectancy assumed by classic expectancy–value models would not be found as prevention focus increased. Specifically, as prevention focus increases, the interactive effect of value and expectancy should be negative.

These predictions were tested in both performance and decision-making tasks. As in Shah et al.'s (in press) studies, participants' chronic strengths of promotion and prevention focus were operationalized in terms of the accessibility of their ideals and oughts, respectively. The performance study involved solving anagrams. The participants gave subjective estimates of both the value of getting an extra dollar for succeeding at the task and the likelihood that they would succeed. The study found, as predicted, that as participants' promotion strength increased, the interactive effect of value and expectancy on performance was more positive. In contrast, as participants' prevention strength increased, the interactive effect of value and expectancy on performance was more negative.

The decision-making studies (Shah & Higgins, 1997b) involved undergraduates making decisions to take a class in their major or to take an entrance exam for graduate school. One study obtained measures of the participants' subjective estimates of value and expectancy, and other studies experimentally manipulated high and low levels of value and expectancy. One study involved comparing individuals who differed chronically in promotion strength and prevention strength, and other studies situationally induced regulatory focus using a framing procedure that emphasized approaching matches for the promotion focus and avoiding mismatches for the prevention focus. Together, these studies found, as predicted, that the interactive effect of value and expectancy was more positive when promotion focus was

stronger but was more negative when prevention focus was stronger.

In one study (Shah & Higgins, 1997b), for example, participants were asked to evaluate the likelihood that they would take a course in their major. Both the value and the expectancy of doing well in the course were experimentally manipulated. High versus low expectancy of doing well in the course was manipulated by telling participants that 75% versus 25% of previous majors, respectively, received a grade of *B* or higher in the course. High versus low value of doing well in the course was manipulated by telling participants that 95% versus 51% of previous majors, respectively, were accepted into their honor society when they received a grade of *B* or higher in the course. Participants' chronic promotion strength and prevention strength also were measured. The contrast representing the Expectancy × Value effect on the decision to take the course was positive for individuals with a strong promotion focus but was negative for individuals with a strong prevention focus.

Together, the results of these studies demonstrate that even a motivational phenomenon considered to be as universal as the positive Expectancy × Value interaction depends on regulatory focus. Although the fact that a strong promotion focus can increase the maximizing, positive interaction is compatible with the pleasure principle, it is not obvious how this same principle could account for the fact that a strong prevention focus can make the interaction negative. Once again, there is a need to move beyond the hedonic principle to understand such phenomena. This is also true of the emotional and evaluative phenomena considered next.

Emotional and Evaluative Sensitivities

The hedonic principle implies that people experience pleasure when self-regulation works and they experience pain when it doesn't. It is silent, however, about the different kinds of pleasure or pain that people can experience. Why is it that failure makes some people sad and other people nervous? Regulatory focus goes beyond the hedonic principle in accounting for variability in people's emotional experiences, including variability in the quality and the intensity of people's emotions, and in their emotional responses to attitude objects. This section begins by illustrating that when self-regulation doesn't work, people experience different kinds of painful emotions depending on their regulatory focus. Then, evidence is presented for how strength of regulatory focus moderates the intensity of different kinds of pleasant and painful emotions. Finally, studies are reviewed that demonstrate how strength of regulatory focus underlies variability in people's evaluative sensitivities to attitude objects.

Regulatory focus underlying variability in painful emotions from self-discrepancies. A review of the psychological literature (see Higgins, 1987) revealed evidence that people experience dejection-related emotions, such as disappointment, dissatisfaction, or sadness, when they fail to attain their hopes or ideals whereas they experience agitation-related emotions, such as feeling uneasy, threatened, or afraid, when they fail to meet their obligations or responsibilities (e.g., Ausubel, 1955; Durkheim, 1951; Duval & Wicklund, 1972; Erikson, 1963; Freud, 1923/1961; Horney, 1950; James, 1890/1948; Kemper, 1978; Lazarus, 1968; Lewis, 1979; Piers & Singer, 1971; Rogers, 1961; Roseman, 1984; Roseman, Spindel, & Jose, 1990; Stein & Jewett, 1982; Sullivan, 1953; Wierzbicka, 1972). Such evidence suggests that discrepancies from promotion-focus ideals, which represent the absence of positive outcomes, produce different types of pain than discrepancies from prevention-focus oughts, which represent the presence of negative outcomes. This possibility was directly investigated in a series of studies testing self-discrepancy theory (Higgins, 1987). Because these studies have been reviewed elsewhere (see Higgins, 1987, 1989b, in press), only a few illustrative studies are described here.

An early study by Strauman and Higgins (1988) used a latent-variable analysis to test the hypothesis that promotion not working, as reflected in ideal discrepancies, predicts different emotional problems than prevention not working, as reflected in ought discrepancies. One month after filling out the Selves Questionnaire measure of self-discrepancies (see Strauman & Higgins, 1988), undergraduates filled out a battery of depression and social anxiety measures. Consistent with predictions, as the magnitude of participants' actual–ideal discrepancies increased, their suffering from depression symptoms increased, and as the magnitude of their actual–ought discrepancies increased, their suffering from social anxiety symptoms increased. Actual–ideal discrepancies were not related to social anxiety, and actual–ought discrepancies were not related to depression. Subsequent studies with clinically depressed and anxious persons also have generally found that depression is related to greater actual–ideal discrepancies whereas anxiety is related to greater actual–ought discrepancies (e.g., Scott & O'Hara, 1993; Strauman, 1989).

It also should be possible to have momentary effects on dejection and agitation emotions by temporarily increasing the strength of people's promotion-focus ideals or prevention-focus oughts. This hypothesis was tested in a study by Higgins, Bond, Klein, and Strauman (1986, Study 2) that situationally primed ideals and oughts. Undergraduate participants completed the Selves Questionnaire weeks before the experiment. Individuals with either both ideal and ought discrepanices or neither type of discrepancy were recruited for the study. Half of the participants had their ideals primed when they described their own and their parents' hopes and aspirations for them. The other half of the participants had their oughts primed when they described their own and their parents' beliefs about their duties and obligations. This priming had no effect on participants with neither type of discrepancy. But the participants with both types of discrepancy experienced an increase in dejection emotions when ideals were primed and an increase in agitation-related emotions when oughts were primed.

In a replication and extension of this study, Strauman and Higgins (1987) tested whether priming just a single attribute contained in participants' ideals or oughts would produce a dejection-related or agitation-related emotional syndrome, respectively (see also Strauman, 1990). Two types of individuals were selected to study—individuals with predominant actual–ideal discrepancies (i.e., individuals with relatively high actual–ideal discrepancies and relatively low actual–ought discrepancies) and individuals with predominant actual–ought discrepancies. Self-discrepancies were primed by asking each participant to complete the phrase "an X person _____" and selecting as "X" whichever trait represented a self-discrepancy for that participant. For each completed sentence, a participant's total verbalization time and skin-conductance amplitude were recorded. Measures of dejection and agitation emotions also were taken. As predicted, individuals with predominant actual–ideal discrepancies experienced a dejection-related syndrome from the priming (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).

Strength of regulatory focus as a moderator of emotional intensity. Regulatory focus clearly underlies the different kinds of pain that people experience from not attaining their goals. Other studies have shown that regulatory focus also underlies the different kinds of pleasure people experience from attaining their goals (see Higgins, Shah, & Friedman, 1997). Higgins et al. proposed that strength of regulatory focus also might moderate the intensity of people's pleasant and painful emotions. This proposal was consistent with earlier suggestions that goal strength (conceptualized as goal accessibility) might moderate the relation between goal attainment and emotional responses (see Clore, 1994; Frijda, 1996; Frijda, Ortony, Sonnemans, & Clore, 1992) and with evidence that attitude strength (operationalized as attitude accessibility) moderates the relation between attitudes and behavior (Fazio, 1986, 1995).

In a series of correlational studies, Higgins et al. (1997) found that (a) the stronger the promotion focus (operationalized as highly accessible ideals), the stronger were the cheerfulness-related emotions experienced when promotion was working (actual–ideal congruency) and the stronger were the dejection-related emotions experienced when promotion was not working (actual–ideal discrepancy), and (b) the stronger the prevention focus (operationalized as highly accessible oughts), the stronger were the quiescence-related emotions experienced when prevention was working (actual–ought congruency) and the stronger were the agitation-related emotions experienced when prevention was not working (actual–ought discrepancy). These studies demonstrated that chronically strong promotion or prevention focus moderates the intensity of different types of pleasant and painful emotions (see Figure 1).

Higgins et al. (1997) hypothesized that similar effects should be obtained for situational variability in strength of regulatory focus. The task in their next study involved memorizing trigrams. As in Shah et al.'s (in press) studies, a framing paradigm was used to manipulate promotion-focus strength (i.e., emphasizing gains and nongains) and prevention-focus strength (i.e., emphasizing nonlosses and losses) while keeping constant both the criterion and consequences of success on the task. After completing the task, the participants were given false feedback that they had either succeeded or failed. It was predicted that feedback-consistent emotional change (i.e., increasing positive and decreasing negative emotions following success and decreasing positive and increasing negative emotions following failure) would be different in the two framing conditions. The study found, as predicted, that feedback-consistent change on the cheerfulness–dejection dimension was greater for participants in the promotion framing condition than the prevention framing condition whereas feedback-consistent change on the quiescence–agitation dimension was greater for participants in the prevention framing condition than the promotion framing condition (see also Roney et al., 1995).

Taken together, the results of these studies demonstrate how regulatory focus goes beyond the hedonic principle by distinguishing between types of pleasant and painful emotions with respect to both quality and intensity. Regulatory focus also goes beyond the hedonic principle by providing an explanation for the variability in people's evaluative sensitivities to objects and events in the world. This issue is considered next.

Strength of regulatory focus and evaluative sensitivity to attitude objects. From the perspective of the hedonic principle alone, people have pleasant or painful responses to the objects and events in their lives. This simple binary description is captured in social psychology's classic distinction between liked and disliked attitude objects. But just as success and failure can produce different types of pleasure and different types of pain, respectively, so too can attitude objects produce different types of pleasant and painful responses. A liked object, such as a painting, might make one person happy and another person relaxed. A disliked object, such as a traffic jam, might make one person discouraged and another person tense. To capture such differences in emotional evaluations of attitude objects, it is necessary to go beyond the hedonic principle. Regulatory-focus strength is one variable that provides some insight into such differences.

To begin with, it should be noted that the significance of a particular emotional dimension for evaluation, such as the cheerfulness–dejection dimension, is independent of the extent to which pleasant versus painful emotions have been experienced in the past. Two persons with a strong promotion focus, for instance, might differ in their history of performance, with one experiencing

primarily successes and cheerfulness and the other experiencing primarily failures and dejection. Although their specific emotional experiences differ, for both of these persons their evaluative sensitivity is to the cheerfulness–dejection significance of their personal qualities. Similarly, when evaluating other attitude objects, their sensitivity would be to the cheerfulness–dejection significance of an object (e.g., "How happy or sad does this object make me?"). In contrast, persons with a strong prevention focus would be sensitive to the quiescence–agitation significance of their personal qualities or the qualities of other attitude objects.

If one considers a dimension like cheerfulness–dejection as a bipolar construct, then this dimension is one way to construe the world of objects and events (see Kelly, 1955). Indeed, Kelly pointed out that both similarity and contrast are inherent in the same construct. A cheerful response is similar to other cheerful responses and contrasts with dejected responses. A dejected response is similar to other dejected responses and contrasts with cheerful responses. Thus, when objects and events are evaluated in terms of their cheerfulness–dejection significance, both cheerfulness and dejection are relevant to the construal even when the emotional experience is just feeling cheerful or just feeling dejected. Because of this, the cheerfulness–dejection dimension can have special significance for two persons with a strong promotion focus despite their having different histories of feeling cheerful or dejected. Similarly, the quiescence–agitation dimension of appraisal can have special significance for two persons with a strong prevention focus despite their having different histories of feeling quiescent or agitated.

Kelly (1955) also proposed that those ways of construing that are significant for a person increase that person's sensitivity to evaluating the world in relation to the construct. Similarly, Shah and Higgins (1997a) proposed that the more a particular emotional dimension is significant for a person, the more sensitive that person will be to evaluating the world along that dimension. Such sensitivity would be revealed in faster reaction times when reporting emotional experiences along that dimension. They predicted that stronger promotion focus (operationalized as highly accessible ideals) would be related to faster emotional evaluations along the cheerfulness–dejection dimension and stronger prevention focus (operationalized as highly accessible oughts) would be related to faster emotional evaluations along the quiescence–agitation dimension.

These predictions were tested in a series of studies by Shah and Higgins (1997a). The participants in every study made emotional appraisals on cheerfulness-related scales, dejection-related scales, quiescence-related scales, and agitation-related scales. In one set of studies, the participants reported how much they experienced each emotion, either during the study or during the previous week. In another set of studies, the participants emotionally evaluated positive and negative attitude objects that had been used in previous studies (e.g., Bargh, Chaiken, Govender, & Pratto, 1992). In each study, the analyses of reaction times statistically controlled for participants' ratings of the extent to which they experienced each emotion.

The results of these studies (Shah & Higgins, 1997a) strongly supported the predictions. In one study, for example, undergraduate participants were asked to rate how each word describing a positive object (e.g., music) or a negative object (e.g., guns) made them feel. For each participant, half of the positive object words were rated in relation to *happy* or *satisfying* and the other half in relation to *relaxed;* half of the negative object words were rated in relation to *sad* or *depressing* and the other half in relation to *tense* or *agitating*. Across the participants, each object word was rated on each emotional dimension an equal number of times. The study found that stronger promotion focus related to faster evaluations of the object words on the cheerfulness–dejection dimension whereas stronger prevention focus related to faster evaluations of the object words on the quiescence–agitation dimension. As in the other studies, this differential sensitivity (reflected in speed of responding) was independent of magnitude of evaluation (reflected in the extent ratings).

This section has reviewed research on approach and avoidance, Expectancy × Value effects, and emotional experiences and evaluations that was inspired by the concept of regulatory focus. Taken together, this research demonstrates how psychologists' understanding of important phenomena can be enhanced by moving beyond the hedonic principle to consider processes that underlie the different ways that it operates. Thus, even for classic hedonic issues like the nature of approach and avoidance, the hedonic principle is not enough. The next, more speculative section of this article considers the possibility that there also might be cases where the hedonic principle is too much. Two questions are raised in that section. First, has theory development on some classic issues, such as the motivational effects of inconsistency or low self-esteem, been handicapped by limiting psychological concepts to simple pleasure–pain distinctions? Second, might at least some phenomena classically understood in hedonic terms have little to do, in fact, with pleasure and pain at all (or at least much less than commonly assumed)? These phenomena include the psychological effects of positive versus negative emotions and the psychological nature of threat versus opportunity and optimism versus pessimism.

When the Hedonic Principle Is Too Much

A disadvantage of a principle that is intuitively appealing and simple and that promises a wide range of applicability is that it tends to be used to understand phenomena with little questioning of its hidden assumptions. This is certainly true of the hedonic principle. Not only has its application been ubiquitous in psychology and other disciplines, but this has occurred with little consideration for the alternative ways in which it might operate. This is one sense in which the influence of the hedonic princi-

ple on theory development has been too much. To illustrate this point, let us consider what it would mean for studying some classic motivational issues if promotion and prevention were treated as alternative ways in which the hedonic principle operated.

When the Hedonic Principle Hinders Theory Development

It is remarkable how much psychological applications of the hedonic principle have been dominated by a prevention focus. Freud (1920/1952) conceptualized the production of pleasure and the avoidance of pain in terms of the lowering of tension. Conceptualizing pain in terms of tension and pleasure in terms of tension reduction has also been common in classic animal learning models (e.g., Hull, 1943), social psychological models (e.g., Festinger, 1957; Heider, 1958; Lewin, 1951), and personality models (e.g., Atkinson, 1964; Murray, 1938). Even in attachment theory, where Bowlby (1969, 1973) originally recognized security and nurturance as separate survival needs, concepts such as "safe haven," "secure base," and "fear of strangers" have received the most attention, and the classic attachment styles are called "secure," "anxious–avoidant," and "anxious–ambivalent."

Undoubtedly, this pervasive emphasis on prevention has influenced psychologists' observations and understanding of phenomena. Freud (1917/1959), for example, described depression in terms of agitated-related symptoms rather than dejected-related symptoms. Such agitated symptoms would be consistent with the prevention focus of his ought-related theory of depression. Animal learning models have paid much more attention to negative reinforcement (i.e., the prevention pleasure of the absence of negative) than to positive punishment (i.e., the promotion pain of the absence of positive). Is this because negative reinforcement concerns tension reduction and involves a prevention focus, whereas positive punishment does not?

To illustrate this issue more fully, let us consider cognitive consistency models in social psychology as one example of how an emphasis on prevention focus might have constrained what was studied. Both of the most influential cognitive consistency models in social psychology, Festinger's (1957) cognitive dissonance theory and Heider's (1958) balance theory, postulated tension reduction as their underlying motivational principle. Did this prevention focus influence how these theories were developed? Might dissonance theory's prevention focus, for example, have inclined later models to emphasize individuals' feelings of responsibility for the negative consequences of their actions (e.g., Cooper & Fazio, 1984)?

It is possible that the prevention focus of dissonance and balance theory constrained which strategic resolutions to inconsistency received attention. In the classic dissonance paradigm of counterattitudinal advocacy, for example, the two resolutions that are emphasized are people rejecting responsibility for advocating the wrong position (e.g., by deciding they had no choice or derogating the experiment) and correcting what would be an error of commission by expressing a current attitude that is consistent with their advocated position. In contrast to these prevention strategies of weakening dissonant elements, a more promotion resolution would be to strengthen consonant elements, such as finding some positive consequence of one's actions, some silver lining. Similarly, Heider's (1958) resolutions for imbalance involved the prevention strategies of correcting mistaken beliefs and rejecting or denying associations, such as beginning to feel that some act is really not so bad or deciding that someone is not really responsible for his or her act. A more promotion resolution for imbalance, such as when two of one's close friends dislike each other, might be to encourage and support them to get along better.

Concentrating on the hedonic principle rather than on the different ways that it operates is a shortcoming in theory development because alternative conceptualizations are overlooked. It can lead to an overemphasis on the prevention focus to the exclusion of promotion-focus possibilities, as just noted. It also can lead to an overemphasis on the promotion focus to the exclusion of prevention-focus possibilities. As one illustration, let us briefly consider the area of self-esteem. In contrast to the prevention focus of Freud (1917/1959), Rogers (1961) had a promotion focus. His concern with actual–ideal congruencies and discrepancies inspired the next quarter century of investigating the pleasures and pains of high and low self-esteem, respectively. Once again, the field paid little attention to other principles that might underlie how self-esteem operates. In particular, psychologists remained content with conceptualizing self-esteem in terms of promotion focus with little consideration of alternatives.

An obvious alternative would be conceptualizing self-esteem in terms of prevention focus as well. If self-esteem is conceptualized as individuals' self-evaluations that they are failing to meet standards or attain goals that they or their significant others hold for them, then prevention-focus goals and standards are as relevant as promotion-focus goals and standards (see Higgins, 1996). Moreover, low self-esteem should then be predictive of agitation-related problems as well as dejection-related problems. In a similar way, psychologists study job satisfaction, marital satisfaction, life satisfaction, and so on, as if promotion working (satisfied, happy) or not working (dissatisfied, unhappy) is all that is relevant in these areas of life. Surely, prevention working (secure, relaxed) or not working (insecure, worried) is also relevant. After all, when people have problems at work, at home, and in other areas of their lives, they suffer from agitation-related distress as well as dejection-related distress.

Classic theories of cognitive consistency and well-being illustrate how psychologists' ability to address some basic issues has been handicapped by limiting psychological concepts to simple pleasure–pain distinctions. The hedonic principle is also too much when it is applied to phenomena that may have little to do with pleasure

or pain at all. Illustrations of such overapplication are considered next.

When the Hedonic Principle Is Overapplied

Across all areas of psychology, there has been a fascination with the effects of positive and negative emotions. Most of the research questions have involved the simple distinction between the effects of good versus bad feelings. In social and cognitive psychology, for example, there has been an explosion of interest over the last decade in how good versus bad feelings influence cognition (for a recent review, see Schwarz & Clore, 1996). An early instance of this interest is the research on how positive versus negative moods influence memory (see, e.g., Bower, 1981; Isen, 1984). One especially influential conclusion from this research was that positively valenced material is more likely to be remembered in positive moods and negatively valenced material is more likely to be remembered in negative moods (see Schwarz & Clore, 1996). But are pleasure and pain really necessary for such memory effects to occur? Findings from a recent study suggest that they might not be.

Higgins and Tykocinski (1992) selected participants who had either a strong promotion focus (operationalized as predominant actual–ideal discrepancies) or a strong prevention focus (operationalized as predominant actual–ought discrepancies). All of the participants read about events in the life of another person that involved promotion working or not working (e.g., "I've been wanting to see this movie at the 8th Street theater for some time, so this evening I went there straight after school to find out that it's not showing anymore") and prevention working or not working (e.g., "I was stuck in the subway for 35 minutes with at least 15 sweating passengers breathing down my neck"). The study found that events involving promotion were remembered better by promotion-focus participants than prevention-focus participants, but the reverse was true for events involving prevention. Most important, this interaction was independent of participants' premood, postmood, or change in mood. Thus, pleasure or pain experiences during the study were not necessary for memory effects to occur. What influenced memory was the compatibility between participants' chronic regulatory focus and the regulatory focus of the events.

The results of this study (Higgins & Tykocinski, 1992) raise the possibility that previous mood and memory studies might not have depended on experiences of pleasure and pain. When these studies manipulated pleasure and pain with music, movies, gifts, or recollections of past experiences, might they have manipulated more than pleasure and pain? It is likely that regulatory focus was manipulated as well, and it is possible that inducing a promotion or prevention focus is critical for the memory effects to occur. Indeed, inducing a negative prevention focus might facilitate memory for fearful events but not for equally negative sad events, or inducing a promotion focus might facilitate memory for joyful events but not for equally positive relaxing events (see Strauman, 1990). Rather than pleasure or pain being necessary for feelings to influence memory, what might be necessary is compatibility between a person's regulatory focus and the regulatory focus represented in the to-be-remembered events.

There has been a special fascination among psychologists, especially clinicians, with how anxiety influences cognition. One major conclusion is that anxiety has negative effects on creativity. When people experience high (vs. low) anxiety, for example, they produce fewer subgroups in a sorting task, which is said to reflect concrete rather than abstract thinking (e.g., Mikulincer, Kedem, & Paz, 1990). As described earlier, however, Crowe and Higgins (1997) found that individuals with a prevention focus produced fewer subgroups in a sorting task than did individuals with a promotion focus, and this effect was independent of the participants' feelings during the study. Rather than pleasure or pain being necessary for the sorting effects to occur, it was a prevention focus that produced fewer subgroupings. It should be noted in this regard that participants in the high-anxious group of previous studies (whether selected or induced) were likely to have been in a prevention focus.

The threat versus opportunity distinction in organizational psychology might be another case where the hedonic principle has been overapplied. Representing strategic issues as threats versus opportunities has been considered an important variable influencing decision makers' information processing and decisions. As Dutton and Jackson (1987) pointed out, a sense of importance and future is contained in both representations, but what differentiates them is that opportunity involves a positive situation in which gain is likely (and control is high) and threat involves a negative situation in which loss is likely (and control is low). This way of distinguishing between opportunity and threat potentially confounds the hedonic principle and regulatory focus. That is, opportunity is discussed as if it involved promotion working, and threat is discussed as if it involved prevention not working, thus confounding promotion versus prevention and pleasure versus pain.

By separating regulatory focus and the hedonic principle when studying threat versus opportunity, one might discover that there are significant independent effects of regulatory focus on decision makers' information processing and decisions. Indeed, findings of regulatory-focus effects on decision making (e.g., Crowe & Higgins, 1997; Shah & Higgins, 1997b) suggest that this is the case. It is important in this area to distinguish between the opportunity for accomplishment (promotion opportunity) and the opportunity for safety or security (prevention opportunity) and between the threat of nonfulfillment (promotion threat) and the threat of committing mistakes (prevention threat). With such distinctions, it would be possible to examine threat versus opportunity effects independent of the hedonic principle.

As a final example of potential overapplication of the hedonic principle, what exactly is meant by the familiar personality distinction between optimism and pessimism? Among personality psychologists, the dimension

of optimism versus pessimism refers to the extent to which a person has favorable expectancies about attaining desired end-states (see, e.g., Carver, Reynolds, & Scheier, 1994; Norem & Cantor, 1986b; Norem & Illingworth, 1993). From this perspective, the critical difference between optimists and pessimists is that the former experience the pleasure of favorable expectancies whereas the latter experience the pain of unfavorable expectancies. Thus, the hedonic principle is critical to this distinction. Could optimism–pessimism be conceptualized in a manner that does not depend on the hedonic principle?

One possibility is that optimism involves a promotion focus whereas pessimism involves a prevention focus. From this perspective, hedonic experiences per se would no longer be critical to understanding the motivational consequences of optimism or pessimism. Instead, regulatory-focus differences in strategic inclinations would be critical. There is some support for this position in the literature. Both defensive pessimists and depressed pessimists experience the pain of anticipated failure (see Norem & Cantor, 1986b; Norem & Illingworth, 1993). The anxious affect of defensive pessimists suggests that they have a prevention focus. If they do, they should strategically insure against errors of commission. Indeed, the literature reports that defensive pessimists are vigilant in their efforts to avoid contemplated disaster, a strategy that reportedly works for them (see Norem & Cantor, 1986b; Norem & Illingworth, 1993). In contrast, the dejected affect of depressed pessimists suggests that they have a promotion focus. If they do, they should strategically insure against errors of omission. In fact, the strategies of depressive pessimists include attempts to use others to obtain what they are missing, a strategy that reportedly doesn't work for them (see Coyne, Kahn, & Gotlib, 1987; Lewinsohn, 1974). Thus, the fact that defensive pessimists tend to perform well and depressive pessimists tend to perform poorly cannot be explained in terms of the hedonic principle, because both groups experience the pain of anticipating failure. It can be explained, however, in terms of differences in regulatory focus that produce different strategic inclinations that vary in effectiveness.

Beyond the Hedonic Principle to Its Ways of Operating

I began this article by asking whether there are implications of the different ways that hedonic regulation operates that are not captured by the hedonic principle itself. I proposed that it's time to examine principles of approach–avoidance orientation that underlie the hedonic principle and have motivational consequences in their own right. My review of some implications of regulatory focus suggests that it is fruitful to examine the unique consequences of the regulatory principles underlying hedonic regulation. Thus, it would be useful to consider additional principles of approach–avoidance orientation that underlie hedonic regulation, both independently and in combination with regulatory focus. This section considers two such principles—*regulatory anticipation* and *regulatory reference.*

Regulatory Anticipation

Freud (1920/1950) described motivation as a "hedonism of the future." In *Beyond the Pleasure Principle* (Freud, 1920/1950), he postulated that people go beyond total control of the "id" that wants to maximize pleasure with immediate gratification to regulating as well in terms of the "ego" or reality principle that avoids punishments from norm violations. For Freud, then, behavior and other psychical activities were driven by anticipations of pleasure to be approached (wishes) and anticipations of pain to be avoided (fears). Lewin (1935) described how the "prospect" of reward or punishment is involved in children learning to produce or suppress, respectively, certain specific behaviors (see also Rotter, 1954). In the area of animal learning, Mowrer (1960) proposed that the fundamental principle underlying motivated learning was regulatory anticipation, specifically, approaching hoped-for desired end-states and avoiding feared undesired end-states. Atkinson's (1964) personality model of achievement motivation also proposed a basic distinction between self-regulation in relation to "hope of success" versus "fear of failure." Wicker, Wiehe, Hagen, and Brown (1994) extended this notion by suggesting that approaching a goal because one anticipates positive affect from attaining it should be distinguished from approaching a goal because one anticipates negative affect from not attaining it. In cognitive psychology, Kahneman and Tversky's (1979) "prospect theory" distinguishes between mentally considering the possibility of experiencing pleasure (gains) versus the possibility of experiencing pain (losses).

Regulatory anticipation is not only an important principle underlying the operation of hedonic regulation but also one way in which the major psychological variable of expectancy influences human functioning. The variable of expectancy is one of the most important concepts in psychology (see Olson, Roese, & Zanna, 1996). It is a central variable in motivational theories in animal learning (e.g., Hull, 1952; Tolman, 1932), developmental psychology (e.g., Ford, 1987; Piaget, 1970), social psychology (e.g., Feather, 1966; Klinger, 1977; Lewin, 1951; Rosenthal & Jacobson, 1968), personality (e.g., Bandura, 1977a, 1986; Mischel, 1973), clinical psychology (e.g., Kelly, 1955; Norem & Cantor, 1986a; Rotter, 1954; Scheier & Carver, 1992), and other areas. Because regulatory anticipation is a specific case of expectancy functioning, knowing more about the variable of expectancy increases psychologists' understanding of regulatory anticipation. This, in turn, has implications beyond the hedonic principle itself. It is notable in this regard that processes basic to expectancies, such as knowledge accessibility (see Olson et al., 1996) or adaptation (e.g., Helson, 1964; Piaget, 1970), are not themselves hedonic in nature. Moreover, there are consequences of expectancy, such as the emotional effects of disconfirmation

(e.g., Mandler, 1975), that are not implied in the hedonic principle.

One way to move beyond the hedonic principle, then, would be to learn more about the variable of expectancy. This presents a challenge of its own because expectancy itself has been used in more than one way as a motivational variable. Some psychologists use expectancy when studying events or outcomes that vary in their likelihood of occurrence (e.g., Ajzen & Fishbein, 1980). Other psychologists use expectancy when studying performances or goal attainments that vary in difficulty (e.g., Weiner et al., 1971). Still other psychologists use expectancy when studying value, and the claims about expectancy–value relations encompass notions that decreasing expectancy increases value (e.g., Atkinson, 1964), normal expectancy establishes neutral value (e.g., Kahneman & Miller, 1986), and smaller norm discrepancies are pleasant whereas larger ones are painful (e.g., McClelland et al., 1953).

Each of these different perspectives on expectancy tells something about motivation, even though their relation to the hedonic principle is not at all clear. There are other self-regulatory models as well that include expectancy as a variable without linking it to hedonic regulation, such as models concerned with epistemic motivations (e.g., Gardner, Holzman, Klein, Linton, & Spence, 1959; Kruglanski, 1989; Lecky, 1961; Piaget, 1970; Snyder, 1984; Sorrentino & Short, 1986). To understand the motivational significance of expectancy, therefore, it is necessary to move beyond its role in hedonic regulation. In this way, the motivational significance of regulatory anticipation as a principle in its own right will become more evident.

Regulatory Reference

Consider two people who regard being in love as a desired end-state. One of them anticipates the pleasure of being in this state, whereas the other anticipates the pain of never being in this state. Now consider two other people for whom being alone is an undesired end-state. One of them anticipates the pain of forever being in this state, whereas the other anticipates the pleasure of never being in this state. The two who imagine being in love differ in their regulatory anticipation, as do the two who imagine being alone. But what about the difference between these pairs? Each pair has one person anticipating pleasure and another anticipating pain. Thus, the difference between the pairs does not concern anticipation per se. Rather, it concerns the difference between having a desired end-state versus an undesired end-state as the reference point for self-regulation.

This difference in regulatory reference is independent of whether pleasure or pain is anticipated. When people regulate in reference to desired or undesired end-states, they might anticipate pleasant or painful consequences or they might not. When they do anticipate consequences, they could anticipate the pleasure of either successful approach to desired end-states or successful avoidance of undesired end-states, and they could anticipate the pain of either failed approach to desired end-states or failed avoidance of undesired end-states. Regulatory reference and regulatory anticipation, then, are independent principles underlying hedonic regulation.

Distinguishing between self-regulation in relation to positive versus negative reference values also has a long history in psychology. Animal learning–biological models highlight the basic distinction between approaching desired end-states and avoiding undesired end-states (e.g., Gray, 1982; Hull, 1952; Konorski, 1967; Lang, 1995; N. E. Miller, 1944). Self theorists distinguish between good selves as positive reference values and bad selves as negative reference values (e.g., Erikson, 1963; Markus & Nurius, 1986; Sullivan, 1953). Social psychologists distinguish between positive reference groups and negative reference groups (e.g., Hyman, 1942; Kelley, 1952; Merton, 1957; Newcomb, 1950; Sherif & Sherif, 1964) and between positive and negative attitudes (e.g., Cacioppo & Berntson, 1994). Self-regulatory systems that have positive versus negative reference values also have been distinguished in cybernetic and control process models (e.g., G. A. Miller et al., 1960; Powers, 1973; Wiener, 1948).

Inspired by these latter models in particular, Carver and Scheier (1981, 1990) drew an especially clear distinction 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 one's (represented) current self-state as close as possible to the desired end-state. 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 current self-state as far away as possible from the undesired end-state.

Like regulatory anticipation, regulatory reference is an important approach–avoidance principle underlying hedonic regulation, but it is not just this. Regulatory reference is one way in which the major psychological variable of standards influences human functioning. Like expectancy, the variable of standards is one of the most important concepts in psychology (see Higgins, 1990; D. T. Miller & Prentice, 1996). A *standard* is a criterion or rule established by experience, desires, or authority for the measure of quantity and extent or quality and value (Higgins, 1990). Self-regulation is influenced by both the standards that individuals chronically possess and the standards that are present in momentary situations.

As a criterion for measuring quantity and extent, the variable of standards has been a fundamental principle in theories of judgment in social psychology (e.g., Festinger, 1954; Sherif & Hovland, 1961; Thibaut & Kelley, 1959), clinical psychology (e.g., Sarbin, Taft, & Bailey, 1960), and cognitive psychology (e.g., Helson, 1964; Tversky & Kahneman, 1974). The variable of standards (or reference points) as a criterion for measuring quality or value also has been a fundamental principle in theories of evaluation and goal-directed activity, including psychodynamic the-

ories (e.g., Adler, 1929/1964; Freud, 1923/1961; Horney, 1950; Rogers, 1961), decision theories (e.g., Kahneman & Tversky, 1979), social learning theories (e.g., Bandura, 1977b; Bandura & Cervone, 1983; Kanfer & Hagerman, 1981; Kanfer & Karoly, 1972; Mischel, 1973; Rotter, 1954), and social–personality theories (e.g., Duval & Wicklund, 1972; Ford, 1987; Lewin et al., 1944; McClelland et al., 1953).

Again, it is notable that there are processes involved in standard utilization, such as contextual salience, priming, and inferential processes (see Higgins, 1990; D. T. Miller & Prentice, 1996), that are separate from hedonic regulation. There are also consequences of standards that are not implied in the hedonic principle, such as memory effects from a change of standard (e.g., Higgins & Stangor, 1988). Thus, psychologists can move beyond the hedonic principle by increasing their understanding of standards in general and regulatory reference in particular. This presents a challenge, however, because the principle of regulatory reference also can be conceptualized in different ways.

Beyond the basic approach versus avoidance asymmetry, several theorists have suggested that there are asymmetries in self-regulation for positive versus negative reference points. First, it has been proposed that the avoidance gradient for movement away from undesired end-states is steeper than the approach gradient for movement toward desired end-states (e.g., N. E. Miller, 1944). Second, several models describe self-regulation in relation to desired end-states as involving behavioral production and self-regulation in relation to undesired end-states as involving behavioral inhibition or suppression (e.g., Atkinson, 1964; Estes, 1944; Gray, 1982; Lewin, 1935; Skinner, 1953; Thorndike, 1935). Third, it has been suggested that, compared to self-regulation with positive reference, self-regulation with negative reference is inherently unstable, open-ended, and relatively rare because it involves an ever-increasing deviation from some undesired end-state with no specific goal state to approach (e.g., Carver & Scheier, 1981, 1990). These proposed asymmetries exemplify why it is important to move beyond the hedonic principle, because the nature of these asymmetries depends on how the underlying processes are conceptualized. Let us briefly consider an alternative perspective on each of these asymmetries.

The first asymmetry distinguishing between approach gradients for desired end-states and avoidance gradients for undesired end-states is somewhat misleading, because, strategically, both approach and avoidance are involved in each type of regulatory reference. When people are motivated to approach a desired end-state, for example, they can achieve this by acting in ways that match this state or by avoiding actions that mismatch this state. To get a good grade on a quiz, for instance, a student might study hard at the library the day before the quiz or turn down invitations to go out the night before the quiz. The research of Higgins et al. (1994), described earlier, demonstrated that the strategy of approaching matches to attain a goal is more likely for promotion-focus regulation whereas the strategy of avoiding mismatches is more likely for prevention-focus regulation. Moreover, Forster and Higgins (1997) measured both approach and avoidance motivation on-line while participants made progress toward a goal and found that the approach gradient was steeper than the avoidance gradient for promotion-focus participants whereas the avoidance gradient was steeper than the approach gradient for prevention-focus participants. For desired end-states alone, therefore, there is both approach and avoidance motivation, and regulatory focus by itself produces differences in approach and avoidance gradients.

The second asymmetry, distinguishing between behavioral production for desired end-states and behavioral inhibition or suppression for undesired end-states, is also overstated in the literature because it ignores alternative strategies and tactics. Approaching a desired end-state by avoiding a mismatch can involve behavioral inhibition or suppression, and avoiding an undesired end-state by approaching a mismatch can involve behavioral production. Moreover, the strategy of approaching a match to a desired end-state can involve behavioral inhibition, and the strategy of avoiding a match to an undesired end-state can involve behavioral production. As an example of the former, to match the desired end-state of winning a race by focusing straight ahead, a runner might suppress turning his or her head to check whether other runners are close behind. As an example of the latter, to avoid matching the undesired end-state of being a bad son by losing contact with his parents, a freshman might make an effort to stay in touch.

The general point regarding these first two asymmetries is that the hedonic principle's emphasis on approaching positives versus avoiding negatives at the system level is not the same as approach versus avoidance at the strategic level. Strategic approach versus avoidance, moreover, is not the same as production versus inhibition or suppression at the behavioral level. These differences are critical for understanding the true nature of approach and avoidance responses, but this understanding has been limited by an overreliance on the hedonic priniciple.

The third proposed asymmetry postulates that, compared with positive reference regulation, negative reference regulation is unstable and open-ended because it involves an ever-increasing deviation from the reference point with no specific goal state to approach. Underlying this distinction is the popular conceptualization of self-regulation in terms of moving toward or away from some reference value. This "movement" metaphor is appealing, especially given that the root of the term *motivation* is *to move*. Nevertheless, it is a metaphor. Actions that are close or distant from a reference value do not require actual movement and need not be conceptualized in such terms. Instead, one can conceptualize actions in terms of whether they fit or do not fit the reference value, that is, whether they are congruent with (match) or discrepant from (mismatch) the reference value. Conceptualized in this way, both positive and negative references involve matches and mismatches (see Higgins et al., 1994), and

negative reference is not open-ended. Rather than attempting to move away from a negative reference value, self-regulation would involve attempts to maximize mismatches or minimize matches to the negative reference value. Such self-regulation does not differ in principle from attempts to maximize matches or minimize mismatches to a positive reference value.

These alternative perspectives on regulatory reference have different implications for how people approach pleasure and avoid pain. Only by moving beyond the hedonic principle to a fuller examination of standards and their use in regulatory reference can one understand the important strategic processes underlying approach and avoidance orientations. Thus, like regulatory focus and regulatory anticipation, regulatory reference needs to be examined more fully as a self-regulatory principle in its own right.

Regulatory focus, regulatory anticipation, and regulatory reference as distinct principles of approach–avoidance orientation have now been described. Table 1 provides a summary of the different ways these principles conceptualize approach versus avoidance. Regulatory anticipation conceptualizes approach versus avoidance in terms of anticipated consequences, distinguishing between approaching anticipated pleasure and avoiding anticipated pain. Regulatory reference conceptualizes approach versus avoidance in terms of movement in relation to reference points, distinguishing between approach regulation in reference to desired end-states (discrepancy-reducing) and avoidance regulation in reference to undesired end-states (discrepancy-amplifying). Regulatory focus conceptualizes approach versus avoidance in terms of strategic means for self-regulation, distinguishing between promotion-focus approach strategies (insuring hits and insuring against errors of omission) and prevention-focus avoidance strategies (insuring correct rejections and insuring against errors of commission).

Table 2 illustrates how these three approach–avoidance orientations combine together. Regulatory anticipation concerns anticipated consequences. It distinguishes between anticipating the pleasure of receiving an *A* (or avoiding receiving less than an *A*) and anticipating the pain of not receiving an *A* (or receiving less than an *A*). Regulatory reference concerns movement in relation to reference points. It distinguishes between approaching the desired end-state of receiving an *A* as a reference point and avoiding the undesired end-state of receiving less than an *A* as a reference point. Regulatory focus concerns strategic means for self-regulation. It distinguishes between promotion-focus approach strategies (e.g., pursuing means for advancement) regarding the accomplishment of receiving an *A* or the nonfulfillment of receiving less than an *A* and prevention-focus avoidance strategies (e.g., being careful) regarding the safety of receiving an *A* or the danger of receiving less than an *A*. In the next section, I briefly consider some implications of combining these three principles of approach–avoidance orientation.

Combining Regulatory Anticipation, Reference, and Focus

Several self-regulatory models contain postulates relevant to both regulatory anticipation and regulatory reference. The classic theory of achievement motivation (see Atkinson, 1964, 1974a, 1974b; McClelland et al., 1953), for example, states that achievement motivation reflects people's concern about performing well in relation to a standard of excellence, which is a positive reference value. The theory also states that people vary in their chronic anticipation of success (hope of success and anticipation of pride) that induces approach tendencies and in their chronic anticipation of failure (fear of failure and anticipation of shame) that induces avoidance tendencies. Another anticipatory postulate is that task difficulty influences motivation both directly in terms of the expectancy of success and indirectly in terms of its impact on the value of success. As another example, Kahneman and Tversky's (1979) prospect theory includes the anticipatory postulates that the attractiveness of a choice generally increases as the expectancy of gain increases and that people overweight positive outcomes that are considered certain relative to merely probable outcomes (a certainty effect). Their theory also includes the regulatory-reference postulates that gains and losses are defined rela-

Table 1
Self-Regulatory Principles of Approach–Avoidance Orientation

Self-regulatory principle	Avoidance orientation	Approach orientation
Regulatory anticipation	Avoid anticipated pain	Approach anticipated pleasure
Regulatory reference	Avoidance regulation in reference to undesired end-states	Approach regulation in reference to desired end-states
Regulatory focus	Prevention Strategically avoid mismatches to desired end-states (and matches to undesired end-states) Insure correct rejections Insure against errors of commission	Promotion Strategically approach matches to desired end-states (and mismatches to undesired end-states) Insure hits Insure against errors of omission

Table 2
Illustration of Different Approach–Avoidance Orientations

Regulatory focus and regulatory anticipation	Regulatory reference	
	Desired end-state reference point	Undesired end-state reference point
Promotion focus	Accomplishment	Nonfulfillment
Anticipate pleasure	I receive an *A* because I pursue so many means for advancement.	I avoid receiving less than an *A* because I pursue enough means of advancement.
Anticipate pain	I don't receive an *A* because I pursue too few means for advancement.	I receive less than an *A* because I omit too many means for advancement.
Prevention focus	Safety	Danger
Anticipate pleasure	I receive an *A* because I am so careful.	I avoid receiving less than an *A* because I am careful enough.
Anticipate pain	I don't receive an *A* because I am too careless.	I receive less than an *A* because I commit too many mistakes.

tive to some neutral reference point and that gains and losses are coded relative to a reference point that differs from the status quo, or one's current assets (shifting reference points).

It is evident from these examples that postulates relating to both anticipation and reference points can be contained in a single theory. These theories, however, do not explicitly identify regulatory anticipation and regulatory reference as independent principles of motivation. By doing so and considering the relation between them, psychologists could increase their understanding of motivation still further. One basic issue, for example, is how regulatory anticipation functions in relation to positive versus negative reference points. Are the motivational effects of anticipated success, for example, the same when approaching a desired end-state as when avoiding an undesired end-state? Are the motivational effects of anticipated failure the same when approaching a desired end-state as when avoiding an undesired end-state?

It also might be useful to combine regulatory focus with regulatory anticipation and regulatory reference in future research and theory development. These three principles might be fruitfully combined, for instance, to understand emotions as direct experiences of different combinations of self-regulation (see Higgins, Grant, & Shah, in press). *Hope,* for example, might be the anticipation of a desired end-state with a promotion focus, *terror* the anticipation of an undesired end-state with a prevention focus, *depression* the anticipation or attainment of an undesired end-state with a promotion focus, and *calm* the anticipation or attainment of a desired end-state with a prevention focus. Combining the different regulatory principles might have applied significance as well. The effectiveness of persuasive messages might be enhanced, for example, by considering different combinations of the three principles. To reduce the spread of AIDS, for instance, campaigns for condom use have naturally framed the persuasive messages in terms of safe sex and the dangers to be avoided, which involve a prevention focus and anticipating undesired end-states. But at the critical moment when condoms will or will not be used, the partners are more likely to be in a promotion focus and anticipating desired end-states. Thus, messages with a promotion focus on anticipated desired end-states might be more effective (e.g., condom use promotes a caring relationship).

Concluding Comment

What do I mean by going beyond the hedonic principle? One interpretation is that psychologists should not restrict themselves to this principle's simple assertion but should examine more fully the different ways that people approach pleasure and avoid pain. I do, indeed, mean to suggest this. But I also mean to suggest something more. The subjective utility models are not just incomplete when they ignore the unpredicted negative interaction between expectancy and value for people in a prevention focus. A single emotional distress category that collapses mild depression and anxiety is not just too broad when these emotions, differing in regulatory focus, involve fundamentally different strategic motivation. Claims about biological underpinnings of emotion based on neuroimages of brain responses to pleasure and pain are not just overly general when they fail to distinguish among types of pleasure and types of pain. In such cases, the problem is not simply that psychologists overlook important distinctions by restricting themselves to the hedonic principle. The problem is that overreliance on the hedonic principle can yield misleading conclusions. To discover the true nature of approach–avoidance motivation, it is not simply desirable but essential to move beyond the hedonic principle to the principles underlying its operation.

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