

Illusion and Well-Being: A Social Psychological Perspective on Mental Health

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Many prominent theorists have argued that accurate perceptions of the self, the world, and the future are essential for mental health. Yet considerable research evidence suggests that overly positive self-evaluations, exaggerated perceptions of control or mastery, and unrealistic optimism are characteristic of normal human thought. Moreover, these illusions appear to promote other criteria of mental health, including the ability to care about others, the ability to be happy or contented, and the ability to engage in productive and creative work. These strategies may succeed, in large part, because both the social world and cognitive-processing mechanisms impose filters on incoming information that distort it in a positive direction; negative information may be isolated and represented in as unthreatening a manner as possible. These positive illusions may be especially useful when an individual receives negative feedback or is otherwise threatened and may be especially adaptive under these circumstances.

Decades of psychological wisdom have established contact with reality as a hallmark of mental health. In this view, the well-adjusted person is thought to engage in accurate reality testing, whereas the individual whose vision is clouded by illusion is regarded as vulnerable to, if not already a victim of, mental illness. Despite its plausibility, this viewpoint is increasingly difficult to maintain (cf. Lazarus, 1983). A substantial amount of research testifies to the prevalence of illusion in normal human cognition (see Fiske & Taylor, 1984; Greenwald, 1980; Nisbett & Ross, 1980; Sackeim, 1983; Taylor, 1983). Moreover, these illusions often involve central aspects of the self and the environment and, therefore, cannot be dismissed as inconsequential.

In this article, we review research suggesting that certain illusions may be adaptive for mental health and well-being. In particular, we examine evidence that a set of interrelated positive illusions—namely, unrealistically positive self-evaluations, exaggerated perceptions of control or mastery, and unrealistic optimism—can serve a wide variety of cognitive, affective, and social functions. We also attempt to resolve the following para-

dox: How can positive misperceptions of one's self and the environment be adaptive when accurate information processing seems to be essential for learning and successful functioning in the world? Our primary goal is to weave a theoretical context for thinking about mental health. A secondary goal is to create an integrative framework for a voluminous literature in social cognition concerning perceptions of the self and the environment.

Mental Health as Contact With Reality

Throughout psychological history, a variety of views of mental health have been proffered, some idiosyncratic and others widely shared. Within this theoretical diversity, a dominant position has maintained that the psychologically healthy person is one who maintains close contact with reality. For example, in her distillation of the dominant views of mental health at the time, Jahoda (1958) noted that the majority of theories considered contact with reality to be a critical component of mental health. This theme is prominent in the writings of Allport (1943), Erikson (1950), Menninger (1930), and Fromm (1955), among others. For example, concerning his self-actualized individuals, Maslow (1950) wrote,

Our healthy individuals find it possible to accept themselves and their own nature without chagrin or complaint. . . . They can accept their own human nature with all of its discrepancies from the ideal image without feeling real concern. It would convey the wrong impression to say that they are self-satisfied. What we must rather say is that they can take the frailties and sins, weaknesses and evils of human nature in the same unquestioning spirit that one takes or accepts the characteristics of nature. (p. 54)

On the basis of her review, Jahoda concluded,

The perception of reality is called mentally healthy when what the individual sees corresponds to what is actually there. (1958, p. 6)

Mentally healthy perception means a process of viewing the world

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so that one is able to take in matters one wishes were different without distorting them to fit these wishes. (1953, p. 349)

Since Jahoda's report, the position that the mentally healthy person perceives reality accurately has been put forth in major works by Haan (1977) and Vaillant (1977), and it has also been incorporated into textbooks on adjustment (e.g., Jourard & Landsman, 1980; Schulz, 1977). For example, after reviewing a large number of theories of the healthy personality, Jourard and Landsman (1980) noted, "The ability to perceive reality as it 'really is' is fundamental to effective functioning. It is considered one of the two preconditions to the development of [the healthy personality]" (p. 75).

To summarize, then, although it is not the only theoretical perspective on the mentally healthy person, the view that psychological health depends on accurate perceptions of reality has been widely promulgated and widely shared in the literature on mental health.

Social Cognition, Reality, and Illusion

Early theorists in social cognition adopted a view of the person's information-processing capabilities that is quite similar to the viewpoint just described. These theorists maintained that the social perceiver monitors and interacts with the world like a naive scientist (see Fischhoff, 1976; Fiske & Taylor, 1984; Nisbett & Ross, 1980, for discussions). According to this view, the person gathers data in an unbiased manner; combines it in some logical, identifiable fashion; and reaches generally good, accurate inferences and decisions. Theories of the causal attribution process (e.g., Kelley, 1967), prediction (see Kahneman & Tversky, 1973), judgments of covariation, and other tasks of social inference (see Fiske & Taylor, 1984; Nisbett & Ross, 1980) incorporated the assumptions of the naive scientist as normative guidelines with which actual behavior could be compared.

It rapidly became evident, however, that the social perceiver's actual inferential work and decision making looked little like these normative models. Rather, information processing is full of *incomplete data gathering, shortcuts, errors, and biases* (see Fiske & Taylor, 1984; Nisbett & Ross, 1980, for reviews). In particular, prior expectations and self-serving interpretations weigh heavily into the social judgment process. In summarizing this work, Fiske and Taylor (1984) noted, "Instead of a naive scientist entering the environment in search of the truth, we find the rather unflattering picture of a charlatan trying to make the data come out in a manner most advantageous to his or her already-held theories" (p. 88). The implications of these conclusions for cognitive functioning have been widely debated and discussed (see Fiske & Taylor, 1984; Greenwald, 1980; Nisbett & Ross, 1980). But these findings also seem to have implications for the understanding of mental health, inasmuch as they appear to contradict a dominant conception of its attributes: How can the normal, healthy individual perceive reality accurately if his or her perceptions are so evidently biased and self-serving? Before considering this issue, a note concerning terminology is required.

At this point, we exchange the terms *error* and *bias* for a broader term, *illusion*. There are several reasons for this change

in terminology. *Error* and *bias* imply short-term mistakes and distortions, respectively, that might be caused by careless oversight or other temporary negligences (cf. Funder, 1987). *Illusion*, in contrast, implies a more general, enduring pattern of error, bias, or both that assumes a particular direction or shape. As the evidence will show, the illusions to be considered (unrealistically positive self-evaluations, exaggerated perceptions of control, and unrealistic optimism) do indeed seem to be pervasive, enduring, and systematic. Illusion is defined as

a perception that represents what is perceived in a way different from the way it is in reality. An illusion is a false mental image or conception which may be a misinterpretation of a real appearance or may be something imagined. It may be pleasing, harmless, or even useful (Stein, 1982, p. 662).

The definition of an illusion as a belief that departs from reality presupposes an objective grasp of reality. This point puts us on the perilous brink of philosophical debate concerning whether one can ever know reality. Fortunately, at least to some degree, the methodologies of social psychology spare us this frustrating conundrum by providing operational definitions. In some cases, evidence for illusions comes from experimental work that manipulates feedback provided to a person (e.g., whether the person succeeded or failed on a task) and measures the individual's perceptions or recall of that feedback; this paradigm can provide estimates of an individual's accuracy as well as information about the direction (positive or negative) of any distortions. As will be seen, people typically distort such feedback in a self-serving manner. More subjective self-evaluations (e.g., how happy or well-adjusted one is) do not have these same objective standards of comparison. In such cases, an illusion is implied if the majority of people report that they are more (or less) likely than the majority of people to hold a particular belief. For example, if most people believe that they are happier, better adjusted, and more skilled on a variety of tasks than most other people, such perceptions provide evidence suggestive of an illusion. Illusions about the future are operationally difficult to establish because no one knows what the future will bring. If it can be shown, however, that most people believe that their future is more positive than that of most other people or more positive than objective base-rate data can support, then evidence suggestive of illusions about the future is provided. We now turn to the evidence for these illusions.

Positive Illusions and Social Cognition

Any taxonomy of illusions is, to some extent, arbitrary. Many researchers have studied biases in the processing of self-relevant information and have given their similar phenomena different names. There is, however, considerable overlap in findings, and three that consistently emerge can be labeled *unrealistically positive views of the self*, *exaggerated perceptions of personal control*, and *unrealistic optimism*. Those familiar with the research evidence will recognize that much of the evidence for these positive illusions comes from experimental studies and from research with college students. We will have more to say about potential biases in the experimental literature later in this article. At present, it is important to note that all three of the

illusions to be discussed have been documented in noncollege populations as well.

Unrealistically Positive Views of the Self

As indicated earlier, a traditional conception of mental health asserts that the well-adjusted individual possesses a view of the self that includes an awareness and acceptance of both the positive and negative aspects of self. In contrast to this portrayal, evidence indicates that most individuals possess a very positive view of the self (see Greenwald, 1980, for a review). When asked to indicate how accurately positive and negative personality adjectives describe the self, normal subjects judged positive traits to be overwhelmingly more characteristic of self than negative attributes (Alicke, 1985; Brown, 1986). Additionally, for most individuals, positive personality information is efficiently processed and easily recalled, whereas negative personality information is poorly processed and difficult to recall (Kuiper & Derry, 1982; Kuiper & MacDonald, 1982; Kuiper, Olinger, MacDonald, & Shaw, 1985). Most individuals also show poorer recall for information related to failure than to success (Silverman, 1964) and tend to recall their task performance as more positive than it actually was (Crary, 1966). Research on the self-serving bias in causal attribution documents that most individuals are more likely to attribute positive than negative outcomes to the self (see Bradley, 1978; Miller & Ross, 1975; Ross & Fletcher, 1985; Zuckerman, 1979, for reviews).¹

Even when negative aspects of the self are acknowledged, they tend to be dismissed as inconsequential. One's poor abilities tend to be perceived as common, but one's favored abilities are seen as rare and distinctive (Campbell, 1986; G. Marks, 1984). Furthermore, the things that people are not proficient at are perceived as less important than the things that they are proficient at (e.g., Campbell, 1986; Harackiewicz, Sansone, & Manderlink, 1985; Lewicki, 1984; Rosenberg, 1979). And people perceive that they have improved on abilities that are important to them even when their performance has remained unchanged (Conway & Ross, 1984).

In sum, far from being balanced between the positive and the negative, the perception of self that most individuals hold is heavily weighted toward the positive end of the scale. Of course, this imbalance does not in and of itself provide evidence that such views are unrealistic or illusory. Evidence of this nature is, however, available.

First, there exists a pervasive tendency to see the self as better than others. Individuals judge positive personality attributes to be more descriptive of themselves than of the average person but see negative personality attributes as less descriptive of themselves than of the average person (Alicke, 1985; Brown, 1986). This effect has been documented for a wide range of traits (Brown, 1986) and abilities (Campbell, 1986; Larwood & Whittaker, 1977); individuals even believe that their driving ability is superior to others' (Svenson, 1981). Because it is logically impossible for most people to be better than the average person, these highly skewed, positive views of the self can be regarded as evidence for their unrealistic and illusory nature. People also tend to use their positive qualities when appraising others, thereby virtually assuring a favorable self-other com-

parison (Lewicki, 1983). And people give others less credit for success and more blame for failure than they ascribe to themselves (Forsyth & Schlenker, 1977; Green & Gross, 1979; Mirrels, 1980; Schlenker & Miller, 1977; Taylor & Koivumaki, 1976).

Although the tendency to see the self as better than others is attenuated somewhat when the others being evaluated are close friends or relatives (Brown, 1986), a corresponding tendency exists for individuals to see their intimates as better than average. One's friends are evaluated more positively and less negatively than the average person (Brown, 1986), and, compared with others, close friends and relatives receive more credit for success and less blame for failure (Hall & Taylor, 1976; Taylor & Koivumaki, 1976). Moreover, these effects at the individual level also occur at the group level: Research using the minimal intergroup paradigm has established that even under the most minimal of social conditions, a pervasive tendency exists for individuals to see their own group as better than other groups (see Tajfel & Turner, 1986, for a review). Thus, although research demonstrates a general person-positivity bias (Schneider, Hastorf, & Ellsworth, 1979; Sears, 1983), individuals are inclined to appraise themselves and their close associates in far more positive and less negative terms than they appraise most other people.

A second source of evidence pertaining to the illusory quality of positive self-perceptions comes from investigations in which self-ratings have been compared with judgments made by observers. Lewinsohn, Mischel, Chaplin, and Barton (1980) had observers watch college-student subjects complete a group-interaction task. Observers then rated each subject along a number of personality dimensions (e.g., friendly, warm, and assertive). Subjects also rated themselves on each attribute. The results showed that self-ratings were significantly more positive than the observers' ratings. In other words, individuals saw themselves in more flattering terms than they were seen in by others.

In sum, the perception of self that most individuals hold is not as well-balanced as traditional models of mental health suggest. Rather than being attentive to both the favorable and unfavorable aspects of self, normal individuals appear to be very cognizant of their strengths and assets and considerably less aware of their weaknesses and faults. Evidence that these flattering self-portrayals are illusory comes from studies in which researchers have found that (a) most individuals see themselves as better than the average person and (b) most individuals see

¹ Despite a general pattern indicating that people accept more responsibility for positive outcomes than for negative outcomes, some evidence suggests that people may exaggerate their own causal role in the occurrence of highly negative events (e.g., Bulman & Wortman, 1977; Janoff-Bulman, 1979; Taylor, Lichtman, & Wood, 1984). These data might appear to be at odds with a general pattern of self-serving attributions, but they may not be. Self-attribution does not imply personal responsibility or self-blame (Shaver & Drown, 1986) and therefore may not produce any blow to self-esteem. Moreover, some have suggested that self-attribution may enable people to begin to achieve mastery over an adverse event, helping to maintain a sense of personal control (Bulman & Wortman, 1977; Taylor, 1983).

themselves as better than others see them. For these reasons, overly positive views of the self appear to be illusory.²

Does there exist a group of individuals that is accepting of both the good and the bad aspects of themselves as many views of mental health maintain the normal person is? Suggestive evidence indicates that individuals who are low in self-esteem, moderately depressed, or both are more balanced in self-perceptions (see Coyne & Gotlieb, 1983; Ruchlman, West, & Pashow, 1985; Watson & Clark, 1984, for reviews). These individuals tend to (a) recall positive and negative self-relevant information with equal frequency (e.g., Kuiper & Derry, 1982; Kuiper & MacDonald, 1982), (b) show greater evenhandedness in their attributions of responsibility for valenced outcomes (e.g., Campbell & Fairey, 1985; Kuiper, 1978; Rizley, 1978), (c) display greater congruence between self-evaluations and evaluations of others (e.g., Brown, 1986), and (d) offer self-appraisals that coincide more closely with appraisals by objective observers (e.g., Lewinsohn et al., 1980). In short, it appears to be not the well-adjusted individual but the individual who experiences subjective distress who is more likely to process self-relevant information in a relatively unbiased and balanced fashion. These findings are inconsistent with the notion that realistic and evenhanded perceptions of self are characteristic of mental health.

Illusions of Control

A second domain in which most individuals' perceptions appear to be less than realistic concerns beliefs about personal control over environmental occurrences. Many theorists, including social psychologists (e.g., Heider, 1958), developmental psychologists (e.g., White, 1959), learning theorists (Bandura, 1977; deCharms, 1968), and psychoanalytic theorists (Fenichel, 1945; Hendrick, 1942), have maintained that a sense of personal control is integral to the self-concept and self-esteem. Research evidence, however, suggests that people's beliefs in personal control are sometimes greater than can be justified.

In a series of studies adopting gambling formats, Langer and her associates (Langer, 1975; Langer & Roth, 1975) found that people often act as if they have control in situations that are actually determined by chance. When manipulations suggestive of skill, such as competition, choice, familiarity, and involvement, are introduced into chance situations, people behave as if the situations were determined by skill and, thus, were ones over which they could exert some control (see also Goffman, 1967). For example, people infer that they have greater control if they personally throw dice than if someone else does it for them (Fleming & Darley, 1986; Langer, 1975). Similarly, a large literature on covariation estimation indicates that people substantially overestimate their degree of control over heavily chance-determined events (see Crocker, 1982, for a review). When people expect to produce a certain outcome and the outcome then occurs, they often overestimate the degree to which they were instrumental in bringing it about (see Miller & Ross, 1975).

Is there any group in which this illusion of control appears to be absent? Mildly and severely depressed individuals appear to be less vulnerable to the illusion of control (Abramson & Alloy, 1981; Golin, Terrell, & Johnson, 1977; Golin, Terrell, Weitz, &

Drost, 1979; M. S. Greenberg & Alloy, in press). When skill cues are introduced into a chance-related task or when outcomes occur as predicted, depressed individuals provide more accurate estimates of their degree of personal control than do nondepressed people. Similarly, relative to nondepressed people, those in whom a negative mood has been induced show more realistic perceptions of personal control (Alloy, Abramson, & Viscusi, 1981; see also Shrauger & Terbovic, 1976). This is not to suggest that depressed people or those in whom a negative mood has been induced are always more accurate than nondepressed subjects in their estimates of personal control (e.g., Abramson, Alloy, & Rosoff, 1981; Benassi & Mahler, 1985) but that the preponderance of evidence lies in this direction. Realistic perceptions of personal control thus appear to be more characteristic of individuals in a depressed affective state than individuals in a nondepressed affective state.

Unrealistic Optimism

Research suggests that most people are future oriented. In one survey (Gonzales & Zimbardo, 1985), the majority of respondents rated themselves as oriented toward the present and the future (57%) or primarily toward the future (33%) rather than toward the present only (9%) or toward the past (1%). Optimism pervades people's thinking about the future (Tiger, 1979). Research suggests that most people believe that the present is better than the past and that the future will be even better (Brickman, Coates, & Janoff-Bulman, 1978). Questionnaires that survey Americans about the future have found the majority to be hopeful and confident that things can only improve (Free & Cantril, 1968). When asked what they thought was possible for them in the future, college students reported more than four times as many positive as negative possibilities (Markus & Nurius, 1986).

Is there any evidence, however, that such optimism is actually unrealistic? Although the future may well hold more subjectively positive events than negative ones for most individuals, as with excessively positive views of the self, evidence for the illusory nature of optimism comes from studies comparing judgments of self with judgments of others. The evidence indicates that although the warm and generous vision of the future that individuals entertain extends to all people, it is decidedly more in evidence for the self. People estimate the likelihood that they

² One might argue that overly positive self-descriptions reflect public posturing rather than privately held beliefs. Several factors, however, argue against the plausibility of a strict self-presentational interpretation of this phenomenon. For example, Greenwald and Breckler (1985) reviewed evidence indicating that (a) self-evaluations are at least as favorable under private conditions as they are under public conditions; (b) favorable self-evaluations occur even when strong constraints to be honest are present; (c) favorable self-referent judgments are made very rapidly, suggesting that people are not engaging in deliberate (time-consuming) fabrication; and (d) self-enhancing judgments are acted on. For these as well as other reasons, a consensus is emerging at the theoretical level that individuals do not offer flattering self-evaluations merely as a means of managing a public impression of competency (see Schlenker, 1980; Tesser & Moore, 1986; Tetlock & Manstead, 1985).

will experience a wide variety of pleasant events, such as liking their first job, getting a good salary, or having a gifted child, as higher than those of their peers (Weinstein, 1980). Conversely, when asked their chances of experiencing a wide variety of negative events, including having an automobile accident (Robertson, 1977), being a crime victim (Perloff & Fetzer, 1986), having trouble finding a job (Weinstein, 1980), or becoming ill (Perloff & Fetzer, 1986) or depressed (Kuiper, MacDonald, & Derry, 1983), most people believe that they are less likely than their peers to experience such negative events. In effect, most people seem to be saying, "The future will be great, especially for me." Because not everyone's future can be rosier than their peers', the extreme optimism that individuals display appears to be illusory.

Other evidence also suggests that individuals hold unrealistically positive views of the future. Over a wide variety of tasks, subjects' predictions of what will occur correspond closely to what they would like to see happen or to what is socially desirable rather than to what is objectively likely (Cantril, 1938; Lund, 1975; McGuire, 1960; Pruitt & Hoge, 1965; Sherman, 1980). Both children and adults overestimate the degree to which they will do well on future tasks (e.g., Crandall, Solomon, & Kelleway, 1955; Irwin, 1944, 1953; R. W. Marks, 1951), and they are more likely to provide such overestimates the more personally important the task is (Frank, 1953). Unrealistic optimism has even been documented for events that are entirely chance determined (Irwin, 1953; Langer & Roth, 1975; R. W. Marks, 1951).

In contrast to the extremely positive view of the future displayed by normal individuals, mildly depressed people and those with low self-esteem appear to entertain more balanced assessments of their likely future circumstances (see Ruchlman et al., 1985, for a review). Relative to judgments concerning others, these individuals fail to exhibit the self-enhancing tendency to see positive events as more likely for self and negative events as less likely for self (Alloy & Ahrens, 1987; Brown, 1985; Pietromonaco & Markus, 1985; Pyszczynski, Holt, & Greenberg, 1987). Thus, although in some cases such tendencies may reflect pessimism on the part of depressed people, it appears to be individuals who are high, not low, in subjective well-being who evince more biased perceptions of the future.

Summary

To summarize, traditional conceptions of mental health assert that well-adjusted individuals possess relatively accurate perceptions of themselves, their capacity to control important events in their lives, and their future. In contrast to this portrayal, a great deal of research in social, personality, clinical, and developmental psychology documents that normal individuals possess unrealistically positive views of themselves, an exaggerated belief in their ability to control their environment, and a view of the future that maintains that their future will be far better than the average person's. Furthermore, individuals who are moderately depressed or low in self-esteem consistently display an absence of such enhancing illusions. Together, these findings appear inconsistent with the notion that accurate self-knowledge is the hallmark of mental health.

Two other literatures also suggest that accurate self-knowledge may not always be positively related to psychological well-being. Consider, first, research on the correlates of private self-consciousness as assessed by the Self-Consciousness Scale (Fenigstein, Scheier, & Buss, 1975). Private self-consciousness refers to the degree to which a person characteristically attends to the private, covert aspects of the self (e.g., "I'm always trying to figure myself out"). People scoring high on this measure have been shown to possess more detailed and accurate self-knowledge than those who are less attentive to this aspect of the self (Franzoi, 1983; Turner, 1978). Additionally, researchers have found that private self-consciousness is positively related to depression (Ingram & Smith, 1984; Smith & Greenberg, 1981; Smith, Ingram, & Roth, 1985). Although the relation between these variables is correlational, experimental research also suggests that under some circumstances focusing attention on the self may engender negative emotional states (Duval & Wicklund, 1972).

Additional support for the argument that accurate self-knowledge may be negatively related to psychological health comes from research on the correlates of self-deception. Specifically, scores on the Self-Deception Questionnaire (Sackeim & Gur, 1979), a measure of the degree to which individuals typically deny psychologically threatening but universal feelings and behaviors (e.g., "Do you ever feel guilty?"), have been found to be inversely related to depression (Roth & Ingram, 1985; see Sackeim, 1983, for a review). The fact that individuals who are most apt to engage in self-deception also score lowest on measures of psychopathology further suggests that accurate self-knowledge may not be a *sine qua non* of mental health.

Mental-Health-Promoting Aspects of Illusion

It is one thing to say that positive illusions about the self, personal control, and the future exist and are true for normal people. It is another to identify how these illusions contribute to mental health. To do so, one first needs to establish criteria of mental health and then determine whether the consequences of the preceding positive illusions fit those criteria. One dilemma that immediately arises is that, as noted earlier, many formal definitions of mental health incorporate accurate self-perceptions as one criterion (see Jahoda, 1958; Jourard & Landsman, 1980). In establishing criteria for mental health, then, we must subtract this particular one.

When we do so, what is left? The ability to be happy or, at least, relatively contented, has been one central criterion of mental health and well-being adopted by a variety of researchers and theorists (e.g., Menninger, 1930; see E. Diener, 1984; Jahoda, 1958 for reviews). In her landmark work, Jahoda (1958) identified five additional criteria of positive mental health: positive attitudes toward the self; the ability to grow, develop, and self-actualize; autonomy; environmental mastery in work and social relationships; and integration (i.e., the balance of psychic forces of the id, ego, and superego). Reviewing both older and more recent formulations, Jourard and Landsman (1980, p. 131) distilled very similar criteria: positive self-regard, the ability to care about others and for the natural world, openness to new ideas and to people, creativity, the ability to do productive

work, the ability to love, and the ubiquitous realistic self-perceptions. Because positive self-regard has already been considered in our section on exaggeratedly positive self-perceptions, we will not review it here. Thus, the common elements in these criteria that we examine in the next section are happiness or contentment, the ability to care for and about others, and the capacity for productive and creative work.

Happiness or Contentment

Most people report being happy most of the time. In surveys of mood, 70% to 80% of respondents report that they are moderately to very happy. Whereas most respondents believe that others are average in happiness, 60% believe that they are happier than most people (Freedman, 1978). Positive illusions have been tied to reports of happiness. People who have high self-esteem and self-confidence, who report that they have a lot of control in their lives, and who believe that the future will bring them happiness are more likely than people who lack these perceptions to indicate that they are happy at the present (Freedman, 1978).

As alluded to earlier, when the perceptions of happy people are compared with those of people who are relatively more distressed, happy people have higher opinions of themselves (e.g., Beck, 1967; Kuiper & Derry, 1982; Kuiper & MacDonald, 1982; Kuiper et al., 1985; Lewinsohn et al., 1980; see Shrauger & Terbovic, 1976), are more likely to evince self-serving causal attributions (Kuiper, 1978; Rizley, 1978), show exaggerated beliefs in their ability to control what goes on around them (Abramson & Alloy, 1981; Golin et al., 1977; Golin et al., 1979; M. S. Greenberg & Alloy, in press), and are more likely to be unrealistically optimistic (Alloy & Ahrens, 1987).

The association between illusions and positive mood appears to be a consistent one, but the evidence is largely correlational rather than causal. Some evidence that illusions directly influence mood has, however, been reported. For example, we noted earlier that individuals are more inclined to attribute success than failure to the self. MacFarland and Ross (1982) tested whether such a self-serving pattern promotes positive mood states. These investigators had subjects perform a laboratory task in which they manipulated success and failure. Some subjects were led to attribute success (failure) to the self, whereas other subjects were led to attribute success (failure) to the task. Mood measures were then gathered. In line with the hypothesis that the self-serving attributional bias causally influences positive mood states, subjects led to attribute success to the self and failure to the task reported more positive mood after success and less negative mood after failure. More recently, Gibbons (1986) found evidence that another self-enhancing illusion—the tendency to see the self as better off than others—also improves mood states among depressed people. Thus, although these investigations do not rule out the possibility that positive mood may also cause illusions, that is, that these variables may be reciprocally related (Brown, 1984; Brown & Taylor, 1986), they do provide evidence that illusions promote happiness.

Ability to Care for Others

The ability to care for others has been considered an important criterion of mental health, and evidence suggests that posi-

tive illusions are associated with certain aspects of social bonding. For example, research with children indicates that high self-evaluations are linked to both perceived and actual popularity among peers (Bohrnstedt & Felson, 1983; Felson, 1981). Optimism may also improve social functioning. One study found that people with high self-esteem and an optimistic view of the future were better able to cope with loneliness at college than were individuals who displayed an absence of these tendencies (Cutrona, 1982).

Illusions may also affect the ability to care for and about others indirectly by means of their capacity to create positive mood. Research indicates that when a positive (as opposed to negative or neutral) mood has been induced, people are generally more likely to help others (e.g., Batson, Coke, Chard, Smith, & Taliaferro, 1979; Cialdini, Kenrick, & Baumann, 1982; Moore, Underwood, & Rosenhan, 1973), to initiate conversations with others (Batson et al., 1979; Isen, 1970), to express liking for others and positive evaluations of people in general (Gouaux, 1971; Griffith, 1970; Veitch & Griffith, 1976), and to reduce the use of contentious strategies and increase joint benefit in bargaining situations (Carnevale & Isen, 1986). Summarizing the research evidence, Isen (1984) concluded, "Positive affect is associated with increased sociability and benevolence" (p. 189; see also E. Diener, 1984).

Overall, then, there is evidence associating positive illusions with certain aspects of social bonding. This relation may also be facilitated indirectly by means of positive mood.

Capacity for Creative, Productive Work

Positive illusions may promote the capacity for creative, productive work in two ways: First, these illusions may facilitate intellectually creative functioning itself; second, they enhance motivation, persistence, and performance.

Facilitation of intellectual functioning. The evidence for direct effects of positive illusions on intellectual functioning is sparse. Whether unrealistic optimism or exaggerated beliefs in personal control affect intellectual functioning directly is unknown. There may, however, be intellectual benefits to self-enhancement. Memory tends to be organized egocentrically, such that people are able to recall self-relevant information well. Greenwald (1980) suggested that there are cognitive benefits to an egocentrically organized memory: The self as a well-known, highly complex, densely organized system allows for rapid retrieval of information and extensive links among elements in the system. As yet, it is unclear, however, whether self-enhancement biases directly facilitate egocentrically organized memory.

Positive illusions may also facilitate some aspects of intellectual functioning by means of positive mood, although this possibility has not been tested directly. Positive affect is an effective retrieval cue, especially for positive information (e.g., Isen, Shalke, Clark, & Karp, 1978); positive affect can facilitate the use of efficient, rapid problem-solving strategies (Isen & Means, 1983); positive affect appears to facilitate the association of multiple cues with encoded information, thus creating a more cognitively complex mental environment for making judgments and decisions (Isen & Daubman, 1984); and positive

affect facilitates unusual and diverse associations that may produce more creative problem solving (Isen, Daubman, & Nowicki, 1987; Isen, Johnson, Mertz, & Robinson, 1985).

Is the impact of positive affect on mental functioning always positive? Some research suggests that positive affect may lead people to use simple, rapid, problem-solving strategies that may be inappropriate for complex decision-making tasks (Isen et al., 1985). More recent work (Isen et al., 1987), however, suggests that positive affect does not reduce cognitive capacity or lead to lazy or inefficient problem solving. Thus, positive affect appears to have a largely positive impact on intellectual functioning.

Motivation, persistence, and performance. Self-enhancing perceptions, a belief in personal control, and optimism appear to foster motivation, persistence at tasks, and ultimately, more effective performance.

Evidence for the impact of self-enhancing perceptions on motivation, persistence, and performance comes from several sources. Positive conceptions of the self are associated with working harder and longer on tasks (Felson, 1984); perseverance, in turn, produces more effective performance and a greater likelihood of goal attainment (Bandura, 1977; Baumeister, Hamilton, & Tice, 1985; see also Feather, 1966, 1968, 1969). People with high, as compared to low, self-esteem also evaluate their performance more positively (Vasta & Brockner, 1979), even when it is equivalent to that of low-self-esteem people (Shrauger & Terbovic, 1976). These perceptions then feed back into enhanced motivation. People with high self-esteem have higher estimations of their ability for future performance and higher predictions of future performance, even when prior performance on the task would counterindicate those positive estimations (McFarlin & Blascovich, 1981).

Evidence relating beliefs in personal control to motivation, persistence, and performance comes from a variety of sources. Research on motivation has demonstrated repeatedly that beliefs in personal efficacy (a concept akin to control) are associated with higher motivation and more efforts to succeed (Bandura, 1977; see also Brunstein & Olbrich, 1985; Dweck & Licht, 1980). In a series of studies, Burger (1985) found that individuals high in the desire for control responded more vigorously to a challenging task and persisted longer. They also had higher (and, in this case, more realistic) levels of aspiration and higher expectations for their performance than did individuals low in desire for control.

Individual-difference research on mastery also indicates the value of believing that one has control. C. I. Diener and Dweck (1978, 1980) found differences between mastery-oriented and helpless children in their interpretations of success and failure. Even when their performance was equivalent to that of helpless children, mastery-oriented children (i.e., those with a sense of control over the task) remembered their success better, were more likely to see success as indicative of ability, expected successes in the future, and were less daunted by failure. Following failure, mastery-oriented children chose to focus on ways to overcome the failure. In fact, they seemed not to recognize that they had failed (C. I. Diener & Dweck, 1978).

Several lines of research suggest that optimism is associated with enhanced motivation and performance. High expectations of success prompt people to work longer and harder on tasks

than do low expectations of success (Atkinson, 1964; Mischel, 1973; Weiner, 1979). Gonzales and Zimbardo (1985) found that a self-reported orientation toward the future was associated with self-reports of higher income, higher motivation to work, more goal seeking, more pragmatic action, more daily planning, and less fatalism. Indirect evidence for the relation of optimism to effort, perseverance, and ultimately, goal attainment comes from studies of depression and studies of learned helplessness. Beck (1967) maintained that pessimism is one of the central attributes of depression,³ and it is also prominent in learned helplessness (Seligman, 1975). One of the chief symptoms of depression is inactivity, and researchers in learned helplessness have also noted the centrality of generalized deficits of motivation in this syndrome (Seligman, 1975). Negative mood, then, depresses activity level, perhaps because it facilitates seeing the negative consequences attached to any action. This pessimism may then reduce motivation and consequent activity toward a goal.

Overall, then, research evidence indicates that self-enhancement, exaggerated beliefs in control, and unrealistic optimism can be associated with higher motivation, greater persistence, more effective performance, and ultimately, greater success. A chief value of these illusions may be that they can create self-fulfilling prophecies. They may help people try harder in situations with objectively poor probabilities of success; although some failure is inevitable, ultimately these illusions will pay off more often than will lack of persistence (cf. Greenwald, 1980).⁴

³ Positive mood provides a potential secondary route whereby illusions may foster motivation and persistence. Manipulated positive mood enhances perceived probability of success and the tendency to attribute success to personal stable factors (Brown, 1984). By way of perpetuating the cycle of positive mood-perseverance-success, people in a naturally occurring or experimentally induced positive mood are also more likely to believe that they have succeeded and to reward themselves accordingly (Mischel, Coates, & Raskoff, 1968; Wright & Mischel, 1982). Their performance also increases more in response to increases in incentives than does that of people in a negative mood (Weinstein, 1982). Manipulated negative mood is associated with lower expectations for future success, with attributions of success to unstable factors (Brown, 1984), and with less self-reward (Mischel et al., 1968; Wright & Mischel, 1982). Motivation and positive mood appear to influence each other reciprocally: Involvement in activity elevates mood, and elevated mood increases involvement in activity (E. Diener, 1984). Overall, the links between being happy and being active are so well-established that one of our earliest psychologists, Aristotle, maintained that happiness is a by-product of human activity (Freedman, 1978).

⁴ We have assumed that the relation between illusions and persistence generally results in positive outcomes. Perseverance may sometimes be maladaptive, however, as when an individual persists endlessly at a task that is truly intractable (see Janoff-Bulman & Brickman, 1982). Although some evidence (e.g., McFarlin, Baumeister, & Blascovich, 1984) suggests that such nonproductive perseverance may be most prevalent among people with high self-esteem (i.e., those who are most apt to display self-enhancing illusions), other studies (e.g., Baumeister & Tice, 1985; McFarlin, 1985) suggest that people with high self-esteem may be most apt to desist from persisting endlessly at an unsolvable task when they are given the opportunity to do so. Thus, the nature of the relation between unproductive persistence and self-enhancing illusions is unclear and needs further empirical clarification.

Summary and Implications

To summarize, we return to the criteria of mental health offered earlier and relate them systematically to positive illusions. Those criteria include happiness or contentment, caring for and about others, and the capacity for creative, productive work. Although research does not systematically address the role of each of the three positive illusions with respect to each criterion of mental health, the evidence is suggestive in all cases. Happy people are more likely to have positive conceptions of themselves, a belief in their ability to control what goes on around them, and optimism about the future. They also typically have high self-esteem. The ability to care for others appears to be associated with positive illusions in that illusions are associated with certain aspects of social bonding. The capacity for creative, productive work is fostered both by enhanced intellectual functioning, which may be an outgrowth of positive illusions, and by the increased motivation, activity level, and persistence that are clearly fostered by a positive sense of self, a sense of control, and optimism.

Accommodating Illusions to Reality

The previous analysis presents some theoretical and practical dilemmas. On the one hand, we have an established view of mental health coming largely from the fields of psychiatry and clinical psychology that stresses the importance of accurate perceptions of the self, one's circumstances, and the future. On the other hand, we have a sharply different portrait from cognitive and social psychology of the normal individual as one who evidences substantial biases in these perceptions. Moreover, these biases fall in a predictable direction, namely, a positive one. How are we to reconcile these viewpoints?

A second dilemma concerns the functional value of illusions. On the one hand, positive illusions appear to be common and, more important, appear to be associated with positive outcomes that promote good mental health. On the other hand, this evidence flies in the face of much clinical wisdom as well as commonsense notions that people must monitor reality accurately to survive. Thus, it is important to consider how positive illusions can be maintained and, more important, can be functional in the face of realistic and often contradictory evidence from the environment.

Reconciling Contradictory Views of Mental Health

In addressing the first dilemma, a useful point of departure in a reconciliation is to examine the potential flaws in the data-gathering methods of the relevant clinical and social psychological literatures in deriving their respective portraits. Historically, clinical constructions of mental health have been dominated by therapy with and research on abnormal people. Many psychologists and psychiatrists who have written about mental health devote their research and clinical endeavors to individuals whose perceptions are disturbed in a variety of ways. How might an understanding of mental health be influenced when abnormality is an implicit yardstick? Contrasts between pathological and normal functioning are likely to loom large. Because

an attribute of many psychologically disturbed people is an inability to monitor reality effectively, the healthy individual may be portrayed as one who maintains very close contact with reality. More subtle deviations in perceptions and cognitions from objectively accurate standards may well go unnoticed.

But just as a strict clinical view of mental health may result in an overemphasis on rationality, a view of mental health derived solely from social cognition research may be skewed to reveal an overemphasis on illusions. Much research in social cognition extricates individuals from the normal settings in which they interact for the purpose of providing them with experimentally manipulated information and feedback. Yet social and cognitive research on the prevalence and usefulness of schemata makes clear that people rely heavily on their prior expectations for processing incoming data (see Fiske & Taylor, 1984; Hastie, 1981; Taylor & Crocker, 1981, for reviews). To the extent that manipulated information and feedback are similar to the information and feedback that people normally encounter in their chosen environments, one might expect to see perceptions similar to those that people usually develop in their normal world. However, to the extent that the information and feedback that are provided experimentally deviate from the usual information and feedback that an individual might encounter in the real world, the implications of any errors and biases in perception and cognition are unclear. Within social cognition, these experimentally documented errors and biases are often interpreted as evidence for flaws in human information-processing strategies. Another interpretation, however, is at least as tenable. Individuals may merely assimilate unfamiliar or unexpected data to their prior beliefs with relatively little processing at all. If prior beliefs include generally positive views of the self, personal efficacy, and the future, then interpretation of any negative feedback may appear, falsely, to be error prone in a positive direction.

Taking these respective flaws of the social and clinical portraits into account, what kind of reconciliation can we develop? First, a certain degree of contact with reality seems to be essential to accomplish the tasks of everyday life. If the errors and biases identified by social cognition dominated all inferential tasks, it would be difficult to understand how the human organism could learn. On the other hand, it is also evident that when errors and biases do occur, they are not evenly distributed. They consistently stray in a positive direction, toward the aggrandizement of the self and the world in which one must function. The key to an integration of the two views of mental health may, then, lie in understanding those circumstances under which positive illusions about the self and the world may be most obvious and useful. The nature of these circumstances is suggested both by social cognition research itself and by research on victims of misfortune.

If one assumes either that people's prior beliefs about themselves, their efficacy, and their future are positive or that their information-processing strategies bias them to interpret information in this way, then it follows that errors and biases will be most obvious when feedback from the real world is negative. In fact, in experimental circumstances examining positive biases, research reveals that positive biases are more apparent as threats to the self increase (Greenwald, 1981). The importance

of information may also alter the prevalence of positive biases. Greenwald (1981) found self-enhancing biases to be more in evidence as the importance of the situation increased. Thus, for example, the self-serving causal attribution bias is more likely to occur for behaviors that are important to an individual than for personally trivial events (e.g., Miller, 1976).

Consistent with both points, research with victims of misfortune, such as cancer patients, suggests that illusions about the self, one's efficacy, and the future are in evidence in dealing with these potentially tragic events (Taylor, 1983). For example, a study of patients with breast cancer found that the belief that one's coping abilities were extraordinary (Wood, Taylor, & Lichtman, 1985) and the belief that one could personally prevent the cancer from coming back, even in the face of a likely recurrence, were quite common (Taylor, Lichtman, & Wood, 1984). More to the point, they were associated with successful psychological adjustment to the cancer.

In a recent review of the literature on personality factors as buffers of the stress-disorder relation, Cohen and Edwards (in press) found only scattered evidence for stress-buffering effects across a large number of personality variables; they suggested that this may occur because only a few superordinate mechanisms actually buffer stress successfully. Significantly, they offered as possible superordinate mechanisms feelings of personal control, self-efficacy or self-esteem, optimism, and effort or ability. At present, the evidence is strongest for sense of personal control. Their analysis provides converging evidence for the potential functional value of self-enhancement, personal control, optimism, and their concomitants under conditions of threat. Becker (1973) made a related point in his Pulitzer-Prize-winning book, *The Denial of Death*. He argued that because the world is an uncertain and frightening place to live in, people create positive, life-affirming illusions to enable them to cope with their existential terror (cf. J. Greenberg, Pyszczynski, & Solomon, 1986).

To summarize then, evidence from converging sources suggests that positive illusions about the self, one's control, and the future may be especially apparent and adaptive under circumstances of adversity, that is, circumstances that might be expected to produce depression or lack of motivation. Under these circumstances, the belief in one's self as a competent, efficacious actor behaving in a world with a generally positive future may be especially helpful in overcoming setbacks, potential blows to self-esteem, and potential erosions in one's view of the future.

Management of Negative Feedback

If illusions are particularly functional when a person encounters negative feedback, we must consider, first, how the process of rejecting versus accommodating negative feedback occurs and, second, how people negotiate the world successfully and learn from experience without the full benefit of negative feedback. To anticipate the forthcoming argument, we maintain that a series of social and cognitive filters make information disproportionately positive and that the negative information that escapes these filters is represented in as unthreatening a manner as possible.

Social construction of social feedback. A variety of social norms and strategies of social interaction conspire to protect the individual from the harsher side of reality. Research indicates that, although people are generally unwilling to give feedback (Blumberg, 1972), when it is given, it is overwhelmingly likely to be positive (Blumberg, 1972; Parducci, 1968; Tesser & Rosen, 1975). Evaluators who must communicate negative feedback may mute it or put it in euphemistic terms (Goffman, 1955), thus rendering it ambiguous. In a similar vein, studies of opinion moderation (Cialdini, Levy, Herman, & Evenbeck, 1973; McGuire, 1985; M. Snyder & Swann, 1976; Tetlock, 1983) reveal that when people expect that others will disagree with them, they often moderate their opinions in advance to be less extreme and thereby more similar to what they perceive to be the attitudes of their audience. If a person holds negative beliefs about another, he or she is highly likely to discontinue interaction with the person, rather than communicate the negative feedback (Darley & Fazio, 1980). Implicitly, then, people collectively subscribe to norms, ensuring that they both give and receive predominantly positive feedback (see also Goffman, 1955).

The interaction strategies that people adopt in social situations also tend to confirm preexisting self-conceptions (see Swann, 1983, 1984, for reviews). People implicitly signal how they want to be treated by adopting physical identity cues (such as clothing or buttons that express political beliefs), by taking on social roles that communicate their self-perceptions (such as mother or radical), and by using methods of communication that preferentially solicit self-confirming feedback (Swann, 1983). In this last category, people actively seek to disconfirm others' mistaken impressions of them (Swann & Hill, 1982) and are more likely to seek social feedback if they believe it will confirm their self-conceptions (Swann & Read, 1981a, 1981b). Because most individuals have favorable self-views, such strategies lead to a tendency to seek feedback primarily when feedback is likely to be positive (Brown, 1987).

The construction of social relationships with friends and intimates also facilitates positive self-impressions. People select friends and intimates who are relatively similar to themselves on physical resources, nearly equal on ability and achievement, similar in attitudes, and similar in background characteristics (Eckland, 1968; Hill, Rubin, & Peplau, 1976; Richardson, 1939; Spuhler, 1968; see Swann, 1984, for a review). This selection process reinforces one's beliefs that one's attitudes and attributes are correct. People form relationships with people who see them as they see themselves (Secord & Backman, 1965; Swann, 1983) and tend to be unhappy in relationships in which they are not seen as they want to be seen (Laing, Phillipson, & Lee, 1966). Tesser and his associates (Tesser, 1980; Tesser & Campbell, 1980; Tesser, Campbell, & Smith, 1984; Tesser & Paulhus, 1983) have suggested that people select friends whose abilities on tasks central to the self are somewhat inferior to their own but whose abilities on tasks less relevant to the self are the same or superior. In this way, individuals can achieve the best of both worlds: They can value their friends for exceptional qualities irrelevant to the self (thereby enhancing the self by means of association) without detracting from their own positive self-evaluations.

Some negative feedback, such as losing a job or being abandoned by a spouse, is difficult to rebut, and under such circumstances, one's friends and family may help in the esteem-restoring process by selectively focusing on one's positive qualities, on the positive aspects of the unpleasant situation, and on the negative aspects of the former situation. In analyses of the social support process, researchers have uniformly regarded the maintenance of self-esteem as a major benefit of social support (e.g., Cobb, 1976; House, 1981; Pinneau, 1975; Schaefer, Coyne, & Lazarus, 1981), and research indicates that social support buffers people from physical and emotional distress during periods of high stress (Cobb, 1976; Cohen & Hoberman, 1983; Cohen & McKay, 1983; Kaplan, Cassel, & Gore, 1977; LaRocco, House, & French, 1980). Experimental studies are consistent with this conclusion (e.g., Backman, Secord, & Peirce, 1963; Swann & Predmore, 1985) by showing that friends' agreement on one's personal attributes can act as a buffer against disconfirming feedback.

Overall, then, norms and strategies of social interaction generally enhance positive self-evaluations and protect against negative ones. One caveat, however, deserves mention. A considerable amount of the research cited demonstrates that people solicit and receive self-confirming feedback, not necessarily positive feedback. For example, a woman who thinks of herself as shy may seek and receive feedback that she is (see Swann, 1983). At first, these results may seem contradictory with the position that social feedback fosters positive self-conceptions, but in fact, they are not. Because most people think well of themselves on most attributes, confirming feedback is typically positive feedback.

Biases in encoding, interpretation, and retrieval. Social interaction itself, then, is one filter that biases the information an individual receives in a positive direction. Another set of filters is engaged as the cognitive system encodes, interprets, or retrieves information. People generally select, interpret, and recall information to be consistent with their prior beliefs or theories (see Fiske & Taylor, 1984; Greenwald, 1980; Taylor & Crocker, 1981, for reviews).⁵ Consequently, if a person's prior beliefs are positive, cognitive biases that favor conservatism generally will maintain positive illusions more specifically.

Some potentially contradictory information never gets into the cognitive system. Preexisting theories strongly guide the perception of information as relevant (Howard & Rothbart, 1980; Rothbart, Evans, & Fulero, 1979; see Fiske & Taylor, 1984; Nisbett & Ross, 1980). Ambiguous information tends to be interpreted as consistent with prior beliefs (see Taylor & Crocker, 1981, for a review); thus, a behavior that is neither clearly a success nor clearly a failure is likely to be seen as positive by most individuals. In particular, ambiguous feedback from others may be perceived as more favorable than it really is (Jacobs, Berscheid, & Walster, 1971).

If feedback is not positive, it may simply be ignored. In their review of approximately 50 studies, Shrauger and Schoeneman (1979) examined the evidence relating self-perceptions to evaluations by significant others in natural settings. They found little evidence that self-evaluations are consistently influenced by others' feedback, nor did they find evidence of congruence between self-perceptions and evaluations by others (see also Sh-

rauger, 1982). They did, however, find substantial evidence that people's views of themselves and their perceptions of others' evaluations of them were correlated. People who thought well of themselves believed that they were well-thought-of, and people who thought poorly of themselves believed that others did as well (see also Schafer & Keith, 1985).

Interpretational biases also mute the impact of incoming information. Generally speaking, discrepant self-relevant feedback is more likely to be perceived as inaccurate or uninformative than is feedback that is consistent with the self (Markus, 1977; Swann & Read, 1981a, 1981b). It is scrutinized more closely than is confirmatory information in terms of the evaluator's motives and credibility, with the result that it is likely to be discounted (Halperin, Snyder, Shenkel, & Houston, 1976; Shavit & Shouval, 1980; Shrauger, 1982). One manifestation of this tendency is that, because self-perceptions are generally positive, negative feedback is seen as less credible than positive feedback (C. R. Snyder, Shenkel, & Lowery, 1977), especially by people with high self-esteem (Shrauger & Kelly, 1981; Shrauger & Rosenberg, 1970; see Shrauger, 1975, for a review). When all else fails, discrepant behaviors may be explained away by excuses that offer situational explanations for the behavior (C. R. Snyder, Higgins, & Stucky, 1983). In those cases in which personal responsibility for failure cannot be denied, one can maintain that the attributes on which one is successful are important, whereas the attributes on which one fails are not (e.g., Tesser & Paulhus, 1983).

Finally, information that is consistent with a prior theory is, generally speaking, more likely to be recalled (e.g., Anderson & Pichert, 1978; Owens, Bower, & Black, 1979; Zadny & Gerard, 1974). People are better able to remember information that fits their self-conceptions than information that contradicts their self-conceptions (see Shrauger, 1982; Silverman, 1964; Suinn, Osborne, & Page, 1962; Swann, 1984; Swann & Read, 1981a, 1981b, for reviews). When social feedback is mixed in its implications for the self, people preferentially recall what confirms their self-conceptions (Swann & Read, 1981a, 1981b). Typically, these self-conceptions are positive.

Cognitive drift. If negative or otherwise contradictory information succeeds in surmounting the social and cognitive filters just described, its effects may still be only temporary. Research demonstrates that beliefs may change radically in response to temporary conditions and then drift back again to their original state (e.g., Walster & Berscheid, 1968). This characteristic, cognitive drift, can act as another method of absorbing negative feedback. For example, a dramatic change in self-perception may occur following a negative experience, such as failing a test or being accused of insensitivity by a friend. But, with time, any single encounter with negative feedback may fade into the context of other so-called evidence bolstering positive self-conceptions (cf. Swann, 1983).

Some direct evidence for cognitive drift exists in the literature

⁵ Hastie and Kumar (1979) and others (see Higgins & Bargh, 1987, for a review) have found that under certain circumstances, inconsistent information is better recalled than consistent information. This finding appears to occur primarily under impression-formation conditions, however, which are unlikely to characterize self-inference.

on self-serving attributions. In a series of experiments, Burger and Huntzinger (1985) found that initially modest attributions for successful and failed performance became more self-serving over time. Similarly, in research on attributions for joint performance, Burger and Rodman (1983, Experiment 2) found that people gave a partner more credit than the self for a joint task immediately following the task (an attribution that may have considerable social value) but later gave themselves more credit for the joint product, as the self-centered bias predicts. Markus and Nurius (1986) made a similar point in noting that the working self-concept is highly responsive to the social environment, whereas the stable self-concept is more robust and less reactive. Cognitive drift, then, is a conservative mechanism that can protect against change in the cognitive system. To the extent that beliefs about one's self and the environment are positive, cognitive drift also maintains positive self-conceptions.

Acknowledged pockets of incompetence. Certain kinds of negative feedback recur repeatedly and, therefore, elude the social and cognitive filters just described. Presumably, this negative information has validity and therefore must be dealt with in some way that acknowledges its existence without undermining generally positive conceptions of the self and the world. One such method is accepting a limitation in order to avoid situations that would require it. In essence, one creates an acknowledged pocket of incompetence. Each person may have a few areas of life (e.g., finances, tennis, artistic or musical ability, fashion sense, or ability to dance) in which he or she readily acknowledges a hopeless lack of talent. People may relegate such behaviors to others and avoid getting themselves into circumstances in which their talents would be tested.

We know of no research that directly addresses these acknowledged pockets of incompetence, but we venture a few speculations on their attributes. First, one might expect that people actually exaggerate their incompetence in these areas to justify their total avoidance of and nonparticipation in the activities. Second, people may admit to these incompetencies, in part, to lend credibility to their positive self-assessments in other areas. Third, to protect self-esteem, people may downgrade the importance or significance of the domains in which they lack skill. For this last point, there is considerable supportive evidence (e.g., Campbell, 1986; Harackiewicz, Manderlink, & Sansone, 1984; Lewicki, 1984, 1985; Rosenberg, 1979).

Despite the absence of research on them, psychological theory provides ample mechanisms whereby such pockets of incompetence might develop. Punishment, in which a behavior is followed by a noxious stimulus, leads to avoidance, and performance declines in that domain in the future (Hilgard & Bower, 1966). "Helplessness training," in which one's efforts to control repeatedly come to naught, produces affective, cognitive, and motivational deficits in both the initial situation in which helplessness occurred and in similar situations, i.e., learned helplessness (Seligman, 1975). Avoidance of a task or its consistent delegation to another person may act as cues that lead one to assume that one is not good at something, an example of what Langer and Benevento (1978) called self-induced dependence.

Research that has adopted the punishment, learned helplessness, or self-induced dependence research models has uniformly stressed the liabilities of assumed incompetence: low

self-esteem, poor performance, low motivation, and the like. These adverse effects occur, however, only when a person must actually perform a task relevant to the doubted skill. In real life, except under unusual circumstances, a person may well avoid the domain. Paradoxically, then, the effects of punishment, learned helplessness, or self-induced dependence may actually be quite positive. By allowing the person to avoid the area of incompetence, they permit self-esteem, motivation, and performance to be left largely intact (cf. Frankel & Snyder, 1978; Rothbaum, Weisz, & Snyder, 1982).

Negative self-schemata. Avoiding situations in which one lacks skill or talent is one method of compartmentalizing negative self-relevant information. For some attributes, however, negative self-relevant information or situations cannot be avoided. For example, if the negative attribute is a physical one that a person unavoidably carries around (e.g., obesity) or if the negative attribute figures prominently into many situations (e.g., shyness), avoidance is an impractical solution. Under these circumstances, a person may develop a negative self-schema (Markus, 1977). A self-schema is a knowledge structure that summarizes information about the self in a particular domain and facilitates the processing of information about the self in that domain. Like positive self-schemata, negative self-schemata enable people to identify schema-relevant information as self-descriptive and to do so with greater speed and confidence than is true for information not related to a self-schema (Wurf & Markus, 1983).

Negative self-schemata have not been widely studied, and consequently, whatever self-protective functions they may serve are speculative. A negative self-schema may enable a person to label and cordon off an area of weakness, so that it need not permeate all aspects of identity (Wurf & Markus, 1983). The fact that schema-relevant situations can be easily identified may make it possible for an individual to anticipate, prepare for, or avoid situations in which he or she will be at a disadvantage (Wurf & Markus, 1983). A negative self-schema may act as a convenient attribution for any failure (e.g., "I didn't get the job because of my weight") that mitigates other, more threatening attributions (e.g., "I didn't get the job because I'm not good enough"; Wurff & Markus, 1983). Future research can address these and other potential self-protective functions.

To summarize, then, an individual's social and cognitive environments may not only fail to undermine positive illusions but may help maintain or even enhance them through a variety of mechanisms. Thus, each person is able to live out positive illusions relatively immune to negative feedback, because individually and collectively, people construct a social world that is as self-enhancing as the private, internal one and a cognitive system that maintains it. In those cases in which negative feedback cannot be eluded, it may be isolated as much as possible from the rest of the self-concept and come to provide guidelines for avoiding or managing situations relevant to negative attributes.

Summary and Conclusions

Evidence from social cognition research suggests that, contrary to much traditional, psychological wisdom, the mentally

healthy person may not be fully cognizant of the day-to-day flotsam and jetsam of life. Rather, the mentally healthy person appears to have the enviable capacity to distort reality in a direction that enhances self-esteem, maintains beliefs in personal efficacy, and promotes an optimistic view of the future. These three illusions, as we have called them, appear to foster traditional criteria of mental health, including the ability to care about the self and others, the ability to be happy or contented, and the ability to engage in productive and creative work.

An analysis of the possible mechanisms whereby these illusions may operate suggests that people may simply assimilate contradictory, negative, or ambiguous information to preexisting positive schemata about the self and the world with little processing at all. Positive illusions may also be maintained by a series of social and cognitive filters that discard or distort negative information. Negative information that eludes these filters may be cordoned off from having general implications for the self and one's world through such mechanisms as acknowledged pockets of incompetence or negative self-schemata.

Despite empirical support for this analysis, our perspective has some intrinsic limitations both as a theory and as a delineation of a functional system. The first theoretical weakness is that some links are not well established and require further empirical documentation. Chief among these are the direct links between illusions and positive affect, illusions and social skills, and illusions and intellectual functioning. The evidence for all three links is sparse, largely correlational, or both, and experimental studies are needed. Further research is especially necessary regarding the link between illusions and positive affect, because, as noted earlier, affect represents a potential route by which illusions may indirectly affect other criteria of mental health.

A second limitation is that the model does not speak persuasively to another common criterion of mental health, namely, the capacity for personal growth and change (Jahoda, 1958). Indeed, one might speculate that the present approach is actually antithetical to growth and change. That is, if people are so able to maintain positive self-conceptions and buttress their decisions even in the face of negative feedback, where is the impetus for growth and change? This criticism implicitly assumes that growth and change necessarily emerge from negative experiences. We suggest that change is often provoked by positive experiences, such as the perception that a new career direction will be even more rewarding than a current one. Unrealistic optimism, an exaggerated sense of mastery, and excessive self-confidence may inspire people to make changes that might be avoided if the uphill battle ahead was fully appreciated. Growth and change may also occur when a person is faced with a negative event such as being fired from a job or developing a serious illness. In this case, the existence of the negative event is given, but the capacity to alter its meaning in positive ways may produce growth and change. Thus, we argue that, far from undermining personal growth and change, positive illusions may actually help people, first, to seek change by minimizing awareness of the potential costs of change initially and, second, to profit from negative events that are unavoidable by enabling them to put those events in the best light (cf. Taylor, 1983). Research evidence on these points is needed.

A third issue concerning the viability of the present perspec-

tive concerns the experimental nature of much of the evidence. We have already noted several potential biases in experimental evidence, such as the tendency to extract people from their customary environments, expose them to unfamiliar stimuli, and draw far-reaching conclusions about human behavior that may in part be a response to novelty. Another problem with experimental evidence is that the time perspective is short, so the long-term consequences of any observed biases cannot easily be ascertained.

This criticism leads directly to a fourth major question: Are positive illusions always adaptive? Might there not be long-term limitations to positive illusions? Indeed, each of the positive illusions described would seem to have inherent risks. For example, a falsely positive sense of accomplishment may lead people to pursue careers and interests for which they are ill-suited. Faith in one's capacity to master situations may lead people to persevere at tasks that may, in fact, be uncontrollable; knowing when to abandon a task may be as important as knowing when to pursue it (Janoff-Bulman & Brickman, 1982). Unrealistic optimism may lead people to ignore legitimate risks in their environments and to fail to take measures to offset those risks. False optimism may, for example, lead people to ignore important health habits (Weinstein, 1982) or to fail to prepare for a likely catastrophic event, such as a flood or an earthquake (Lehman & Taylor, *in press*). Faith in the inherent goodness of one's beliefs and actions may lead a person to trample on the rights and values of others; centuries of atrocities committed in the name of religious and political values bear witness to the liabilities of such faith. If positive illusions foster the use of shortcuts and heuristics for making judgments and decisions (Isen & Means, 1983), this may lead people to oversimplify complex intellectual tasks and to ignore important sources of information.

It is not clear that the preceding points are limits of positive illusions, only that they are possible candidates. It is important to remember that people's self-evaluations are only one aspect of judgments about any situation, and there may be non-ego-related information inherent in situations that offsets the effects of illusions and leads people to amend their behavior. For example, a man who does poorly at a job may fail to correctly interpret negative feedback as evidence that he is doing a poor job, but he may come to feel that he does not like the job, his boss, or his co-workers very much; consequently, he may leave. The certitude that one is right may lead to discrimination against or hatred of others who hold different beliefs. People may be dissuaded, however, from committing certain actions, such as murder or incarceration of others, in service of their beliefs because they believe the means are wrong or because they know they will be punished; this recognition may, nevertheless, leave their beliefs intact. Potential liabilities associated with one illusion may be canceled out by another. For example, false optimism may lead people to underestimate their vulnerability to cancer, but mastery needs may lead people to control their smoking, diet, or other risk factors. The preceding argument is not meant to suggest that positive illusions are without liabilities. Indeed, there may be many. One should not, however, leap to any obvious conclusions regarding potential liabilities of positive illusions without an appreciation of possible countervailing forces that may help offset those liabilities.

In conclusion, the overriding implication that we draw from our analysis of this literature is that certain biases in perception that have previously been thought of as amusing peccadillos at best and serious flaws in information processing at worst may actually be highly adaptive under many circumstances. The individual who responds to negative, ambiguous, or unsupportive feedback with a positive sense of self, a belief in personal efficacy, and an optimistic sense of the future will, we maintain, be happier, more caring, and more productive than the individual who perceives this same information accurately and integrates it into his or her view of the self, the world, and the future. In this sense, the capacity to develop and maintain positive illusions may be thought of as a valuable human resource to be nurtured and promoted, rather than an error-prone processing system to be corrected. In any case, these illusions help make each individual's world a warmer and more active and beneficent place in which to live.

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Call for Nominations for Editor of *JEP: Learning, Memory, and Cognition*

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