

## **MAINTAINING POSITIVE ILLUSIONS IN THE FACE OF NEGATIVE INFORMATION: GETTING THE FACTS WITHOUT LETTING THEM GET TO YOU**

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Recent research on mental health suggests that normal mental functioning is characterized by self-aggrandizing positive biases, namely overly positive self-conceptions, an exaggerated perception of personal control, and overly optimistic assessments of the future. These biases cannot be thought of as defense mechanisms such as repression or denial because they promote rather than undermine other aspects of mental health. Such findings raise the question as to how people maintain overly positive views of themselves, the world, and the future in the face of negative information that challenges such beliefs but would seem to be necessary for effective functioning. We argue that positive illusions are responsive to the utility of information, rather than increasing in response to threat as defensive reactions do. We further argue that the mind processes negative information differently, depending upon the diagnosticity and pervasiveness of that negative information for the self. In such ways, people are able to preserve positive self-conceptions while simultaneously making adaptive use of negative feedback.

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I refuse to be intimidated by reality anymore. After all, what is reality anyway? Nothin' but a collective hunch . . . I made some studies, and reality is the leading cause of stress amongst those in touch with it . . . Now, since I put reality on a back burner, my days are jam-packed and fun-filled . . . When I think of the fun I missed, I try not to be bitter.

—Lily Tomlin as Trudy, the Bag Lady (Wagner, 1986)

Many traditional models of mental health assert that the mentally healthy person perceives reality objectively. Research from cognition and social cognition, however, suggests that normal thought is marked by systematic positive distortions of reality. In a recent paper in *Psychological Bulletin*, Taylor and Brown (1988) reviewed a substantial literature showing that, rather than maintaining accurate views of themselves, the world, and the future, most people hold unrealistically positive views of the self, an exaggerated sense of personal control over the environment, and unrealistic optimism about the future. For example, rather than being balanced between positive and negative attributes, the perception of the self that most people hold is heavily weighted toward the positive. Most people believe that they are more socially competent than others think they are, and in general self-conceptions appear to be more favorable than how the self is perceived by others (e.g., Shrauger, 1975; Taylor & Brown, 1988). Research on the illusion of control (e.g., Langer, 1975; Langer & Rodin, 1976; Langer & Roth, 1975; Rodin & Langer, 1977) suggests that normal people tend to overestimate the amount of control that they have in situations, particularly those that are chance-determined. Considerable research on estimations of future events suggests that people's predictions of what will occur in the future correspond very closely to what they would like to see happen or to what is socially desirable, but not very closely to what is objectively likely (Cantril, 1938; Lund, 1975; McGuire, 1960; Sherman, 1980; Weinstein, 1980). Taylor and Brown (1988) argued that these systematic, robust, and enduring positive beliefs represent illusions. An 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)

Are these overly positive beliefs a psychological benefit or a liability? Trudy, the bag lady, as well as the present authors, would argue that this set of positively biased illusions is associated with and fosters better life functioning as well as positive psychological adjustment. This is counter not only to traditional theories of mental health, but also to intuitive beliefs about adjustment. Even if one accepts the idea that

overly optimistic beliefs foster psychological adjustment, it is compelling to believe that this would be a false happiness, that those living in a dream world would be unable to function as effectively in the long run as would more realistic persons. We will argue below that such is not the case. Illusions of self-worth, personal control, and a positive future have been consistently associated with criteria of mental health and have not been associated with poor psychological adjustment. Furthermore, we will argue that persons who engage in such positive illusions are able to function effectively and productively and that the source of this ability lies in a seeming paradox: Namely, people are able to maintain positive biases while simultaneously learning from and making use of negative feedback. This effective use of negative feedback, together with some more subtle characteristics of illusions, serves to keep illusions within adaptive bounds.

## ILLUSIONS AND MENTAL HEALTH

As Taylor and Brown (1988) argue, positive illusions appear to be associated with traditional criteria of mental health: the ability to be happy, the ability to form social bonds, the capacity for creative and productive work, a high degree of motivation and persistence in the pursuit of goals, and the ability to adapt successfully to stressful events (see Jahoda, 1958; Jourard & Landsman, 1980, and Schulz, 1977, for reviews of the mental health literature). For example, happy people have falsely high opinions of themselves, they show self-serving causal attributions, they have exaggerated beliefs in their ability to control what goes on around them, and they are often unrealistically optimistic (Taylor & Brown, 1988). People with a positive view of themselves, their personal control, and the future persist longer and harder on tasks and show more fluid and creative thinking than those who are low in self-esteem, those who are mildly depressed, or those in whom a negative mood has been induced. A positive mood, which tends to be fostered by positive illusions about the self, personal control, and the future, exerts a positive effect on social interactions. Experimental studies demonstrate that those in whom a positive mood has been induced show more prosocial behavior, such as helping others and evaluating others more favorably (see Isen, 1984, for a review). High self-esteem, perceptions of control, and optimism about the future have all been related to superior coping with stressful events. Those who hold positive illusions appear not only to react less adversely to stressful events, but also to exhibit more effective coping strategies in dealing with them (see Scheier & Carver, 1985; Taylor, in press).

### ILLUSIONS AND DEFENSE MECHANISMS

Thus, it would seem that positive biases in self-perceptions are conducive to adaptive psychological functioning. However, the idea that normal human thought is marked by occasional gaps and distortions, as well as by the outright denial of reality, is not new, and these previously identified distortions have been associated with a variety of adverse outcomes. Freud (1940, 1957) argued that when events from the internal and external world are highly threatening, people may deny or repress their implications in order to avoid intolerable anxiety. Denial involves a distortion of negative experiences so complete that it can block out memory of the experience altogether. Repression is a companion defense that involves inhibiting the emotional responses that result from a conflict between the demands of society and one's own internal impulses. By pushing the emotions into the unconscious, repression eliminates the discrepancy between what one believes one should feel and what one actually feels (Horney, 1950).

Denial is considered to be a primitive defense (see Lazarus, 1983). It may give the appearance of being a successful psychological shelter from reality, but it may actually mask anxiety without making it go away. The person who denies the existence of a threatening event often appears to others as rigidly overcontrolled, as if a crack in the defense would cause the entire facade to crumble. Indeed, reality will often break through, leaving the person vulnerable and frightened. Long-term denial, then, is generally considered to be a defensive pattern from which people must be coaxed through therapeutic intervention. The liabilities of repression are also well documented. Repression can interfere with learning information vital to the management of stressful events so that when those events occur, the person who characteristically copes through repression is left defenseless and anxious (Taylor & Clark, 1986).

How, then, is it possible that the seemingly related construct of positive illusion might be adaptive? In many ways those who cope with the problems of life through repression and those who deal with life through positive illusions do look very similar. However, illusions can be distinguished from repression and denial in several ways that help to explain their adaptive value.

First, repression and denial alter reality whereas illusions simply interpret it in the best possible light (Weinberger, personal communication, October 23, 1988). Defenses distort the facts, leading people to hold misperceptions of internal and/or external reality. Illusions, on the other hand, make the most of bad situations by adopting a maximally positive perspective. Ambiguous elements of situations enable people to impose their own interpretations on events and to give themselves the benefit

of the doubt, framing events in ways that promote hope and positive self-appraisal. Weinberger (personal communication, October 23, 1988), for example, argues that illusions represent a distortion of statistical reality, in that people hold beliefs that are more positive than reality can sustain; however, he argues that hoping for the best, believing you can beat the odds, and thinking very well of yourself do not represent misconstruals of the facts. Defenses, in contrast, are maladaptive because of the internal dissociation process whereby part of the brain will not deal with what another part "knows."

A second important way in which illusions can be distinguished from defense mechanisms is in their consequences. In particular, whereas positive illusions have been associated with mental health, the repressive defensive style has been associated with maladaptive consequences regarding these same criteria of mental health. With regard to the mental health criteria of happiness and positive self-worth, those with positive illusions seem genuinely to be happy and to think well of themselves. In contrast, those who cope with life via repression report an absence of negative experiences, but no corresponding feelings of happiness and self-worth (Weinberger, in press). Even the absence of negative emotion seems to require active management for its maintenance, rather than a genuine life experience free from distress (Weinberger, in press).

Repressors typically report low levels of negative emotion, such as not being angry, hurt, upset, or confused as much as other people. On personality tests that do not distinguish the repressive coping style, repressors come out looking quite healthy, indeed, like normal people (Weinberger, in press). While people who cope through repression describe themselves as not upset by unpleasant events, they do not report enjoying themselves or meeting the challenges of life head-on. Repressors regard themselves as rational, controlled, and stable, whereas people who are truly free of anxiety describe themselves in terms suggesting a jubilant, flexible enjoyment of life. The fact that repressors actively avoid negative emotions of all kinds may retard their experiences of positive affect as well. For example, repressors report fewer positive as well as negative memories of their childhood (Weinberger, in press). In contrast, the illusions associated with normal thought appear to facilitate a fluent recall of positive memories (Taylor & Brown, 1988), although specific memories for childhood experiences have not been assessed.

Another way in which repression and illusions differ is in their relation to social skills. There is evidence that repression interferes with certain aspects of social competence. For example, in a study in which students were asked to disclose personal information to others, those high in the repressive style appeared to have little insight into their behavior, and consequently they made a poor impression on those to

whom they disclosed (Doster, 1975). The gaps that repressors demonstrate in their self-knowledge and ability to express themselves socially are also reflected in a limited understanding of the experiences of others. When asked to play the role of a counselor by listening and responding to another person's problems, for example, repressors did significantly more poorly than people who do not characteristically use repression (Nielsen & Fleck, 1981). They appear to show less interpersonal cognitive complexity and generally seem to pick up less information in the social environment (Wilkins, Epting, & Van De Reit, 1972). In contrast, positive illusions appear to foster many aspects of social competence (Taylor & Brown, 1988), although self-disclosure and role-playing have not been directly investigated.

Certain aspects of the ability to engage in creative and productive work also appear to be undermined by the repressive style. Repressors may need to use so much of their cognitive capacity to monitor negative affect that they may inhibit their cognitive flexibility, particularly the "spontaneous playful aspects of concept formation" (Weinberger, in press, p. 36; see Bergquist, Lloyd, & Johansson, 1973). In contrast, positive illusions, as noted earlier, actually appear to facilitate motivation, persistence, and activity level (Taylor & Brown, 1988). When repressors are confronted with cognitive and perceptual tasks that are sensitive to the effects of anxiety, their performance is impaired. In contrast, the illusions associated with normal thought seem to facilitate intellectual performance, including performance on challenging tasks. The defensiveness that repressors evince, then, may be associated with certain deficits in intellectual functioning, a pattern opposite of that observed in those who hold positive illusions (Weinberger, in press).

Perhaps the most important difference that distinguishes defensive responses from positive illusions is the manner in which they respond to the threat inherent in information and the anxiety generated by it. Rather than increasing in response to threat as defensive reactions do, normal illusion appears to respond realistically to threat (Taylor, in press). While normal people may not perceive their vulnerability to an event accurately, an increase in threat leads realistically to an increase in perceived risk. For example, in a study of Southern California college students, Taylor and Lehman (1987) found that all of the students considerably underestimated the probability of a major earthquake. However, these students accurately perceived their risk relative to one another: those who lived in seismically unsafe buildings were aware that their risk was greater than that faced by those in buildings that were structurally more sound. In contrast, repression and denial increase in magnitude as the threatening content of information increases. The more threat that exists, the more rigidly one adheres to defended beliefs. This maladaptive quality

of repression has been characterized as "a car that maintains a low speed because the driver is leaning heavily on both the brakes and the accelerator" (Weinberger, in press, p. 51).

There are several reasons, then, why the phenomena of repression and denial are not synonymous with the self-aggrandizing illusions observed in normal thought, and these differences are, we believe, at least one source of their differing adaptive value. First, defense mechanisms result in a distortion of reality, while illusions are simply overly positive subjective evaluations. Second, repression seems to lead to an absence of both positive and negative emotion, while illusions seem to mute only negative affect. Third, repressors appear to function less effectively according to the criteria normally associated with mental health (the ability to form social bonds, to engage in creative, productive work, to be happy, and to effectively combat stress), while positive illusions have been found to promote these same mental health criteria. Finally, the mechanisms of repression and denial have been articulated in a way that suggests differential responsiveness to threat but not to the utility of information. In contrast, the illusions of normal thought are very responsive to the usefulness of negative information and to its implications for the future, exhibiting a subtlety and patterning of responses to negative information not observed in the defense mechanisms of repression or denial.

In sum, illusions do not appear to be the mere cognitive infrastructure of repression and denial. While the latter are associated with some aspects of poor psychological and behavioral adjustment, the positive biases that we address appear to lead to better mental health and increased functioning. Moreover, some of the differences between illusions and defenses provide an illustration of illusions' aforementioned paradoxical characteristics: their ability to maintain positive affect and yet respond appropriately to negative information.

## ILLUSIONS AND NEGATIVE OUTCOMES

Despite their seemingly adaptive relationship to mental health, the fact that positive illusions are often distortions of reality leads many people to reject the idea that they are inevitably positive in their consequences. There would seem to be readily apparent examples of illusions run to excess both in history and in current events. The invasion of Russia, first by Napoleon and later by Hitler, can be thought of as optimism and overconfidence gone awry. The conviction of Ivan Boesky and the impending trial of Michael Milken can be seen as cautionary tales, symbols

## ILLUSIONS AND THE USE OF NEGATIVE INFORMATION

Up to this point we have argued that illusions are adaptive and that this adaptiveness rests in their ability to maintain positivity (with its accompanying mental and behavioral benefits), while simultaneously making use of negative feedback. It is scarcely functional to be oblivious to negative feedback. If people were unaware of their faults and shortcomings, they would be vulnerable to a host of irrational decisions. Clearly, the ability to accommodate one's self-perceptions and perceptions of the world to negative feedback is essential for effective functioning. Below we describe the process by which negative information serves to keep illusions specific to appropriate areas of life and at adaptive levels.

Responses to negative information that the environment provides vary, depending upon the implications that information has for the self. Not all negative information is useful. Some is gratuitous, relevant perhaps to a single episode that occurs once and only once. The occasional caustic remark of a friend or a tiff with the dry cleaner are the kinds of isolated negative events that we all encounter and that, in themselves, have little or no meaning for future behavior. This information is likely to be screened out by either social or cognitive filters (Blumberg, 1972; Goffman, 1955; Parducci, 1968; Swann, 1983, 1984; Tesser & Rosen, 1975; see Taylor & Brown, 1988, for a review).

In contrast to this gratuitous information, other negative information is useful because it tells us something important about ourselves, that is, it is diagnostic. Diagnosticity is the degree to which negative information is indicative of some enduring quality of the self. Most of us lack talent in at least a few domains of life, whether it be managing finances, playing tennis, or dancing the latest steps. A second important quality of information is its pervasiveness. Pervasiveness refers to whether the negative information is confined to a limited life domain or whether it intrudes into many life domains, such as a readily identified weakness (*e.g.*, shyness). Diagnostic and/or pervasive negative information will not be screened out by social and cognitive filters because it has validity and, as a consequence, it will occur repeatedly.

The position we have adopted is that diagnostic and/or pervasive negative information is processed and represented in as benign a manner as possible. This enables people to profit from negative information that cannot be explained away, forgotten, or reinterpreted without undermining optimism or self-esteem. People can represent this type of negative information in a way that is simultaneously helpful to them and yet cordoned off from the rest of the self-concept, so as to produce as little damage for positive beliefs about the self, the world, and the future as possible. One such mechanism we have called "acknowledged pockets

of optimism and self-confidence turned to greed, lawlessness, and delusions of invulnerability. The recent defeat of Michael Dukakis in the U.S. presidential election has been blamed on his overly optimistic belief that his record would stand on its own and that responses to criticism were unnecessary.

But there are risks in overgeneralizing from such readily available examples. Merely because a person can be characterized as high in self-esteem, a sense of mastery, and unrealistic optimism does not mean that any failure can automatically and appropriately be ascribed to these large features of thought. It is likely that false beliefs have also led to equally large successes. The dilemma with examples is that one can never conclusively demonstrate that a particular factor, such as an illusion, led to a particular error or problem.

Nonetheless, each of the positive illusions that most people demonstrate would seem to have inherent risks. A falsely positive sense of one's accomplishments might lead people to pursue careers and interests for which they are ill-suited. Faith in one's capacity to master situations might lead people to persevere at tasks that are uncontrollable; knowing when to abandon a task may be as important as knowing when to pursue it. Unrealistic optimism might lead people to ignore legitimate risks in their environment and to fail to take measures to offset those risks. False optimism, for example, might lead people to ignore important health habits or to fail to prepare adequately for a likely catastrophic event, such as a flood or earthquake.

Illusions, however, need not constitute the contents of those dreams and aspirations that may themselves be flawed. They are, in essence, the fuel that drives creativity, motivation, and high aspirations. Just as one would not typically fault gasoline for a breakdown in an automobile's engine, so one cannot fault self-aggrandizing illusions for sometimes being used in service of incorrect ideas or goals that are out of reach. Persons who believe excessively in their ability to perform a task at which they are unskilled also are likely to be overly positive about their abilities in areas where they have a greater probability of success. Thus, while illusions may sometimes foster action unlikely to lead to success, they are also likely to provide the catalyst to positive outcomes. Indeed, because illusions are responsive to threat, beliefs about ability, control, and outcomes are likely to be patterned realistically. In other words, while positivity may mark perceptions of most abilities, it will be greatest where it most realistically should be. This leads us to infer that, given limited time and resources, people are more likely to pursue activities and exert control where they will be successful, and illusions will simply give them enough confidence to move into action. Overall, then, positive biases should lead to relatively more success than failure.

of incompetence" (Taylor & Brown, 1988), which is a method of accepting a limitation in order to avoid situations that require it. People may relegate activities in which they lack talent to others or avoid getting themselves into circumstances in which their talents would be tested, so as to preserve their otherwise positive self-conceptions.

In some cases, an area of incompetence cannot be cordoned off from the self-concept altogether because it has broad implications for a variety of life tasks (*i.e.*, it is pervasive as well as diagnostic). Chronic social ineptitude is an example. This kind of negative information typically leads people to develop negative self-schemas (Markus, 1977). A self-schema is a knowledge structure that summarizes information about the self in a particular domain. As such, it facilitates the processing of information about the self in that domain. One can recognize information as self-descriptive more quickly and with greater confidence than is true for information not related to the schema. Negative self-schemas (Wurf & Markus, 1983) refer to organized knowledge structures about the self involving one's faults or weaknesses. Having a negative self-schema enables a person to anticipate and prepare for situations in which he or she will be at a disadvantage. The shy person, for example, can rehearse questions to ask of people at a party prior to its occurrence.

There is a third type of negative information that is in many ways pervasive and that at least temporarily can lead to devastating effects on mental and physical health. These are victimizing events such as assault or rape, a life-threatening disease such as cancer or AIDS, a social devastation such as bereavement or divorce, and the like. These events will elude social and cognitive filters because their implications are so profound. They are also not amenable to the development of negative self-schemas or pockets of incompetence because they do not involve specific personal attributes.

Previous research has demonstrated both positive (Taylor, 1983) and negative (Janoff-Bulman, *in press*) responses to such events. Given evidence for both positive and negative changes following victimization, it seems logical that there is a set of moderating or mediating conditions that will determine the circumstances under which people achieve positive or negative outcomes following victimization. Our current work has attempted to provide just such a framework (Collins, Taylor, & Skokan, 1988). We argue that following a victimizing event certain beliefs are likely to be directly challenged by negative information, in particular, perceptions of personal invulnerability and the benign nature of the world. Thus, beliefs concerning the self and the world may be negatively altered by this type of information. In contrast, other domains of life are less likely to be directly challenged by a victimizing event, such as personal priorities or personal relationships. In addition, people actively

respond to and cope with victimizing events. This coping process is likely to lead to more positive beliefs in life domains amenable to control through such efforts. Thus, the amount of coping in which the victim engages may determine the types of changes experienced as well.

An empirical test of these hypotheses produced results consistent with the proposed process. Fifty-five men and women with cancers of varying sites and prognoses participated in a study assessing changes in their lives following the cancer experience. They were queried about five life domains: personal activities and priorities, personal relationships, views of the self, views of the world, and views of the future. We found that beliefs about the self, the world, and the future were about evenly split between the positive and negative. However, domains in which the individual's coping responses exerted an effect, namely personal priorities and relationships, not only remained positive but were reported to become increasingly so.

This integrative framework provides a basis for synthesizing the previous results of Janoff-Bulman and our own work, which had seemed on the surface to be contradictory. More important to the present argument, they describe a mechanism whereby negative information is admitted into perceptions of oneself, the world, and the future, but in a way that also retains and maximizes positive beliefs as well. These results suggest that the beliefs people derive from victimizing events maintain positive conceptions but also shift realistically in response to the negative implications of a threatening event.

Through the processes delineated above, we argue that illusions are able to respond to and make use of negative information when appropriate, while still maintaining positive beliefs overall. In this way, they can be distinguished from less adaptive diversions from realistic thinking such as repression or denial. Finally, we will argue below that there are some additional, less obvious ways in which illusions may be kept from running to excess, a possibility that might otherwise lead to a link between illusions and problems in functioning.

## ILLUSIONS TAMED

People's positive beliefs about themselves, the world, and the future are only one set of beliefs that they hold. There may be information inherent in situations that can offset what might otherwise be maladaptive effects of self-aggrandizing illusions (see Fiske & Taylor, 1984; Nisbett & Ross, 1980, for discussions of this issue). Consider, for example, a man who does poorly at his job but who fails to interpret negative feedback correctly as evidence that he is doing a poor job. Although his perceptions of

himself as a capable worker may persist, it cannot have escaped his attention that his work situation is not the most desirable one possible. He may come to feel that he does not like the job very much or that he does not particularly enjoy interacting with his boss or his coworkers. Consequently, he may leave his position, even though he has failed to correctly interpret the negative feedback as evidence that he is doing a poor job. One can argue that he has made the right decision for the wrong reasons, but if the conditions gave rise to non-ego-related information that ultimately led him to make the correct decision, then it may not matter. Moreover, if he can leave this job with his self-esteem relatively intact, his remaining self-confidence may lay the groundwork for greater success in a new occupation, at least more than would be the case if he perceived himself to be a failure.

People converse and interact with others in the social world in ways that may correct blatantly inflated self-perceptions, perceptions of the world, and perceptions of the future. Although there is an implicitly agreed upon social conspiracy to provide people with primarily positive feedback (e.g., Blumberg, 1972; Goffman, 1955), there are boundaries within which this social positivity operates. When a person's self-assessments stray too much in a positive direction, the social environment may mute them by providing gentle but clear feedback to suggest that the grandiosity has exceeded appropriate limits (see Fiske & Taylor, 1984). A worker who assumes most of the credit from some jointly undertaken venture, for example, would no doubt have these overly grandiose self-perceptions rapidly corrected by irate co-workers, thereby knocking his self-assessments back within reasonable bounds.

Certain beliefs about oneself may be more subject to illusions than others, specifically, those with few objective standards for evaluation. Most of us are at least intuitively aware of the fact that our grandiose self-conceptions are better held about attributes that cannot be directly tested than about attributes that can be readily held to a standard. As Jonathon Brown (1986) noted:

Insofar as personality characteristics are inherently subjective in nature, it may be the case that individuals are relatively free to assume, for instance, that they are more interesting, friendly, and humorous than the average other person, and precisely because social attributes lack objective referents, such beliefs may be harbored with psychological impunity. (p. 375)

For personal qualities with more objective referents such as the ability to play the piano or to do mathematics, personal assessments may stay closer to the truth. When either the environment provides objective standards against which self-assessments can be directly compared, or those self-assessments concern abilities that can be relatively easily con-

firmed or disconfirmed, people may show a more appropriate degree of modesty than may be the case with attributes that are unlikely to be challenged or that have objective standards of evaluation.

Illusions may also provide experiences that enable people to use them with ever-increasing success. Consider, for example, the illusion of control and the oft-noted potential risk that people may attempt to control situations that are actually uncontrollable. According to this argument, people with an exaggerated sense of their personal control may persist inappropriately at tasks that cannot be mastered. If this were true, it would constitute a clear limitation of the illusion of control. It does not, however, appear to be so. The available evidence suggests, instead, that people with high needs for mastery may be better able to discriminate controllable from uncontrollable situations, a very different and quite adaptive outgrowth of control needs (Janoff-Bulman & Brickman, 1982).

Why might people with high needs for control be better able to discriminate the situations in which it can be used successfully? People who have high needs to master or control situations almost certainly avail themselves of more opportunities to exert control than people with low needs for control. In so doing, they expose themselves to more opportunities to learn what things can be controlled and what cues in situations signal opportunities for control or its absence. Learning about control is unlikely to be different from learning about any other kind of contingent situation: People get better with practice. So it may be that people with high needs to control learn more about how to exert it successfully.

Finally, the idea that positive illusions are in service of self-esteem virtually requires that they stay in check. If one develops substantially unrealistic expectations regarding the future that exceed what one is actually able to accomplish, then one sets oneself up for failure and disappointment, thus lowering self-esteem (see Baumeister, in press). There appears, then, to be a natural feedback loop for keeping illusions in check. Except for those rare and unfortunate few who actively court failure and humiliation, most of us derive no comfort or satisfaction from such situations. Consequently, one would expect illusions to operate within a narrow band, to nudge people into attempting slightly more but not excessively more ambitious undertakings than they otherwise might. Illusions both work and are held in check, then, in part because they are self-fulfilling, creating the world that we believe already exists. Illusions produce adaptive behaviors, action and persistence, which are more likely to lead to success than lack of persistence and inactivity. Should the goal be set too high and the efforts fail, then the goal may be readjusted into more reasonable bounds, so that failure will not occur again.

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## CONCLUSIONS

In closing, we return to the logical paradox: How do people maintain their positive views of themselves, the world, and the future in the face of negative information that challenges these overly positive beliefs but would seem to be necessary for effective functioning in the world? The answer to this paradox, we have suggested, is twofold. First, positive illusions are responsive to the utility of information. Rather than increasing in response to threat as defense reactions appear to do, illusions represent a departure from, but not necessarily a distortion of, the truth. Highly threatening but probable events are recognized for what they are, namely probable threats, and their likelihood, though distorted in falsely optimistic manner, is nonetheless perceived realistically relative to less probable threats.

A second answer is that the mind processes negative information differently, depending upon the diagnosticity and pervasiveness of that negative information. The small, gratuitous insults of everyday life that have no meaning or lasting implications can be dealt with through cognitive and social filters that enable people to ignore, forget, or misperceive these events altogether. Negative information that has more enduring implications for the self may be cordoned off from the rest of the self-concept through negative self-schemas or pockets of incompetence that are domain-specific and enable people to prepare for or avoid situations in which their liabilities or lack of talent would be tested. Negative events that are more pervasive, such as victimization, appear to prompt more complex representations. Beliefs directly affected by victimizing events change realistically and negatively in response to them. However, active coping behaviors involving both cognitive and behavioral strategies succeed in creating positive changes in life domains amenable to their control. Finally, there may be more subtle characteristics of processing and of the complex environment in which it takes place that keep illusions within adaptive bounds. In these multiple ways, then, illusions enable people to achieve that enviable state of rulership described by George Orwell, 1949, p. 177 (cited in Greenwald, 1980): "the ability to believe in one's own infallibility coupled with the power to learn from past mistakes."

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