Positive Fantasy and Motivation

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Two different kinds of optimistic thinking about the future, with different impacts on motivation and action, are postulated: optimistic expectations and spontaneously generated positive fantasies. Whereas “optimistic expectations” are beliefs about how likely it is that certain events will happen or not, “spontaneously generated positive fantasies” are daydreams or mental images depicting future events and scenarios. In this chapter, I describe various studies demonstrating that optimistic expectations facilitate successful performance and that spontaneously generated positive fantasies about the future restrain motivation. I then discuss experimental studies investigating the conditions under which spontaneous positive fantasies about the future strengthen the motivation to act. First however, I consider the benefits and perils of optimistic thinking in general.

THE BENEFITS OF OPTIMISTIC THINKING

Empirical research demonstrates that optimistic thinking, even if illusory, has beneficial effects on motivation, cognition, and affect. For example, optimistic thinking is associated with increased persistence in the face of difficulties, better problem solving, heightened creativity, less fear of failure, more effective coping, more prosocial and caring behavior, and higher standards and aspirations. Optimistic thinking is also beneficial to mental and physical health. It is a buffer against depression, alcoholism, and obesity. Moreover, it hinders the emergence of acute and chronic disease and moderates its progress (for reviews, see Bandura, in press; Scheier & Carver, 1992; Peterson & Bossio, 1991; Taylor & Brown, 1988, 1994; Taylor, 1989).

their propensity to use stable, global, and internal attributions for explaining positive events to a greater extent than for explaining negative events. Scheier and Carver (1985) ask people directly about their beliefs regarding the quality of their future life. Finally, optimism can be conceptualized as “self-efficacy”—that is, as the self-reported competence to perform a certain action in its relevant context, which is a powerful predictor of successful performance in many life domains (e.g., achievement, mental and physical health) (Bandura, in press; for a trait measure of self-efficacy, see Skinner, Chapman, & Baltes, 1988). All of these concepts of optimistic thinking are common in that they are beliefs about one’s self-worth, one’s future outlook, or one’s range of control.

THE PERILS OF OPTIMISTIC THINKING

Under the influence of humanistic psychologists (e.g., Allport, 1955; Jahoda, 1958; Maslow, 1954; Rogers, 1951), it was widely believed until the beginning of the 1980s that people would benefit from accurately accepting their reality, even if their own personalities had to be looked upon as average, their environment as boring or overwhelming, and their future as grim. Despite the overwhelming empirical evidence for the beneficial effects of optimistic thinking that has accumulated since then, the traditional position stressing the importance of reality acceptance has recently reappeared, and the research that stresses the beneficial effects of illusory optimism has been heavily criticized (e.g., Colvin & Block, 1994). But there are further voices warning against the perils of illusionary optimism. For example, Baumeister (1989) argues that overly positive illusions will lead to unsafe behavior and dangerous decision making. He adduces findings that “illusions of unique invulnerability” lead to risky behaviors (Burger & Burns, 1988), and describes examples from history to illustrate the maladaptive consequences of over-optimistic thinking. Research on the “power corrupts” phenomenon (Kipnis, 1972) seems to corroborate Baumeister’s position. In persons with high status, overconfidence can lead to a variety of misperceptions of reality, such as devaluing the performance of the less powerful, viewing the less powerful as objects of manipulation, and attributing the agency of others’ efforts to their own influence. These misperceptions of reality are conducive to high-risk behaviors on the part of the powerful (e.g., restricting or overworking subordinates). To avoid the dangerous consequences of overconfidence, Baumeister (1989) suggests staying within an “optimal margin of illusion”—a certain quantity of illusory optimism that is adaptive for psychological functioning. A moderately positive distortion of the self and the world helps to ensure the benefits of illusory optimism without inducing individuals to act too riskily or on false assumptions.

Gollwitzer and Kinney (1989) present another approach to the advantages and disadvantages of positive illusions. They argue that the benefits
of illusory optimism depend on the situation or the task at hand. For example, when people attempt to implement a goal, illusory control helps maintain the determination to pursue the chosen goal (Gollwitzer & Kinney, 1989; Gollwitzer, 1990). When people try to arrive at well-thought-out decisions, however, they need to analyze the positive and negative consequences in an impartial manner; if they choose a path with undue demands, they may suffer for a long time from the adversities of the wrong decision.

In summary, Baumeister (1989) argues that one should look at the quantity of illusory optimism in predicting whether illusory optimism is adaptive or maladaptive. Gollwitzer and Kinney (1989) suggest considering the situation or the task at hand in order to check whether illusory optimism is functional or dysfunctional. But there is still another way to approach this problem. There may be different kinds of optimistic thinking—some associated with perils, others with benefits. It is this issue that I focus on in the present chapter.

**DIFFERENT KINDS OF OPTIMISTIC THINKING**

Researchers commonly conceptualize optimistic thinking according to control beliefs, self-efficacy beliefs, outcome expectations, or expectations of future life in general. Thoughts about the future, however, do not necessarily have to be beliefs about how likely or unlikely it is that a certain desired event will occur or not, or that a certain behavior will be carried out or not. People also spontaneously imagine their successes and failures, visualize them in their minds' eyes, and play with their memories and mental images of anticipated future events. In their daydreams and wishes, they fancy masterful performances and blissful experiences. But people also picture the falling through of their desires; dreadful news cutting right across their lives; and dreary, everyday, routine work. Such mental images, daydreams, or fantasies may depict incidents with good or bad endings, and thus may possess a positive or negative quality. Fantasies more easily escape the grip of reality than expectations, because fantasies are not constrained by the cognitive mechanisms that make people acknowledge factual information (Klinger, 1971, 1990; Singer, 1966). Accordingly, individuals may indulge in spontaneous positive fantasies, although critical analyses of past performance or thinking about objective likelihoods would lead to low expectations of success.

These considerations suggest that expectations and fantasies are two different ways of thinking about the future. But do they have different effects on motivation and action? High expectations of success signal that a given desired task can be attained, and thus should increase motivation (Atkinson, 1957). In contrast, positive fantasies of success constitute an anticipation of having reached it or even an anticipatory consumption of the various positive consequences or experiences, and thus should reduce motivation to actually achieve them. In a positive fantasy, a person may “ex-
positive fantasies may prevent a person from realizing that effortful action precedes most achievements accordingly, no action plans for how to achieve the imagined fantasies may be formed. This should further reduce the chances of success, as a lack of mentally rehearsed action plans has been linked to decreased performance (Gollwitzer, Heckhausen, & Ratajczak, 1990; Gollwitzer, 1993 and Chapter 13, this volume; Taylor & Schneider, 1989; Taylor & Pham, Chapter 10, this volume; see also Friedman, Scholnick, & Cocking, 1987).

In summary, because positive fantasies imply anticipatory consumption of success, experience of no need to act, and a lack of detailed action plans, they should produce less successful performances than negative fantasies. This should be in contrast to positive expectations, which are known to foster successful performances.

POSITIVE FANTASIES VERSUS POSITIVE EXPECTATIONS

Various studies in different life domains (e.g., health, interpersonal attraction) were conducted to test the hypotheses stated above. In all of these studies, the subjects' expectations and fantasies were assessed for positivity long before (up to 4 years before) we assessed relevant performances (e.g., weight loss, recovery from illness, getting involved with someone). Positive expectations, according to our hypotheses, would predict strong performances. Positive fantasies, on the other hand, would predict weak performances.

Weight Loss

We assessed expectations of success, as well as weight- and food-related fantasies, in 25 obese women who had enrolled in a weight reduction program at the Hospital of the University of Pennsylvania (Oettingen & Wadden, 1991). The women weighed an average of 233 pounds. The weight reduction program, which offered diet prescriptions and weekly behavior therapy, lasted for a full year. In the second year, the patients received weight maintenance therapy.

At pretreatment, each patient had to indicate the number of pounds she wished to lose in the program and her expectations of attaining her weight goal. We used a semiprojective procedure to assess the positivity of patients' fantasies. We wanted subjects to generate spontaneous fantasies at that very moment rather than to recall fantasy retrospectively from long-term memory, because such recall is likely to be distorted (see Ericsson & Simon, 1980, 1993). Each patient was asked to imagine herself vividly as the main
character in four weight- and food-related scenarios. Two stories were designed to elicit fantasies about the subject's weight loss, whereas the other two stories described encounters with tempting foods. Each story had an open ending, which subjects were asked to complete in writing by describing the stream of thoughts that occurred to them. For example, one scenario read: "You have just completed Penn's weight loss program. A friend of yours has invited you to her annual pool party. You attended this function last year, so you will probably see many familiar faces. As you are on your way to the party, you imagine..." Right after describing their mental images, subjects rated the positivity and negativity of their images, as well as their imagined body shape. From the correlations between these ratings, we learned that positive fantasies meant having images about a slim body. Weight loss was measured three times on a balance beam scale in the clinic: after 3 months, 1 year, and 2 years.

Expectations and fantasies predicted weight loss in opposite directions. After 1 year, patients with high expectations lost about 12 kilograms more than patients with low expectations. In contrast, subjects with positive fantasies lost about 11 kilograms less than subjects with negative fantasies. After 2 years, the respective differences were 15 and 12 kilograms. These patterns of results stayed unchanged when subjects' weight loss aspirations, as well as their subjective incentives to reach their aspired weight loss, were covaried. The findings thus supported our assumption that optimistic expectations and positive fantasies are different types of optimistic thinking, and that they have differential effects on motivation and action. Apparently, images of getting slim and resisting food temptations hindered weight loss. Subjects seemed to daydream that weight loss had occurred without their having to make any effort. For example, in response to the friend's pool party scenario, one subject with positive fantasies wrote: "I am going swimming in front of everyone!! First I have a drink because I am too excited and have to act like I am not self-conscious. Everyone is going to really check me out. I'll be shining!" Such wishful daydreams did not help subjects to succeed, either in the short or in the long run. On the contrary, positive expectations favored weight loss. This is in line with previous studies demonstrating that people who expect to lose weight are more successful in doing so (Bernier & Avard, 1986; Chambliss & Murray, 1979; Glynn & Ruderman, 1986; Leon, Sternberg, & Rosenthal, 1984; Stotland & Zuroff, 1991).

Recovery from Chronic Illness

Another area where optimistic expectations have beneficial effects is recovery from illness. For example, Scheier et al. (1989), using the Life Orientation Scale (Scheier & Carver, 1985), observed that optimistic patients recovered faster after coronary artery bypass surgery and returned to full-time work somewhat earlier than patients with a pessimistic outlook. Effects of heightened self-efficacy beliefs on physiological functioning have been
shown by Bandura, Cioffi, Taylor, and Brouillard (1988), who suggest that even the functioning of the immune system may benefit from optimistic efficacy beliefs. Whatever the path from optimism to recovery may be—physiological or behavioral—it seems that optimistic expectations help to prevent the onset of and the recovery from physical illness (for reviews, see Scheier & Carver, 1992; Taylor, 1989). Data predicting comparatively better health at ages 45 through 60 from an optimistic explanatory style at age 25 further support this claim (Peterson, Seligman, & Vaillant, 1988).

Do positive fantasies retard the recovery from physical illness? In a conceptual replication of the weight loss study, we (Oettingen, Losert, Wood, Nathanson, & Kazak, 1995, Study 1) tested expectations and fantasies in children suffering from chronic asthma and gastrointestinal disease. We recorded children's disease activity at the time of the interview as well as several months later. We operationalized positive expectations using a measure of explanatory style (the children's version of the Attributional Style Questionnaire; Seligman et al., 1984), which assessed to what extent patients perceived hypothetical positive events as more stable, global, and internal than negative events. An optimistic explanatory style conveyed the patients' sense that they would eventually be able to deal with the situation at hand (see Abramson, Seligman, & Teasdale, 1978; Peterson & Seligman, 1984), and thus indicated positive expectations. Positive fantasies concerning patients' future lives were assessed through 12 scenarios, which pertained to the domains of health, interpersonal relations, and achievement (four scenarios each). A typical health scenario read: 'Imagine you have been invited to sleep over at a friend's house. But since you have been sick for the past couple of days, your mother calls the doctor to see if you are well enough to go. She hangs up the phone and..." After the children had completed the scenarios in writing, they rated the positivity/negativity of their images. From the doctors' charts, we took a standard measure of disease activity, and also recorded prescribed medicine as an indicator of how well children were doing in fighting their disease. As dependent variables, we used the disease activity and prescription scores several months after the interview, corrected for the respective scores at the time of the interview. The pattern of results was the same as in the weight loss study. Over a period of several months, patients with asthma and gastrointestinal disease who were optimistic in their explanatory style tended to show comparatively better recovery. In contrast, the more positive the patients' fantasies were, the worse their disease activity scores were and the more medicine they had to take over time.

Recovery from Acute Illness

In a study on physical illness, we (Oettingen, Losert, et al., 1995, Study 1) assessed explanatory style and fantasies in children suffering from cancer (i.e., leukemia and lymphoma). The physicians in charge rated patients' probability of survival at two points in time: at the interview and 4 years later.
As the dependent variable, we used probability of survival after 4 years (all patients were still alive), corrected for probability of survival at the time of the interview. The same measures of explanatory style and fantasies that were used in the study of chronically ill children were used here. In the children with cancer, positive fantasies predicted a less favorable recovery rate ($\phi = .10$), though explanatory style showed a close to zero correlation to recovery rate. The predictive relation of positive fantasy rested in particular on the four health-related scenarios. Apparently, patients' positive fantasies about their future health did not aid in recovery. Effective recovery from cancer demanded taking action (e.g., complying with the various medical demands and coping with painful procedures), and taking action should have been suppressed by positive fantasies in which future recovery was anticipated to be achieved effortlessly.

To sum up, the studies described to this point supported the hypothesis that positive thinking in terms of expectations is beneficial, whereas positive thinking in terms of fantasies is maladaptive. This pattern of results emerged regardless of whether high-risk health behavior or chronic illness was analyzed. However, all of these data pertained to the health domain only and came from studies with rather small samples. The next question we addressed was how reliable the predictive effects of positive fantasies are when it comes to other domains and larger samples.

**Romantic Success**

The next study focused on starting a love relationship. Students who had crushes on fellow students of the opposite sex, but who were not yet going out or were not yet involved with them, were tested for their expectations of getting together with their "crushes," as well as for their fantasies about what might happen to them and their crushes in the future. To measure subjects' fantasies, we (Oettingen, Losert, et al., 1995, Study 2) used a procedure similar to that described for the health studies. For example, one item read: "You are at a party. While you are talking to HIM, you see a girl whom you believe HE might like to meet. As she approaches the two of you, you imagine...." After several months, we asked students whether they were successful in getting involved with their crushes. Students who originally had positive expectations were more likely to get together with their crushes than those with more negative expectations. In contrast, students with positive fantasies about themselves and their crushes were less likely to get involved with their crushes than their peers who spontaneously generated less positive fantasies. This pattern of results stayed the same after subjects' perceived incentive to get together with their crushes and subjects' gender were covaried.
Professional Success

Another study (Oettingen, Losert, et al., 1995, Study 3) focused on the topic of "transition into work life." We tested students who were completing their university education and preparing to enter the job market. We assessed subjects' expectations of finding a job and the tone of their spontaneous fantasies related to the future experience of transition into work life. Two years later, subjects were asked to report on the professional opportunities they had been offered and to indicate their current professional status. High expectations of success predicted success, whereas positive fantasies showed an inverse relation to professional achievement. This was true even after subjects' incentive to get a job was statistically controlled for.

Summary

Optimistic expectations fostered the resistance to high-risk health behavior and the combating of chronic disease, as well as interpersonal and professional success, whereas positive fantasies were a clear hindrance. The fact that similar patterns of results emerged in three different life domains (i.e., the health, the interpersonal, and the work domains) supports our hypotheses on the perils of positive fantasy. Moreover, in almost all of our studies, optimistic expectations had beneficial effects. This corresponds to previous findings on optimistic thinking.

OTHER CONCEPTS OF FANTASY

In this section, similarities and differences between our work and three other lines of research involving the concept of fantasy—Thematic Apperception Test (TAT) fantasies, the stream of thought, and current concerns—are discussed.

Thematic Apperception Test Fantasies

Our measure of positive fantasy should not be confused with fantasy generated in response to the TAT, the classic measure of motives (Murray, 1938; McClelland, Atkinson, Clark, & Lowell, 1958). In the TAT approach, fantasies are perceived as reflections of specific personal needs. Accordingly, subjects' fantasies in response to a given picture are content-analyzed to determine to what extent the fantasies contain elements of striving for achievement, affiliation, intimacy, power, and so forth, and to determine whether the fantasies reflect hope (i.e., approach) or fear (i.e., avoidance; see Heckhausen, 1989/1991). Our work is concerned neither with the number of fantasies generated in a given domain (achievement, affiliation, etc.)
nor with whether subjects habitually tend to fantasize about approaching a desired outcome (e.g., having a slim body) versus avoiding an undesired one (e.g., not having an obese body). Rather, we are interested in how positively or negatively subjects fantasize about a certain upcoming event (e.g., their body shape after the weight loss program). As a consequence, the way we measure subjects’ positive or negative fantasies is markedly different from the measures used with TAT fantasies. First, we use self-report scales to determine the positivity or negativity of the fantasies. In contrast, the fantasies in response to the TAT are rated according to a prescribed coding scheme applied by trained raters who code various indicators for the respective variables (e.g., “instrumental activity leading to achieving a standard of excellence” as indicative of hope for success in the achievement domain). Second, in our approach fantasies pertain to the self, whereas in the TAT approach they pertain to the people depicted. Third, we have obtained sufficiently high reliability for our fantasy items (Cronbach's alphas of about .70), whereas reliability has always been a problem in the TAT (for a discussion, see McClelland, 1980). Finally, our measure of positive fantasy is different from what are referred to as “incentives” in expectancy–value theories (Heckhausen, 1989/1991). Incentives determine people’s beliefs about the expected value (desirability) of a certain future outcome. Our measures of spontaneous positive fantasies do not assess beliefs and thus show only negligible correlations to incentive values. Moreover, expectancy–value theories predict a positive relationship between subjective expected values and success, whereas we have found negative relationships between positive fantasies and success.

The Stream of Thought

Over a century ago, William James (1890/1950) published his revealing ideas about the stream of thought. It took another 60 years for the subject to be examined empirically. Jerome L. Singer, a pioneer in the research on fantasy, and his collaborators showed in experimental and correlational studies that people's inner experience is filled with task-irrelevant thoughts, free-floating images, and fanciful anticipations (see Singer, 1966, 1988, for summaries). Unstructured thoughts and images appear to arise when a person's full attention is not needed to adjust to the present external environment. Memories or environmental stimuli can serve as the starting points for such daydreaming or fantasizing. Therein, past or present experiences are rehearsed, changed, and ingeniously combined to emerge as new creations of the mind, which reshape the past, embellish the present, and fancy the future. Such fantasies can feature extravagant actions, overwhelming successes, and clever strategies, but also shameful failure and painful rejection. Many characteristics of people's fantasy lives, as well as the relationships of these to other personality dimensions, have been identified by self-report instruments measuring daydreaming patterns retrospectively—the Imaginal Processes Inventory (IPI; Singer & Antrobus, 1963, 1972) and the Short Im-

Singer and his collaborators, however, do not focus on the positivity of fantasies. Rather, the SIPI includes a "positive-constructive" daydreaming scale, which combines an accepting attitude toward one's inner experiences with problem-solving, joyful, vivid, and future-oriented daydreaming. The positive-constructive pattern differs from guilty-dysphoric daydreaming, which characterizes people who feel threatened by their fearful and hostile daydreams. Furthermore, fantasy is not distinguished from expectations or self-efficacy beliefs. Rather, both self-efficacy beliefs and fantasies are perceived as important corroborative influences on behavioral change (Singer & Pope, 1978). Finally, rather than prompting the kind of spontaneous fantasies present in our work, the IPI and SIPI ask subjects to retrospectively rate the frequency of certain kinds of daydreams (such as achievement-oriented, sexual, or bizarre).

**Current Concerns**

The theory of "current concerns," which has its roots in achievement motivation theory (Atkinson, 1957; McClelland et al., 1953), defines such a concern as the state between the act of commitment to a specific goal and the time of achievement of or disengagement from that goal (Klinger, 1975, 1977). Studying the differential effects of optimistic expectations versus spontaneous positive fantasies on behavior is not the objective in Klinger's work. Rather, high expectations of success foster commitment, which as a gate to the state of current concern should then influence the content of fantasies. Other features of current concerns, such as unexpected difficulties in goal achievement, also influence what kind of information the person will process and what the stream of thought will be about (Klinger, Barta, & Maxeiner, 1980). Accordingly, subjects responding to the Concern Dimensions Questionnaire (Klinger et al., 1980) or the Interview Questionnaire (Klinger, 1987) are asked to report about various characteristics of their current concerns, such as value of the goal, subjective probability of success, or intended action regarding the goal. From these self-report answers, subjects' cognitive and physiological reactions as well as the contents of their spontaneous thoughts are predicted.

**THE PERILS OF POSITIVE FANTASY: SUPPORTIVE FINDINGS**

Thus far in this chapter, I have reported studies explicitly designed to test the predicted negative relation between positive fantasy and performance. But there are various other lines of research that, at least indirectly, add further support to this notion. First, in a prospective study of women with a
history of breast carcinoma (Jensen, 1987), comforting daydreaming, as measured by the positive–constructive scale of the SIPI (Huba et al., 1981, 1982), predicted metastatic spread over a period of more than a year. As mentioned earlier, high scores on the positive–constructive scale of the SIPI indicate vivid, enjoyable, problem-solving, and future-oriented daydreaming. Second, wish-fulfilling fantasy has been linked to poor adjustment in patients coping with physical illness and painful medical procedures (Felton & Revenson, 1984), whereas accurate and thus often negative information about the kind of anticipated procedures and about the sensations that patients will experience have beneficial effects on the patients’ ability to deal with the hardships (Johnson, Lauver, & Nail, 1989; Suls & Wan, 1989). Similarly, Peterson (1989), summarizing research on how children cope with medical routine, has reported better adjustment in children who seek precise information about upcoming surgical or diagnostic procedures. These results imply that patients who focus on positive images depicting how easy and effortless upcoming medical procedures will be cope less well than patients who generate more negative mental images in response to accurate medical information.

The second line of research comes from the literature on cognitive therapy. By means of various procedures, such as covert modeling, hypnosis, or guided imagery, subjects are led to give up positive fantasies of effortless recovery. Patients are guided to produce mental images about upcoming hardships as a means of preparing them for staying away from high-risk situations and for resisting temptations (for an example, see Brownell, 1989; for a review, see Marlatt & Gordon, 1985; Marlatt, Baer, & Quigley, 1995). Related to this type of research are self-efficacy training programs, in which the overcoming of possible difficulties and pitfalls that hinder successful task performance (e.g., in school, work, or sports) is systematically rehearsed. This should also reduce positive fantasies about the ease of solving such tasks (changes in self-efficacy, see Bandura, in press; on effects of mental practice, see Corbin, 1972; Feltz & Landers, 1983).

Harmful effects of positive fantasies on performance were reported in an experiment by Goodhart (1986). Subjects with experimentally induced positive images about their own competence did worse on an anagram test than subjects with negative images. However, this was only true when subjects were not asked to predict how well they might perform after generating their images—that is, when subjects’ positive images were not overridden by their expectations. Similar results were obtained by Sherman, Skov, Hervitz, and Stock (1981, Study 1). With respect to an upcoming anagram task, subjects first had to explain hypothetical success or failure, and then either had or did not have to state their expectations of success. Subjects who explained failure did somewhat better than those who explained success when they did not have to state their expectations. The reverse was true for subjects who had to state their expectations. Sherman and his collaborators interpreted the findings as follows: Explaining hypothetical failure leads to
the consideration of possible failure and consequently to more effort in the upcoming task than does explaining hypothetical success. When explicit expectations are set, however, subjects’ performance tends to confirm their negative expectations generated from explaining undesirable events.

Finally, in working with defensive pessimists, Showers (1992) demonstrated that experimentally induced positive images about performance led to worse performance than negative images did (Study 1). “Defensive pessimists” are generally successful people who strategically reduce their expectations of success (Norem & Cantor, 1986). In Study 2, Showers observed that negative imagery produced more reassuring thoughts than positive imagery. This “plucking up” of courage after having generated negative images should have promoted good performances. Though Showers’s findings pertain only to students who have a successful performance history and use a particular performance strategy, they do demonstrate that positive imagery can indeed have harmful effects on performance.

**WHY IS POSITIVE FANTASY HARMFUL?**

Indulging in positive fantasies should increase the salience of positive outcomes, whereas generating negative fantasies should increase the salience of difficulties and hardships. Subjects with positive fantasies, because they are working out positive events in their minds’ eyes, should hardly be motivated to put effort into obtaining success. In contrast, subjects with negative fantasies, because they are perceiving the occurrence of hardship in their minds’ eyes, may feel challenged to make efforts to overcome these obstacles (see Sherman et al., 1981). To follow up on this speculation, we asked subjects in our study on finding jobs how many applications they had sent out. Indeed, subjects with positive fantasies reported having sent out fewer job applications than subjects with negative fantasies. At the same time, the subjects with positive daydreams reported having refrained from conflicting commitments (e.g., going on a long vacation) and having already prepared themselves for changes in their private lives that would result from success in finding jobs. It appears, then, that subjects generating positive fantasies about finding a job took success for granted. They presumptuously thought of themselves as having already obtained the desired jobs, and consequently failed to confront the adverse reality that needs to be tackled if success is actually to be achieved.

**POSITIVE FANTASY AND NEGATIVE REALITY**

At this point, we wondered whether positive fantasy can motivate behavior if it is contrasted with reflections about the negative reality—that is, with reflections on what demands stand in the way of fantasy fulfillment. When
positive fantasy and the respective negative reality appear in the mind's eye, positive fantasy should no longer allow indulgence and premature consumption, because it is experienced as something to be achieved in real life. Whereas positive fantasies give action the necessary direction, reflections on reality point to the necessity to act. Moreover, reflections on reality provide clues on how to actually implement one's positive fantasies in real life. Accordingly, focusing on both the positive fantasy and the contradictory negative reality should increase motivation toward implementing the positive fantasy.

If contrasting positive fantasy with negative reality turns positive fantasy into something to be implemented in real life, people who ponder the contrast between fantasy and reality should become tuned to the probabilities of success. The subjective probability of success should now guide motivation and action. Imagine a young man indulging in positive daydreams about getting involved with a young woman. Only after generating both positive fantasies and reflections about the actual situation (i.e., being without her) should he perceive his positive fantasies as something to be achieved. Accordingly, he should become attuned to the probability of actually getting involved with the loved one when it comes to the decision of whether to pursue her or not.

In contrast, expectations should leave motivation and action largely untouched when a person prefers to indulge in positive fantasies. Giving free reign to positive images about the future does not suggest a necessity to act nor does it convey any hint on how to act. Such positive images are sheer fantasies left to the inner stream of consciousness and thus are not experienced as outcomes to be implemented through laborious efforts. Similarly, expectations should fail to guide motivation and action when a person prefers to brood on the shortcomings of the present reality. Dwelling only on the negative status quo conveys no allusion to where to go, that is, in which direction the reality should be changed. There is no guiding future vision that leads a person's efforts to change reality to the better.

These ideas imply that when people are induced to contrast their positive fantasies with reflections on the corresponding negative reality, they should evince high positive correlations between subjective probabilities of fantasy fulfillment and their motivation to achieve their fantasies. In contrast, with people who either generate only positive fantasies or reflect only on their negative reality, no substantial correlations should be observed. Whereas high expectations of success should lead to more motivation when one is contrasting fantasy and reality, as compared to when one is dwelling on fantasy or reality only, low expectations of success should lead to comparatively less motivation.

Interpersonal Concern

In our first experiment on this issue (Oettingen, Böhringer, & Losert, 1995, Study 1), female students were asked to name the interpersonal matter that
was presently most important to them (e.g., getting to know somebody) and to state their expectations about whether it would result in a happy ending. Then they were asked to list positive aspects of the happy ending (e.g., love, feeling of being needed) and negative aspects of reality that appeared to stand against the possibility of a happy ending (e.g., being insecure, unattractive). In the fantasy–reality contrast group, subjects had to select two aspects of both the happy ending and the negative reality. To achieve a fantasy–reality contrast, subjects were asked to alternate in their production of spontaneous images between positive aspects of wish fulfillment and negative aspects of reality, beginning with a positive aspect. Thus, both aspects had to be reflected on intermittently. In contrast, in the fantasy-only group, subjects were asked to imagine only positive aspects of the happy ending; in the reality-only group, subjects were asked to reflect only on negative aspects of the actual situation. Dependent variables were measures of activity feelings and immediacy of action. These variables were recorded right after the experiment and during the following weeks.

In the fantasy–reality contrast group, subjects' expectations of success showed a substantial positive correlation with the dependent variables. In both the fantasy-only and the reality-only groups, these correlations were much lower. Furthermore, the latter two groups did not differ in their low correlations. For example, in the fantasy–reality contrast group, subjects with high expectations of success acted sooner than those with low expectations, whereas there was almost no difference in the date of starting action between subjects with high and low expectations in the other two groups. Moreover, subjects with high expectations of success felt more active and started acting earlier in the contrast group as compared to the other two groups, whereas subjects with low expectations felt less active and started acting later in the contrast group than in the other two groups.

Finally, these effects were not attributable to differential effects of the manipulation on subjects' expectations. We found an almost perfect correlation between subjects' expectations measured before and after the experiment. In addition, subjects' expectations measured after the manipulation did not differ among the three groups.

**Getting to Know an Attractive Stranger**

In the next experiment (Oettingen, Böhringer, & Losert, 1995, Study 2), we used the same salience paradigm as in the preceding study, which had been stimulated by the work of Mischel, Ebbesen, and Zeiss (1972) as well as of Taylor and Fiske (1978). However, instead of asking subjects to name their own interpersonal concerns, we created the same concern for all subjects. The cover story told the female subjects that we were interested in daydreams about getting to know a stranger. Then subjects were shown a picture of an attractive young man whom they did not know, supposedly a young researcher at the Max Planck Institute. Subjects had to indicate their expectations
in terms of the probability of successfully getting to know this person, if they had the opportunity. Then they had to go through the same procedures as described in the preceding study. This time, however, the aspects of fantasy fulfillment pertained to how it would be to get to know the person in the picture (e.g., joyful, interesting), whereas the aspects of the status quo pertained to what would stand in the way of getting to know him (e.g., being shy, not having enough time). We also added a fourth group to the design of this study. Subjects in this group were asked to solve arithmetic tasks creating a heavy cognitive load, because we wanted to test whether the high correlations between expectation and motivation observed in the preceding study were indeed attributable to contrasting fantasy-reality images rather than to the sheer listing of the various aspects of fantasy fulfillment and reality. The dependent variable in the present study was the extent to which subjects cared about getting to know the person on the picture. This was assessed immediately after the manipulation and 1 week later.

The results were like those of the preceding experiment: A higher positive correlation between expectation and the dependent variable was obtained for subjects in the fantasy-reality contrast group than for the other groups, which did not differ from each other and which showed correlation coefficients close to zero (including the arithmetic task control group). Furthermore, subjects with high expectations cared more about getting to know the young man in the picture and were more eager to meet him than the respective subjects in the other groups. The opposite was true for subjects with low expectations.

These differences between groups were more pronounced after 1 week than immediately after the experiment. Over time, only subjects with high expectations of success in the fantasy-reality contrast group kept up their motivation to get to know the person in the picture. The remaining subjects cared less about getting to know him and felt less eager to meet him after 1 week had passed.

**Combining Work and Family Life**

A third experiment used a rationalization paradigm to vary the fantasy-reality contrast. Subjects were female doctoral students who did not have children and who were approaching a critical age for being able to bear children. The study supposedly was concerned with life planning. Subjects were told that we (Oettingen, Böhringer, & Losert, 1995, Study 3) were interested in how individuals of different ages and career paths imagine their futures. More specifically, they were asked to produce positive daydreams or fantasies about their professional and their private lives several years from now, to let these mental images pass in front of their minds' eyes, and then to describe them in writing. Thereafter, subjects rated their confidence that their fantasies and daydreams would come true. Statements then followed
that supposedly came from interviews with working mothers. The statements were complaints about the daily hardships of combining work and family life. Two examples were as follows: "Again Nina had to wait all alone in front of the nursery school because I did not get out of the office in time," and "At work I am always so tired and irritated because at night my little son wakes up every other hour.

Subjects in the fantasy–reality contrast group were asked to read through the statements, to let their associations and imaginary thoughts in response to these statements pass freely in front of their minds’ eyes, and then to write these images down. Subjects in the fantasy-only group were given the same instructions as the fantasy–reality contrast group. To direct subjects’ attention away from the mothers’ statements of negative reality, however, we made subjects trivialize the mothers’ statements. We added at the beginning of the instructions that in each of the statements, the mother was complaining about the harsh reality of combining professional life and motherhood just as an excuse; in fact, the mother wanted to conceal some other problems she had. Subjects were asked to imagine what each mother’s excuse could be about. Finally, subjects in the reality-only group were also given the same instructions as the fantasy–reality contrast group. However, to force subjects’ attention away from their positive fantasies, we asked them to depict their thoughts pertaining to the fact that the subjects themselves did not have any children yet. After a couple of weeks, subjects rated their intention to act toward, their thought involvement in, and their caring for the idea to combine work and family life for themselves.

For all three dependent variables, the pattern of results resembled those of the experiments described above: A strong positive correlation with expectation was obtained for the fantasy–reality contrast group, and this was stronger than that found for the two other groups, which did not differ from each other. Furthermore, subjects with high expectations wanted to do more to combine work and family life, their thoughts were more involved in this idea, and they cared more about the idea than the respective subjects in the other groups. However, for subjects with low expectations, the difference between the fantasy–reality contrast group and the other two groups was significant only for subjects’ intention to act.

These results pertained only to subjects who fantasized about their future lives in terms of having both a profession and a child. Subjects in the fantasy–reality contrast group who fantasized about having a job only (no child) or about having a child only (no profession) showed, like the other group, no correlations between expectations and the dependent variables.

**Summary**

In each of these studies, optimistic versus pessimistic expectations guided motivation and action more in subjects from the fantasy–reality contrast
group than in subjects from the fantasy-only or reality-only group. Furthermore, in the fantasy-reality contrast group, subjects with high expectations were more motivated and subjects with low expectations were by and large less motivated than the respective subjects in the other experimental groups. These effects emerged both when a salience procedure was used and when a rationalization paradigm was employed.

The observed pattern of results was stable over periods of one to several weeks. Whether subjects followed up on their fantasies until they reached a happy ending, we do not know. Our dependent variables focused largely on thought involvement and on activities pertaining to getting things started.

**ENGAGEMENT AND DISENGAGEMENT**

The observed effects are not attributable to changes in expectations, but to changes in motivation and action *in response* to expectations. Optimistic expectations, then, seem to develop their beneficial effects on motivation and action when positive fantasy points in the direction of acting and, at the same time, when reflections on the negative reality show the necessity of acting. The experimental studies also revealed two moderators of the effects of optimistic expectations: Optimistic expectations did not yield their benefits for motivation when subjects indulged in positive fantasies or dwelled on the negative reality. Thus, the observed results should temper the criticism regarding the perils of illusory optimism. Expectations seem to leave motivation and action largely untouched when a person's attention is focused solely on positive fantasies or solely on negative reality. At the same time, however, the results imply that negative thoughts about reality can be beneficial for adjustment. If these reality images are contrasted with positive future fantasies in the mind's eye, expectations gain relevance for action.

To engage a person in a task, then, one would need to create the fantasy-reality contrast plus optimistic expectations; to disengage a person from a concern or a task, one would need to induce the fantasy-reality contrast plus pessimistic expectations. When indulging in positive fantasies or dwelling on negative reality, our subjects behaved unreasonably by not thinking and acting according to the subjective probabilities of success. Subjects with pessimistic expectations were more engaged than their probability judgments suggested, whereas subjects with optimistic expectations were less engaged than their probability judgments suggested. In other words, subjects with low expectations who indulged in positive fantasies, and thus were "pessimistic and hopeful" at the same time, stayed more engaged than seemed justified on the basis of their expectations. Interestingly, this was also true for subjects with low expectations who dwelled on the negative reality, and who were thus "pessimistic and worrying" at the same time. Furthermore, subjects with high expectations who indulged in positive fantasies, and thus were "optimistic and hopeful," stayed less engaged than seemed justified by their
high expectations. They behaved like subjects with high expectations who dwelled on the negative reality, and thus were "optimistic and worrying."

**THE FANTASY–REALITY CONTRAST IN DAILY LIFE**

Our studies are not relevant to the question of how fantasy–reality contrasts emerge spontaneously. When people are lost in reveries, reality may have to be quite harsh in order to induce them to start reflecting on it. Reality is a nuisance in the sense that it forces people to take sides—that is, either to engage in or to disengage from reaching their fantasies (depending on their expectations). Moreover, engaging and disengaging demand mental, affective, and behavioral efforts. Not surprisingly, then, rationalizations, which allow people to keep daydreaming, are plentiful (Erdelyi, 1990; Kunda, 1990; Taylor, 1983).

And what about people who are lost in dwelling on the negative reality? As they only have to start joyfully daydreaming, shouldn't it be easy for them to create a fantasy–reality contrast? As it turns out, people often have reasons not to fantasize. It may also be that people cannot spontaneously produce positive images about a certain task (e.g., the doctoral students who did not spontaneously envision having both a professional life and a child). Clearly, future studies must examine the processes by which people spontaneously produce fantasies to be contrasted with the grim reality.

Did the successful subjects in our field studies (e.g., the studies of weight loss and romantic success) spontaneously produce a fantasy–reality contrast, whereas the unsuccessful subjects were lost in their positive fantasies? We do not know the exact content of these subjects' mental images. The results of our experiments suggest that indulging in positive fantasies indeed leads to less motivation than can be reasonably inferred from expectations. But this is true only for subjects who have high expectations. For subjects with low expectations, indulging in positive fantasies leads to more motivation than seems reasonable. However, in the long run the latter finding might be poor comfort for the "hopeful and pessimistic" subjects, because pessimistic expectations reflect past failure (e.g., in our weight loss sample; see also Bandura 1977; Mischel, 1973). Over the months and years of harsh confrontation with negative reality, then, these "hopeful and pessimistic" subjects may have started to contrast their positive fantasies with the negative reality. Thus, they may have become attuned to their low expectations, thereby losing much of their initial motivation.

Finally, what happens to the quality of positive fantasies when people contrast them with reflections about the negative reality? As contrasted positive fantasies become something to be achieved, fanciful images should fade, and more realizable features of the happy ending should appear in the stream of thought. Similarly, reflections on the negative reality may change when people contrast them with the respective positive fantasies. Instead of focus-
ing on the stable attributes of the status quo, they now may deal with clues about how to change reality and with preparations for coping with possible hardships. Thus, reflections about the negative reality contrasted with positive fantasies may lead up to what Taylor and Pham (Chapter 10, this volume; see also Taylor & Schneider, 1989) call "process simulations," and what Nor- em and Cantor (1986) mark out as the strategy of defensive pessimism. These are thoughts of future events and actions that help people to avoid anticipated threat and promote coping with foreseen hardship. Such thoughts and images foster the exploration of alternative routes and hidden opportunities and help control people's actions, all of which should promote the achievement of behavioral change.

**HOW POSITIVE FANTASIES TURN INTO GOALS**

One might argue that our experimental research shows nothing but the classic notion that deviations from standards are motivating (e.g., Duval & Wicklund, 1972; Higgins, 1987; Locke & Latham, 1990; Markus & Nurius, 1986; Wicklund & Gollwitzer, 1982), particularly when people have high expectations of success (Bandura, 1991; Carver & Scheier, 1981). If this were the case, however, the arithmetic task condition in the study of getting to know an attractive stranger should have generated motivating effects in line with subjects' expectations, because subjects wrote down the discrepant reality at the outset of the experiment. This motivating effect should have been furthered in the positive-fantasy-only group by the subsequent making salient of the standard. The same argument would apply to the negative-reality-only group. If the subjects had already had a set standard or a goal, making the discrepant reality salient should have led to motivating effects guided by subjects' expectations.

The contrasting of mental images about wish fulfillment and the status quo do something to motivation that goes beyond the effects of the sole existence of discrepancies. We know this because the mere availability of the respective positive and negative aspects failed to show the motivational effects of expectations. It may be, then, that when people rehearse the discrepant aspects in their minds' eyes, their positive fantasies are turned into something that definitely needs to be achieved or relinquished, depending on subjects' expectations. In other words, only when expectations are high these fantasies acquire a binding quality and thus become goals: People feel that they have to fulfill these fantasies in real life.

**CONCLUSION**

To come back to the question of whether realism or illusory optimism is beneficial, it seems that both positions are true. Clearly, optimistic thinking
has beneficial effects on health and performance when it is operationalized via expectations. However, a matter-of-fact view of the negative reality is crucial, too. What seems necessary in order to translate both into motivation is fantasy—a positive vision of what the future may hold. Oddly enough, a positive vision also seems necessary to advance pessimistic expectations and reflections on the negative reality into disengagement. Maybe we need to consider not only the question of how much optimistic thinking there is, or in what situation optimistic thinking occurs, but also the question of how various kinds of thinking about the future translate optimistic expectations into motivation and action.

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