The Pygmalion effect is a type of self-fulfilling prophecy (SFP) in which raising manager expectations regarding subordinate performance boosts subordinate performance. Managers who are led to expect more of their subordinates lead them to greater achievement. Programmatic research findings from field experiments are reviewed, and our present knowledge about the Pygmalion effect in the management of industrial, sales, and military organizations is summarized. A model is presented in which leadership is hypothesized to be the key mediator through which manager expectations influence subordinate self-efficacy, performance expectations, motivation, effort, and performance. The behaviors that comprise the Pygmalion Leadership Style are described. Besides creating the one-on-one Pygmalion effect, additional ways for managers to assert their leadership by creating productive organizationwide SFP are suggested. An agenda for research on SFP applications is proposed.

Expectations play an important role in determining leadership effectiveness. Scholars and practitioners have assumed for a long time that leaders who expect more get more (e.g., Likert, 1961, 1967; McGregor, 1960). Despite this general awareness, until recently there was little empirical research illuminating how and why leader expectation effects operate, and how they can be profitably utilized in practice. In parallel, work motivation theorists have long postulated the central role of self-expectations in motivating the exertion of effort in job performance and in determining the level of productivity achieved (Atkinson, 1957; Atkinson & Feather, 1966; Atkinson & Raynor, 1974; McClelland, Atkinson, Clark, & Lowell, 1953; Rotter, 1943, 1945; Vroom, 1964; Zuroff

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There is a consensus among scholars that expectations and motivation are positively associated. However, none of these theoreticians has proposed that we apply knowledge of this relationship by purposely raising worker expectations in order to boost work motivation. Moreover, theory and research have largely ignored the interface between the manager's expectations of the subordinate and the subordinate's self-expectations. The manager-as-Pygmalion model is unique in focusing on the interlinking expectations of managers and subordinates as a key to understanding—and enhancing—the motivational power of effective leadership. The purposes of the present article are to review the experimental findings demonstrating the power of expectation effects in leadership, to present a model of leader expectation effects, and to propose ways in which expectations can be utilized to improve leadership practice.

The leader expectation effect is a special case of self-fulfilling prophecy (SFP). Merton (1948) gave us the SFP concept. SFP is the process through which the expectation that an event will occur increases its likelihood of occurrence. Expecting something to happen, we act in ways that make it more likely to occur. (Note the misnomer; the prophecy does not fulfill itself. Rather, it is the prophet who, due to his expectations, acts unwittingly to bring about the expected event. This makes it appear to be self-fulfilling.) SFP is ubiquitous in human intercourse (Jones, 1977).

SFP in management shares much common ground with concepts of charismatic and transformational leadership (Bass, 1985; Conger & Kanungo, 1987; House, 1977). A unique feature of SFP in management, which distinguishes it from other leadership phenomena, is that SFP operates by and large beyond the awareness of the players, both leaders and followers, whose behavior is so profoundly affected by it. The elusiveness of SFP is at once fascinating and frustrating, and it undoubtedly explains why such an important leadership phenomenon has been neglected by scholars for so long. The SFP approach to management is also unique in proposing raising leader expectations as a way of increasing transformational leadership. In presenting a summary model of SFP in management, integrating all the relevant variables, I hope to stoke up the interest of leadership theorists and researchers. I also hope practitioner readers will devise innovative SFP applications to boost productivity.

**SFP AND EXPECTATION EFFECTS**

**Early Research on SFP and Expectation Effects**

The first SFP to be investigated extensively in psychology was the experimenter effect. Serendipitously discovered by Rosenthal (1976), the experimenter effect refers too hypothesis confirmation that results from the experimenter's influencing subjects to respond to the treatment in a way that conforms to the experimenter's expectations. Rosenthal (1963) summarized a dozen experimenter-effect studies and wondered in print whether similar interpersonal expectation effects occur among physicians, psychotherapists, employers, and teachers. This led to Rosenthal and Jacobson's (1968) landmark experiment published under the title "Pygmalion in the Classroom." They showed that by raising teachers' expectations regarding the academic potential of some randomly designated pupils, those pupils actually learned more than control pupils in the same classes. They dubbed this boost in achievement the "Pygmalion effect." Igniting
Leadership and Expectations: Pygmalion Effects

the imagination of a generation of classroom researchers, the Pygmalion effect was studied intensively (see Dusek, Hall, & Meyer, 1985; Rosenthal & Rubin, 1978 for reviews), and is now an undisputed feature of teacher-pupil relations. However, the application of the Pygmalion concept to leader-follower relations in general, and to manager-worker relations in particular, was much slower in emerging.

Pre-Pygmalion Expectation Effects and SFP in Management

Some theorists of the human relations tradition wove expectations and SFP into their management theories as a minor chord. McGregor's (1960) Theory X and Theory Y invoked SFP as an explanatory concept. McGregor described the circular SFP process by which managers' assumptions (expectations) determine how they treat their subordinates, which in turn affects how the subordinates respond. A manager acting on Theory X assumptions mistrusts workers, refrains from delegating authority to them, and supervises them closely. This leads to fulfillment of the manager's prophecy, as workers so treated react by exerting less effort on the job. In contrast, belief in Theory Y leads the manager to trust people and to seek ways of achieving greater integration between individual and organizational goals. McGregor held that workers live up to the trust placed in them and respond responsibly to the challenge by redoubling their commitment and motivation. Thus, McGregor considered managers' expectations to be a determinant of productivity via an SFP process.

Likert (1961; 1967) was also aware of leader expectation effects. He included the communication of high performance expectations as an important component of leadership behavior. He wrote of the highly effective manager: "His confidence in his subordinates leads him to have high expectations as to their level of performance. With confidence that he will not be disappointed, he expects much, not little" (1961, p. 191). Likert postulated a leader expectation effect before the publication of any Pygmalion research.

Thus, SFP and leader expectation effects were presaged by the foremost management scholars of more than a generation ago. But expectations were not their central focus. Their humanistic bent led them to emphasize more the building of trust and respect in superior-subordinate relations (Argyris, 1964), the supportiveness of the "supervisory climate" (Roethlisberger & Dickson, 1939), the nature of the work group (Seashore, 1965), and the fulfillment of higher-order needs at work (Maslow, 1954; 1965). Performance expectations were never the centerpiece on the human relations mantel.

In a longitudinal study of managerial socialization at AT&T, Berlew and Hall (1966) found a strong relationship between the level of performance that the company had initially expected of new hires and evaluations of their contributions to the company during the next five years. Stedry and Kay (1966) also found a relationship between manager expectations and subordinate performance. Next, Korman (1971) reported two laboratory experiments and three field studies. He found that subjects given high expectations consistently outperformed those given low expectations. Korman wrote:

One interesting implication of these findings is that high expectancies can be established in an organization by working through the medium of work group norms and group values, as well as through the medium of leadership influence directly. This opens the door for a greater variety of ways by which the motivation to work may be increased by organizational leadership (p. 221).
Without mentioning the Pygmalion research, in these insightful words Korman linked leadership, expectations, and motivation, and foresaw many of the managerial and cultural issues that emerged later.

PYGMALION'S DEBUT ON THE MANAGEMENT STAGE

Fresh in the wake of *Pygmalion in the classroom*, Livingston (1969) argued cogently for the relevance of the Pygmalion concept to management. Livingston wrote that what a manager expects of his subordinates, and how he treats them, largely determine their job performance and careers. The best managers create high performance expectations that subordinates fulfill. Livingston realized that expectations can be created and transmitted to many ways. Also, managers’ belief in their own capacity to lead subordinates to outstanding performance determines how they play Pygmalion’s role:

The high expectations of superior managers are based primarily on what they think about themselves—about their own ability to select, train, and motivate their subordinates. What the manager believes about himself subtly influences what he believes about his subordinates, what he expects of them, and how he treats them. If he has confidence in his ability to develop and stimulate them to high levels of performance, he will expect much of them and will treat them with confidence that his expectations will be met. But if he has doubts about his ability to stimulate them, he will expect less of them and will treat them with less confidence (p. 85).

Livingston emphasized the effects of the expectations of the young manager’s own first manager on his first job, discussed the negative impact of low expectations, invoked the theory of achievement motivation to explain expectation effects, and spoke of self-esteem as mediating the relationship between expectations and performance. In this early article Livingston raised many of the leadership issues that were subsequently studied experimentally.

THE FIRST PYGMALION EXPERIMENTS IN INDUSTRY

King (1971) replicated the Pygmalion effect in a training program for disadvantaged persons using the experimental approach pioneered by Rosenthal and Jacobson. He designated four pressers, five welders, and five mechanics as high aptitude personnel (HAPs), leading the instructors to expect superior performance from these individuals. In reality, the HAPs had been chosen at random. The designations produced the hypothesized SFP. The HAPs obtained higher test scores, higher supervisor and peer ratings, and shorter learning times, and had lower dropout rates, evidencing the Pygmalion effect.

Organizationwide Expectation-raising

King (1974) next shifted his focus from the individual to SFP at the organizational level. He hypothesized that managers’ expectations regarding the outcomes of organizational innovations produce effects on those outcomes that are distinguishable from the effects of the innovations themselves. He tested this hypothesis experimentally in four similar industrial plants in one company. The firm’s director of manufacturing
presented the same changes differently in each plant. Job enlargement was the innovation installed in two plants and withheld from the two enlargement-control plants, which got job rotation as a sham innovation. The second independent factor was management’s productivity expectations, which were raised in one enlargement plant and in one rotation plant, and unchanged in the two remaining plants. Thus, four comparable plants got different treatment combinations: a high-expectation enlargement plant, a high-expectation rotation plant, a control-expectation enlargement plant, and a control-expectation rotation plant.

The results were that neither enlargement nor rotation had any effect but expectations did. Over the follow-up period, both high-expectation plants increased output by similar amounts irrespective of whether they had gotten enlargement or rotation, whereas output in both control-expectation plants remained unchanged. King concluded that manager expectations for performance due to the innovations had produced an SFP. He neither measured or speculated about the leadership behaviors through which the managers increased output.

King’s findings have important practical implications for management and consulting. Those who expect more from a program—any program—are likely to benefit more from it. This implies that one way to create productive SFP willfully is for leaders to get followers to expect positive outcomes from programs and organizational changes of all sorts. However, organizationwide SFP is not a Pygmalion effect. There are two different varieties of SFP that are distinguishable in terms of how the high expectations are anchored. To produce a Pygmalion effect, one gets a leader to expect more of a follower on the basis of some characteristic of the follower. In creating organization-wide SFP, King took advantage of his expert role to anchor leader expectations in properties of the new program. This can be an effective, alternative way to create productive SFP when leaders know, or think they know, their followers’ limitations well. Firmly crystallized expectations are hard to change, rendering those who hold to them resistant to Pygmalion effects.

King’s rotation plants got what in medical science would be called a placebo, and the high-expectation rotation plant showed a placebo effect: even the “sugar capsules” (i.e., rotation) proved to be an efficacious remedy if the “patients” believed they could improve productivity. A menace to valid inference, placebo effects must be controlled in research evaluating the effectiveness of new treatments (Critelli & Neumann, 1984). However, practice is not research. We should harshly judge the clinician who abstains from using the placebo effect as an aid to treatment. If smiling, nodding reassuringly, and saying to a patient, “I’m sure the treatment I’ve prescribed will make you feel a lot better” can augment the drug in promoting the healing process, then physicians should add these placebo interventions to their treatment repertoire. Refraining from creating physician expectation effects on methodological grounds is wrong both practically and ethically. The same reasoning applies to willful creation of leader expectation effects.

PYGMALION IN THE ISRAEL DEFENSE FORCES

The next three field experiments using variations on the classical Pygmalion research design were carried out by my students and me in the Israel Defense Forces (IDF).
The first IDF experiment (Eden & Shani, 1982) was designed to replicate the basic Pygmalion paradigm in a culture and an age group different from previous SFP experiments. Successful replication in highly dissimilar circumstances would establish that the Pygmalion effect as a robust phenomenon and broaden its generalizability. An additional aim was to treat the mediating variables that had been revealed in classroom research in a way that would render them applicable to management. Rosenthal (1973) had summarized several dozen classroom studies and identified four factors, or clusters of teacher behaviors, that mediate the teacher expectation effect: climate, feedback, input, and output. We assumed that these factors operate also in adult leader-follower relations. They should therefore be detectable using a managerial leadership questionnaire. There was a precedent for adapting a standard measure of leadership to investigate college instructors’ behavior (Dawson, Messe, & Phillips, 1972). King (1971) had concluded his Pygmalion article calling for “a serious re-examination of the process of leadership behavior and specifically of the role of supervisors and managers in organizations” (p. 378). He then quoted Likert’s description of the effective manager as maintaining high performance expectations. Thus, both Likert and King had hypothesized a relationship between expectations, leadership, and performance, but neither had tested it experimentally. Likert had measured leadership without raising expectations, and King had raised expectations but had not measured leadership. We therefore hypothesized that the manager’s leadership behavior mediates the Pygmalion effect. Confirmation would establish the Pygmalion effect as a leadership phenomenon.

Pygmalion Goes to Boot Camp: The Combat Training Experiment

The first IDF experiment was conducted on a sample of 105 men with at least 11 years of schooling, who had been selected into a combat command course on the basis of ability and motivation. Their instructors were four experienced training officers. Each instructed a group of about 25 trainees.

Procedure

Four days prior to the trainees’ arrival at the base we induced differential expectations in the instructors by saying:

The IDF is undertaking a large-scale evaluation of training methods. We will be studying this course and collecting information of various kinds. We have compiled much data on the trainees including psychological test scores, sociometric evaluations, grades in previous courses, and ratings by previous commanders. Based on this information we have predicted the command potential (CP) of each soldier. Experience has shown that course grades predict CP in 95% of the cases. Based on CP scores, we have designated each trainee as having either high, regular, or unknown CP, the latter due to incomplete records. When we’re not sure, we don’t guess. Soldiers of all three CP levels have been divided equally among the four training classes.

Each instructor was then given a list of his trainees in which about a third were designated high CP, a third were unmarked to indicate regular CP, and a third were marked with a question mark indicating they were unclassifiable. Unbeknownst to the instructors, the assignments both to the four training groups and to the three CP conditions were random.
The instructors were asked to copy each trainee’s CP into his personal record and to learn their trainees’ names and CP scores before the trainees arrived. The above procedure replicated Rosenthal and Jacobson’s (1968) classroom paradigm as closely as was feasible in this situation. Like Rosenthal and Jacobson, we raised the instructors’ expectations but abstained from intimating in any way how they should relate to their trainees. Except for collecting data, we made no further interventions. Any subsequent differences in attitudes or performance, among either the instructors or the trainees, could have been caused only by the induced expectations. The treatment check verified that the information raised instructor expectations as intended. One week after the course had begun, the instructors rated their trainees’ CP on a 9-point scale. They expected significantly better performance of trainees designated as having high CP, indicating that the treatment “took.”

**Performance**

We analyzed grades in four subjects. Achievement in three subjects—basic studies, topography, and theoretical specialization—was assessed by means of multiple-choice examinations. The fourth subject, called practical specialization, was evaluated by an impartial examiner from corps headquarters who arrives near the end of each course to test trainees’ proficiency in the use of weapons they have been trained to master. The external examiner knew nothing about the experiment. Thus, these grades were free of instructor-expectation bias. The mean performance grades confirmed the SFP hypothesis. Those designated as high in CP significantly outperformed their classmates in all four subjects. Those of “unknown” CP scored about midway between those in the other two conditions. The differences in performance evidenced a substantial Pygmalion effect—about 15 points on a conventional 100-point grade scale. Analysis of the overall Performance Index showed that the experimentally induced expectations accounted for nearly three quarters of the variance in performance, a high proportion by any standard.

**Attitudes**

Each trainee filled out a questionnaire that included items asking whether he would recommend the course to a friend, desired to go on to the next course, and his overall satisfaction. High-expectation trainees expressed more favorable attitudes on each of the items and obtained a significantly higher mean on the overall Attitude Index, instructor expectations accounting for two thirds of the variance. This is evidence that these trainees enjoyed the course more; it also portends a more positive attitude toward future training (“desire to on to the next course”).

**Leadership**

We measured leadership as a potential mediator of expectation effects. Each trainee described his instructor’s leadership behavior using items borrowed from the University of Michigan’s Survey of Organizations (Taylor & Bowers, 1972). These items operationalize the four factors of leadership conceptualized by Bowers and Seashore (1966) on the basis of their review of several approaches to leadership. The factors are Support, Interaction Facilitation, Goal Emphasis, and Work Facilitation. In the combat experiment we used the 10-item version of these items that Eden and Leviatan (1975)
had translated into Hebrew, and Eden and Daniely (1979) had adapted for IDF research. The summary means of instructor leadership revealed that trainees designated as having high CP rated their instructors' leadership significantly higher. Induced expectations accounted for 28 percent of the variance in the Leadership Index. This confirmatory pattern was replicated with a high degree of consistency for each of the four factors of leadership.

**Implications**

These leadership findings support two relatively new and very important ideas about marginal leadership. First, leadership mediates the Pygmalion effect. Raising manager expectations improves leadership, which in turn promotes subordinate performance. Supervisory leadership is comprised of behaviors that are very similar to Rosenthal's four factors of teacher behavior. Both Bowers and Seashore's four factors and Rosenthal's four factors boost subordinate performance. These leadership findings help to demythologize the Pygmalion effect. The prophecy is not mysteriously self-fulfilling. Rather, manager expectations work their "magic" on subordinates by inducing managers to provide better leadership to subordinates of whom they expect good performance. Leadership is thus a means by which managers fulfill their prophecies regarding subordinate performance. The Pygmalion effect is basically a leadership phenomenon.

The second implication is that managers allocate leadership resources to subordinates in proportion to their expectations. Each instructor had a mix of high- and control-expectation trainees in his group. We designed the study this way to control instructor effects. Taking the data at face value, what the trainees were telling us in their leadership ratings is that different trainees got different leadership from the same supervisor. This is not the way management scholars have traditionally thought about leadership. Standard measurement practice has been to summarize a number of subordinates' ratings of a manager's leadership in terms of a mean score, and to regard the within-group standard deviation as statistical "error" or as inconsequential differences of opinion among the subordinates. However, averaging may be a way of unintentionally discarding rich information about leadership that goes undetected in a means analysis. Alternatively, Graen and his colleagues, who have pioneered the "leader-member exchange" (LMX) approach (Dansereau, Graen, & Haga, 1975; Graen & Schiemann, 1978; Scandura, Graen, & Novak, 1986), analyze data on relationships within each leader-follower pair separately. They have shown that a manager treats subordinates differently based on his or her judgment of their competence and motivation, and the degree to which he or she trusts them. Liden and Graen (1980) have called those who get treated best "in-group" subordinates and the others "out-group." Supervisors undoubtedly expect better performance from in-group subordinates. In light of findings in the IDF combat experiment, the superior performance on the part of the in-group subordinates in the LMX studies may be interpreted as a Pygmalion effect. "Knowing" that in-group workers are most competent, the manager treats them as such and unwittingly fulfills his prophecy. At the same time, regarding out-group personnel as inferior, the manager expects little of them, (mis)leads them accordingly, and depresses their performance.

Both Pygmalion and LMX research thus reveal that averaging across subordinates' ratings of a manager obscures some of the truth. The reality lost by averaging is that
managers do not treat all subordinates the same. Different ratings of the same manager by different subordinates are neither errors nor trivial differences of opinion. The combat experiment showed that managers are discriminating when it comes to allocating leadership resources; they invest their best leadership in those they expect to perform best. This implies that one way to improve leadership is to raise managers' expectations.

In the combat course, and undoubtedly in other management situations, the same supervisors were quite good leaders and simultaneously not such good leaders. They were quite good leaders for those of whom they expected a lot, but not such good leaders for those of whom they expected less. The difference in leadership reported by high- and control-expectation subordinates when describing the behavior of the same supervisors indicate that the supervisors were not using their best leadership skills when supervising subordinates not expected to excel. Evidently, high expectations bring out the best leadership in a manager. This suggests the hypothesis that if managers would treat all their subordinates to the same quality leadership that they lavish upon those of whom they expect the most, all would perform better. Discussing LMX theory, Yukl (1989) has called attention to potential dangers in differentiating subordinates into in- and out-groups. Hostility may arise between the two groups, undermining teamwork and cooperation. Also, out-group members may resent that others are more favorably treated and become apathetic and alienated. A later SFP experiment, described below, showed that the Pygmalion effect can be produced among subordinates as a whole, without treating some subordinates as an out-group of second-class citizens.

It can be concluded from the combat equipment that raising expectations triggers a leadership process that culminates in superior performance. The sarcastic adage that “managers get the subordinates they deserve” should be replaced by one that has greater fidelity to what we now know about leader expectation effects: Managers get the performance they expect. The practical upshot is that we need to develop ways of getting managers to expect more.

Pygmalion and Galatea: The IDF Adjutancy Experiment

In the combat experiment we had learned how raising expectations affects the supervisor: his leadership improves. But what goes on in the subordinate's mind? Another study was needed to extend our understanding of intra-trainee factors in the Pygmalion effect. One possibility is that when a manager communicates high expectations to a subordinate, the subordinate is likely to raise the level of his or her own performance expectations. This reasoning integrates the leader expectation effect and the expectancy theory of work motivation (Lawler, 1973; Vroom, 1964), which postulates that the more an individual expects to succeed in performing a task, the greater the effort he or she exerts in performing it. We hypothesized that self-expectations mediate the Pygmalion effect; the manager who expects a lot communicates high expectations to the subordinate, who then raises his or her own self-expectations, resulting in higher motivation, greater effort, and enhanced performance. We tested this hypothesis by comparing trainees' self-expectations before and after inducing high expectations in their instructors.
On further reflection, it seemed that if the intrapsychic key to the Pygmalion effect were the subordinate's own self-expectations, the manager may be tangential to the core motivational process. It should be possible to short-circuit the SFP process by directly raising the subordinate's self-expectations, bypassing the supervisor. If self-expectations mediate the Pygmalion effect, then raising subordinate expectations directly should be as effective a way to enhance performance as by raising their expectations indirectly, through the manager. Therefore, in the second IDF experiment we hypothesized that directly inducing subordinates to expect more of themselves enhances their performance. If obtained, such performance enhancement would be dubbed the "Galatea effect," after the mythical Pygmalion's sculpture, since it would result from working directly on the statue itself, so to speak.

Sample
We (Eden & Ravid, 1982) conducted the second IDF experiment in two simultaneous seven-week adjutancy courses. One course included 28 trainees divided randomly into two training groups. The other course had 33 trainees divided at random into three training groups. Each course was commanded by an officer. The five instructors were sergeants and corporals aged 18-1/2 and 19. The trainees were 1 g-year-old privates and PFCs in their first half year in service. These men were above average in mental aptitude but were either physically unfit for combat or were only-sons or sons of bereaved families who were therefore exempt from combat duty.

Procedure
The procedure used in the adjutancy experiment was similar to that employed in the combat course, except that there were four experimental conditions instead of three. Only about 25% of the trainees were described to the instructors as having high potential (Pygmalion condition) and 25% were designated regular (Pygmalion-control condition); 50% were designated as having unknown potential due to incomplete information. This unclassified category was further split into two trainee-expectation conditions, Galatea and Galatea-control, each compromising 25% of the trainees. All these designations were random. The instructors were told the same background story as in the combat experiment, and their expectations regarding trainee performance were raised in the same manner. The trainee also received information about their potential according to the experimental conditions to which they had been assigned. The Galatea trainees were given the following 5-minute personal interview by a military psychologist:

Shalom! My name is _______. I'm a psychologist. I wanted to get to know you on your arrival at the base. We interview all new trainees. Please tell me a few details about your military service up to now, such as length of service and courses you've had." [Trainee answers.] "How do you feel about being here for this course?" [Trainee answers.] "Thank you. To conclude, I wanted to tell you that, in light of data we've gathered about trainees with the aid of the military psychology unit, you have high potential for success." [Dismisses trainee.]

The Galatea-control trainees were similarly interviewed, except that they were told at the end "You have regular potential for success." The interview with the trainees in the Pygmalion conditions ended without the last sentence; that is, the psychologist did not alter their self-expectations.
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The Impact of Expectation Raising on Reported Self-expectations

We measured self-expectations by asking the trainee whether he expected to do better than (1) 20%, (2) 40%, (3) 60%, or (4) 80% of the others in his course. Trainees completed this measure three times: on the day they arrived on base prior to contact with their instructors and with the psychologist, in the fourth week, and in the final week of the course. Mean preinduction self-expectation scores in the four conditions were very similar, reflecting the effectiveness of random assignment in creating preexperimental equivalence among the conditions. Statistical analysis revealed substantially rising self-expectations among trainees in both the Pygmalion and the Galatea conditions throughout the course, in contrast to relatively stable or slightly declining expectations among the controls. The increase in self-expectations among the Pygmalion trainees confirmed the hypothesis that raising the leader’s expectations of certain subordinates causes those subordinates to expect more of themselves. This is the expectation link we sought.

For the trainees in the Galatea condition, the rise in self-expectations could not have resulted from raising the instructors’ expectations, as trainees in both the Galatea and the Galatea-control conditions had been designated to the instructors as unclassifiable. Rather, this serves as a treatment check and shows that the 5-minute personal interview did raise the Galatea trainees’ self-expectations as intended.

Effects of Expectation Raising on Performance

Performance in the adjutancy course was measured both by weekly examinations and by weekly instructor ratings of trainee performance. Analysis of scores on both performance measures revealed that raising instructor expectations and raising trainee self-expectations boosted performance significantly and substantially. Between a quarter and a third of the variance in the exam scores was attributable to expectations. Comparing across the weeks, the predicted gap between each high-expectation condition and its relevant control was evident already by the end of the first week and was sustained for the duration of the course. Comparing the summary exam means across all seven weeks, both the 12-point Pygmalion effect and the 17-point Galatea effect were significant. However, the two effects were not significantly different from each other.

Self-sustaining Prophecy: Second-generation Pygmalion

The performance ratings in one of these courses are particularly interesting due to the unscheduled replacement of the instructors after the third week. The original instructors were reassigned elsewhere on very short notice. We capitalized on their abrupt replacement as a “natural experiment.” Comparing the mean weekly ratings by original and relief instructors revealed that the ratings changed little in any condition when the instructor substitution occurred. The effects of the initial expectancy induction carried over to the relief instructors, whose expectations had not been treated experimentally.

The spillover of the expectancy effects to the relief instructors underscores the potency of interpersonal expectancy effects and supports the idea that expectations can produce self-sustaining, as well as self-fulfilling, prophecies (Salomon, 1981). However, the manner in which the spillover occurred is unclear. The relief instructors were not
hermetically insulated from the original expectation induction. There was a brief period of overlap—several hours—during which each original instructor transferred his affairs to his replacement and described his trainees as he had come to know them. At this time they probably passed along the expectations we had created three weeks earlier. It is also possible that the Galatea trainees' high performance raised the original instructors' expectations toward them, and they conveyed these high expectations to their replacements as they conveyed the experimentally-induced high expectations toward the Pygmalion trainees. Expectation effects are contagious. Expectations could have been passed on from instructor to instructor, as they evidently are passed from instructor to trainee. This is a case of one instructor passing a Pygmalion effect on to another instructor. A similar transfer of information about pupils is said to take place in teachers' rooms in schools and about employees in discussions, performance reviews, and "bull sessions" among managers.

Besides instructor-to-instructor spillover, the stability of performance over time could have resulted from relief instructors' studying the record. The relief instructors had access to evidence of good performance in the Galatea trainees' files. Written records are a source of persuasive information that may have influenced the relief instructors' expectations commensurate with previous performance.

A more intriguing interpretation is that both Pygmalion and Galatea effects are self-sustaining due to intratrainee factors. Once aroused to high self-expectations by a manager or by a psychologist, a subordinate may maintain high performance under subsequent supervisors, regardless of the latters' initial expectations. The subordinate's high performance may be sustained by the high self-expectations that he or she has internalized. This interpretation focuses on the subordinate as the prophet who fulfills his own expectations after initial exposure to a manager with high expectations.

Conclusions

The near-disruption of the adjutancy experiment due to personnel exigencies in the field is typical of field experiments, and simulates organizational reality. There is little doubt that the spillover of expectancy effects in the adjutancy experiment also simulates everyday management actualities. This "second-generation" Pygmalion effect may also be sustained beyond the termination of the course. This is because subordinate self-expectations are a key in the SFP process. They mediate the leader expectation effect and they can be raised directly to produce similar performance gains in the Galatea effect. The common denominator shared by both of these SFP effects is the subordinate's self-expectations. Credible high expectations communicated by an authority figure, whether an experimenter, a manager, or a staff psychologist or consultant, lead subordinates to expect more of themselves and to perform better.

However, Galatea is not Pygmalion. In the Pygmalion condition, the supervisor unwittingly treated subordinates differently in accordance with his expectations. In contrast, in the Galatea experiment, the psychologist imparted his "expectations" to the trainees knowingly. Following the five-minute interviews, the psychologist had no further contact with the trainees. Therefore, he could not have fulfilled his prophecy by means of his own behavior. Calling the psychologist a prophet in this situation misses the point. In this sense the Galatea effect is not an interpersonal expectation effect.
Raising self-expectations relies on the subordinate's capacity to mobilize his or her own resources to perform better. In the Galatea effect, the subordinate is the one who functions as a prophet and fulfills his or her own expectations. Getting managers to believe in subordinates' potential is one way, an important way, but not the only way, to raise subordinates' self-expectations and boost their performance. There is a larger role for imaginative leadership to play, as will be discussed below.

**Whole-Group Pygmalion: The IDF Squad Leaders Experiment**

The classical Pygmalion research design does not control contrast effects. Since Rosenthal's earliest work on the experimenter effect, the standard experimental procedure has been to designate some members of a group as worthy of high performance expectations. The remaining individuals in the same group are in a control condition for the sake of comparison. Though the researcher says nothing to deprecate the control subjects, perhaps conveying information about the high potential of their experimental peers implies that nothing has been said about them because they are of lower potential. Thus, it is possible that raising expectations toward some is tantamount to unintended lowering of expectations toward others.

This experimental design raises several questions. First, there is the issue of contrast effects. Can the Pygmalion effect be produced without a control group? Perhaps comparison of "high potential" subjects to peers who are not so designated is necessary for the effect to occur. Comparing subjects assigned to different conditions, which is inherent in experimental design, may be a substantive factor that interacts with raising expectations and creates the Pygmalion effect. Perhaps raising expectations toward subordinates without contrast to controls should not produce SFP. If leader expectation effects were to boil down to an artifactual contrast effect, SFP in management would not seem as important or as applicable a phenomenon.

The second question concerns productivity. If the Pygmalion effect requires a control group, is it practical? Our efforts may be better spent seeking management innovations that raise productivity of all subordinates, rather than only some. Worse still, if the experimental subjects gained at the expense of the controls, we could not justify creating expectation effects in the name of organizational effectiveness. Leader action that makes some individuals more productive and others less so is equivalent to the proverbial "Robbing Peter to pay Paul." In a redistribution of productive potential, the organization profits nothing in aggregate. But some individuals are aggrieved.

This grievance is the third, but not least important, reason for concern about contrast effects. Is it fair to the control subjects? If expectation effects came at the expense of individuals randomly assigned to the control group, it would be unfair to them. Even if being in the control group does not degrade their performance, being outperformed by peers chosen for the experimental treatment may create relative deprivation. This ethical dilemma is posed in the American Psychological Association's *Ethical Principles in the Conduct of Research with Human Participants* (1982) under the heading "Withholding Potential Benefits from Control Participants." Peering through the mist of these ethical ambiguities, it seemed that the Pygmalion effect would be hard to disseminate as a practical technique if it required contrast effects. Establishing its feasibility goes beyond showing control subjects are not actually harmed. If creating
the effect required any sort of discrimination, it would be distasteful to researchers and managers alike.

**Comparison without contrast**

There was thus a need for a Pygmalion experiment in which contrast effects would be eliminated. However, classical experimental design compares subjects who have been exposed to an experimental treatment to comparable others who have not been exposed. How can we make the comparison without creating contrast effects? Campbell and Stanley (1966) proposed that, when it is not feasible to assign individuals to conditions at random, as in experimental research on intact work groups in organizations, preexperimental equivalence be achieved by randomly assigning whole groups to conditions. In Pygmalion research, the whole-group design requires randomly assigning a number of leaders to conditions. Each leader and his or her entire group are assigned to a condition. Testing the hypothesis involves the comparison of means of group means. No distinction is made among individuals within groups, nor is any comparison of individuals within groups made. Therefore, the experiment induces no contrast effects among individuals within groups. This requires a large sample of comparable groups to allow for sufficient statistical power, as degrees of freedom for hypothesis testing are based on the number of groups, not the number of individuals in the groups. The randomized whole-group design was used in the next Pygmalion experiment.

**Sample**

Ten companies brought to the IDF School for Squad Leaders for combat and command training participated in this experiment. Each company was comprised of three platoons; each platoon was instructed by its own leader. The platoon is the natural training group in the School and was therefore the unit of analysis. One platoon in each company was chosen at random for the Pygmalion condition, and the other two were assigned to the control condition. Once a platoon was assigned to a condition, all its members were assigned with it. One company had only two platoons, which were assigned to conditions at random. Therefore, we had 10 experimental and 19 control platoons. The trainees were high school graduates aged 19 or 20 of average or above average aptitude as measured by an IDF battery. They had been through basic training.

**Procedure**

This school has a military psychologist on its permanent staff, and instructors are accustomed to working with a psychologist on various problems that arise during a course. One day before each company arrived at the School to begin its course, the psychologist met individually with the leader of each experimental platoon for a conversation designed to raise his expectations toward the men in his platoon. The psychologist said:

The IDF is conducting a large-scale research project to investigate the effectiveness of different training methods. The aim is to improve how we train soldiers. As part of the project, I will follow your course closely. I'll be checking on several aspects of the training and I'll gather data also from the trainees during the course. Any recommendation made will be applicable only to methods employed in future courses.
One of our assumptions is that there is a relationship between the training method used and the trainee's ability and his success as a commander. In order for you to know the trainees who will be arriving tomorrow better, I checked out their aptitude test scores, sociometric evaluations from their basic training, and ratings by their previous commanders. On the basis of this information, we can predict the Command Potential (CP) of the soldiers. Comparing the mean CP score of the platoon you're getting tomorrow with other groups, it is evident that the average CP of your trainees is appreciably higher than the usual level.

Research on previous courses has shown that there is a great deal of correspondence between our evaluation of trainees' CP and their actual achievements. It was found that CP could predict the level of success in 95% of the cases. Therefore, you can expect unusual achievements from the trainees in this group. Throughout the course you will be asked to complete an instructor's questionnaire in which you will evaluate your trainees. The trainees will also be asked to complete questionnaires.

The psychologist also met individually with the leader of each control platoon and described the research in a similar manner, except that nothing was said about the CP of their soldiers. The random assignment and conversations with the psychologist thus created two groups of platoons that were comparable in everything except the CP information provided to the leaders. This procedure created an experimental group of ten platoons whose leaders were in a Pygmalion condition and a control group of 19 platoons whose leaders' expectations were not treated. To check whether these conversations achieved their aim, all 29 leaders were asked to rate their soldiers on a 9-point CP scale three times. The leaders of the Pygmalion platoons rated their trainees significantly and consistently higher than did the leaders of the control platoons. Thus, the conversations succeeded in creating higher expectations among the Pygmalion leaders, as intended.

**Results**

Scores in two objectively assessed performance areas were analyzed. These subjects were taught by the platoon's own instructor. This is the leader whose expectations the base psychologist had raised. One area was assessed by anonymously scored multiple-choice examinations, which are free of subjective errors such as halo and leniency. Scores in the second area were determined by a series of performance tests in which each trainee progressed from station to station on a testing line manned by all the instructors. At each station the trainee was asked to perform a particular operation using weapons or other equipment. The instructors at the station graded his performance. Most of the instructors determining these grades were not the trainee's own leader, and their expectations had not been treated. Therefore, these performance scores are free of expectation bias.

We also compared performance of experimental and control platoons in two objectively assessed "control areas" that were not predicted to be influenced by the leaders' expectations. Physical fitness was assessed by a physical education specialist who drilled the men from time to time to keep them in condition during the course. This specialist was given no information about the experiment and had no reason to assess the potential of the men in the different platoons differently. Sharpshooting was not even drilled in this course. It was included in the record because of its generic importance in the military. There was no reason to expect spillover of the effects of the platoon leader's expectations to performance in areas over which he had no
influence. Thus, we analyzed physical fitness and sharpshooting as control subjects that were not predicted to be influenced by the expectancy induction.

Comparing the means revealed a significant Pygmalion effect in both performance areas taught by the platoon leaders. As predicted, there was no substantial difference between Pygmalion and control platoons in physical fitness or in sharpshooting. These findings confirm the hypothesis that the Pygmalion effect is not dependent upon contrast effects. SFP in management is not a methodological artifact, nor do leaders create SFP for the benefit of a favored few at the expense of the rest. Rather, raising managers’ expectations toward their subordinates as a group boosts those subordinates’ average performance. This opens the way for whole-group SFP applications.

**COUNTERPRODUCTIVE SFP: THE GOLEM EFFECT**

SFP is a double-edged sword. Until now, we have considered the positive effects of raising expectations on performance. However, there is evidence that low expectations have negative performance effects. For obvious ethical considerations, Pygmalion researchers have been reluctant to impart low performance expectations. Nevertheless, there have been studies of the effects of naturally occurring low expectations. Such studies are causally ambiguous because they lack the rigorous control achieved in randomized experiments in which the experimenter raises expectations. Nevertheless, we can infer from such research what effects low expectations must have on performance. As no experimental research on low expectations among adults in work organizations has been reported, the debilitating effects of low expectations can be illustrated by Babad, Inbar, and Rosenthal's (1982) study of expectation effects among physical education student-teachers. They found that pupils about whom they imparted high expectations to the instructors performed best. However, they also found that pupils toward whom instructors harbored natural low expectations performed worse than those regarding whom they had high or intermediate natural expectations. Babad et al. dubbed the debilitating effect of low expectations the “Golem effect.” (Golem is Hebrew slang for dumbbell.) Thus, SFP is a double-edged sword that can either boost or depress performance, depending on the level of the expectations fueling it.

Babad et al. studied physical performance, including sit-ups, push-ups, broadjumping, and sprinting. This broadens the generalizability of adult interpersonal SFP effects to nonintellectual spheres of performance. King’s trainees learned welding, and the practical specialization assessed in the IDF combat experiment included assembling, dismantling, calibrating, and operating heavy weapons. Thus, SFP effects are not limited to academic performance.

The mission for leaders bent on profiting maximally from application of SFP is therefore two-fold. It entails purposefully reducing Golem effects as well as deliberately creating positive Pygmalion and Galatea effects. The distinction is not merely semantic. Eliminating Golem and creating Pygmalion are appropriate in different situations, and call for different interventions.

**No Approach Works Every Time**

Not every attempt to raise leader expectations will succeed. Particularly when supervisors have prior personal knowledge of subordinate competence, their
expectations become resistant to change and require information that is especially convincing. Sutton and Woodman (1989) reported an unsuccessful attempt to produce a Pygmalion effect among retail sales personnel. Elsewhere (Eden, 1988a, 1990d) have analyzed Sutton and Woodman's procedure and mustered arguments that it is doubtful whether they actually raised manager expectations. If expectations were not raised, the Pygmalion hypothesis was not tested. This highlights some potential pitfalls in willfully creating expectation effects. Given the circumstances in which Sutton and Woodman tried to produce the SFP, especially considering that the supervisors knew their subordinates prior to receiving the information intended to raise their expectations, it would have been preferable to attempt an organizationwide SFP rather than Pygmalion effect based on new information about the subordinates.

BOOSTING SELF-EFFICACY FOR PRODUCTIVE ENDS

"Hos successus alit; possunt, quia posse videntur."
Virgil's Aeneid, Book V (Fairclough, 1967, p. 461)

In this marvelous passage describing the waxing motivation of men nearing the glory of victory in a contest at sea, Virgil used concise, classical words to convey the concept of self-efficacy: "Success encourages them; they can do it because they think they can." A key to the willingness to commit oneself to a highly demanding undertaking is one's belief in one's capacity to mobilize the physical, intellectual, and emotional resources needed to succeed, that is, self-efficacy (Bandura, 1986). Self-efficacy is emerging as an important determinant of work motivation (Eden, 1984, 1988b; Gist, 1987; Locke, Frederick, Lee, & Bobko, 1984; Locke & Latham, 1990). I (Eden, 1988b) began thinking of self-efficacy as the crux of SFP at work. Managers influence their subordinates' self-efficacy, often unwittingly. Expecting much of subordinates and conveying high performance expectations to them via myriad channels, the manager-as-Pygmalion acts in ways that boost their sense of self-efficacy. Higher self-efficacy in turn raises their performance expectations. Then, according to the expectancy theory of work motivation, expecting to do well motivates greater effort and culminates in improved performance. Thus, subordinate self-efficacy is posited to be a crucial intrapsychic mediator of expectation effects. The mediating effect of self-efficacy can also explain the second-generation SFP found among subordinates whose leaders were replaced (Eden & Ravid, 1982). Trait-like self-efficacy is well suited to serve as the solid mooring to preserve an individual's high self-expectations during and after leader transition.

**General and Specific Self-efficacy**

A distinction can be made between self-efficacy as a stable trait that person carries around from situation to situation at a relatively constant level, and specific self-efficacy, which is a changing state that varies across situations in the same person. General self-efficacy is a belief about self-competence in achievement situations in general; specific self-efficacy is a cognition about one's future achievement in a particular, ability-related situation. Bandura's (1977) self-efficacy is situation-specific; he (1986) eschews the concept of general self-efficacy. Nevertheless, personality researchers have validated scales of general self-efficacy (e.g., Sherer, Maddux, Mercadante, Prentice-Dunn,
Jacobs, & Rogers, 1982). Reviewing the state-trait issue, I (Eden, 1988b) concluded that both concepts are useful. Experimenters attempting to raise performance expectations should measure specific self-efficacy as a treatment check and analyze antecedent general self-efficacy as a moderator. In practice, specific self-efficacy is a key to low-cost efforts to boost motivation, as Pygmalion and goal-setting research shows. However, a product of lifelong experience, general self-efficacy is not amenable to quick change; treating it as a moderator both in research and in brief interventions makes more sense. Comparing persons of high and low general self-efficacy might reveal different responses to attempts to raise their specific self-efficacy. These ideas were corroborated in an experiment described below (Eden & Kinnar, 1991). Interest in the trait concept among motivation theorists is growing, as exemplified by Brockner's (1988) work on general self-esteem at work. The implications for leadership practice are that specific self-efficacy can be raised by careful attention to immediate situational factors, whereas raising general self-efficacy requires sustained leader effort.

**Sources of Self-efficacy**

Bandura (1986) has summarized four sources of information from which people derive their notions about their self-efficacy. In descending order of impact on self-efficacy, these are enactive attainment, vicarious experience, verbal persuasion, and physiological state. Enactive attainment, that is, successful performance, has the strongest influence on self-efficacy because seeing oneself succeed at a job is incontrovertible evidence of one's ability to do the job. Next best is the vicarious success experienced by seeing someone else succeed. This is the basis for behavioral modeling in training (e.g., Goldstein, 1986). Instead of, or in addition to, enactive attainment and vicarious experience through a model, a credible senior or peer may convince one with reassuring words that one is capable of success. Finally, sensing some of the visceral reactions that accompany the threat of failure and the exhilaration of success, we draw commensurate inferences about our self-efficacy. Recently, self-efficacy has become a focus of attention of organizational behavior scholars seeking to improve the effectiveness of training and to increase a variety of productive behaviors (Caplan, Vinokur, Price, & van Ryn, 1989; Frayne & Latham, 1987; Gist, Schwoerer, & Rosen, 1989). In the SFP context, raising subordinates' self-efficacy gets them to expect more of themselves; they then act as prophets, exerting the effort and effecting the behaviors required to bring about the expected performance successfully. In part encouraged by our own evidence that self-expectations mediated the Pygmalion effect and that by raising self-expectations we could create productive Galatea effects, my students and I have begun experimenting with practical ways of boosting self-efficacy.

In the first of these (Eden & Aviram, in press), we conducted a randomized field experiment to evaluate a workshop designed to increase the self-efficacy of unemployed persons. Considerable previous research had documented the severe blow to self-efficacy caused by job loss, and the vicious circle of despair and diminishing job-seeking behavior due to ebbing self-efficacy. We designed a workshop intervention to reverse this downward spiral by boosting self-efficacy. The workshop was based on behavioral modeling and targeted enactive attainment, vicarious experience, and verbal persuasion as channels for getting across to the trainees that they could efficaciously effect the requisite behaviors to land a job. We predicted that by strengthening their belief in
their capacity to emit job-seeking behaviors, we could motivate them to engage more in the kinds of activities that would increase their likelihood of finding work and speed their reemployment.

The workshop did succeed in raising self-efficacy. Furthermore, compared to the control group, experimental participants appreciably intensified their job-seeking activities. Finally, analyzing initial general self-efficacy as a moderator, among persons of initially low self-efficacy, a higher proportion of those trained in the workshops gained reemployment than of those in the control condition. The self-efficacy training turned them into Galateas. Having their self-efficacy boosted culminated in their effectuating a most existential organizational behavior—being there to do a job at all.

Next, we (Eden & Kinnar, 1991) joined in the efforts of the IDF to increase the volunteer rate among service candidates qualified for special forces duty. Prescreened youths on the threshold of conscription, who have obtained sufficiently high scores on preliminary aptitude tests, are invited to attend an information program designed to increase volunteering. Those who decline go on to serve in a wide variety of alternative IDF roles, but are “lost” as far as the special forces are concerned. Unduly low self-efficacy stifles willingness to test one’s mettle, reduces volunteering, and removes one from the arena where success is attainable. Low self-efficacy is fertile ground for self-inflicted Golem effects. In a field experiment, we tested the effectiveness of an information program designed to augment the candidates’ specific self-efficacy for special forces duty, modified according to principles derived from self-efficacy theory. The SFP prediction was that, feeling more efficacious, more candidates would “go for it,” putting eventual success within their reach. Based on modeling and verbal persuasion, we designed a modified program of the same length (one hour) and compared it to the existing program. We found that, compared to the control group, candidates randomly exposed to the experimental program scored higher in specific self-efficacy, expressed greater willingness to volunteer for special forces, and actually did volunteer more. Losses of qualified candidates due to nonvolunteering were reduced by a third in comparison both to their peers exposed to the conventional program and to all candidates during the preceding year. Their self-efficacy appreciably enhanced, the experimental candidates were more willing to undertake the challenge of demanding service. In this experiment we also distinguished between general and specific self-efficacy. Analysis of antecedent general self-efficacy as a moderator showed that these effects were stronger among the lows than among the highs, as hypothesized.

Again, the behavior effected was crucial to the organization’s existence; the dependent variable was not level of performance once there, but the more crucial question of being there to perform at all. Such is the power of self-efficacy that it determines such primordial dichotomies as being unemployed or reemployed and volunteering or refraining from doing so. Together with convergent findings from other recent field experiments, these results show that it is within our power to create Galatea effects by augmenting self-efficacy. Willful creation of such SFPs should be on every leader’s agenda.

**SUMMARY OF SFP IN LEADERSHIP**

Figure 1 displays a model of SFP in leadership based on the management research summarized above. The model portrays SFP as originating primarily from manager
expectations. Expectations determine important dimensions of leadership behavior. Leaders lead best when they expect success. Leadership in turn has direct effects on subordinate achievement via work facilitation behaviors on the manager's part. A-B-E is dubbed the "Pygmalion triangle." It represents a straightforward, motivationally neutral, task-oriented leadership effect resulting from high leader expectations. The basic SFP process is the same for Golem-producing low leader expectations. Expecting little, the manager does little to facilitate subordinate success. Neglected and discouraged, subordinates are more likely to flounder and fail.

In the interpersonally richer leadership process involving the B-C-D-E variables, expectation-inspired leadership behavior raises follower self-efficacy and performance expectations, motivating effort and promoting achievement. The most practicable way for a leader to create productive SFP willfully is to communicate high performance expectations to followers, in a way that augments their self-efficacy. The B-C connection indicating the impact of leadership on followers' self-efficacy is the heart of SFP in management. Achievement in return reinforces high self-efficacy and performance.
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expectations, both the leader's and the followers'. In the wake of the followers' success, the manager feels more competent to lead and the followers' feel more competent to perform. Through this feedback loop, the self-fulfilling prophecy can also become self-sustaining, as productive followers go on from success to success with a growing sense of self-efficacy to sustain their own performance expectations and fuel further SFP.

C-D-E is dubbed the "Galatea triangle." This triangle does not involve the leader. This is an intrapersonal SFP process in which the follower acts as the prophet who fulfills his or her own expectations. Perceiving themselves to be capable and therefore expecting to succeed, followers mobilize their internal resources, including knowledge, skills, ability, resolve, patience, and stamina, for peak performance. People may bring high self-efficacy with them or obtain it from any other source. This was demonstrated by the subordinates in the Galatea condition in our adjutancy experiment, whose leaders were told we lacked sufficient information to determine their potential. Our controlled field experiments showed how pinpointing self-efficacy for focused treatment can increase desirable behavior with profitable outcomes. Leaders' ongoing efforts to boost their subordinates' self-efficacy ought to have more powerful effects. Though the leader's interpersonal style often is a source of subordinates' positive self-efficacy and high expectations, there are other sources. The individual's personal history of success and failure is an important one.

The organization's (and the society's) culture is another important source of expectations. The impingement of culture on the SFP process is depicted in Figure 1 by broken arrows. An achievement-oriented, optimistic culture of success nourishes all players with high expectations and increases the likelihood that SFP will augment the organization's accomplishments. Conversely, a cynical culture supporting prophecies of doom can drag an organization from one disaster to the next in an ongoing negative SFP process in which the organization's true productive potential is not realized.

The fact that culture comprises a rich source of expectations implies another practical role for leadership in the SFP process. To the extent that leaders can mold the culture, they can implant positive SFP and root out counterproductive SFP. SFP is not an overpowering fact of life that we must regard with awe and accommodate, for better or worse. Rather, it is a social process that savvy leaders can manage, at least partially. One may also generalize to nationwide SFP (Eden, 1990b). Some nations have proactive, can-do cultures that speed them along the path to rapid industrialization; economic development in others is restrained by national cultures that instill resignation to the status quo and personal adjustment to things as they are.

**PYGMALION AND CHARISMA**

To conclude the discussion of Pygmalion, expectations, and leadership, let us return to a related concept: charisma. A new conceptualization of leadership emerged in the 1980's, as management scholars began renewing their interest in Weber's (1947) concept. Some theorists articulated charisma in concrete terms in order to demystify it and make it more amenable to research and application (e.g., Conger & Kanungo, 1987; House, 1977; House, Howell, Shamir, Smith, & Spangler, 1990). Some have explicitly pointed out the common ground shared by the Pygmalion and charismatic formulations.
As part of this "new look" at charisma, the concept of transformational leadership emerged. Transformation addresses a leadership phenomenon broader than the rewards-for-performance exchange of transactional leadership, and extends well beyond the confines of previous conceptualization of managerial style. Charismatic and inspirational leadership are dubbed "transformational" because they radically alter followers' beliefs in their capacity to achieve outstanding levels of performance, levels that far exceed their previous achievements and expectations. Such leadership transforms followers by changing their values, ideals, motives, and concepts of what levels of achievement are possible. Hence Bass (1985) titled his book on transformational leadership "Leadership and Performance beyond Expectations." Borrowing from political science and psychohistory, and acknowledging a heavy debt to Burns (1978), Bass described transformational leadership as encompassing both charisma and Pygmalion: "Charismatics take advantage of the Pygmalion effect . . . and reciprocate in their confidence in their followers and in their optimistic expectations about their followers' performance. Follower self-esteem and enthusiasm are raised as a consequence, and the effort is increased among followers to fulfill the leaders' expressed expectations" (p. 47). Expanding charisma to include inspirational leadership, Bass included "making use of the Pygmalion effect" as an inspirational behavior: "In its most general form, the Pygmalion effort (sic) is a performance-stimulating effect. People who are led to expect that they will do well, will be better than those who expect to do poorly or who do not have any expectations about how well or poorly they will do. . . . The leader who arouses in subordinates confidence in their own capabilities and confidence in those with whom they work, all things being equal, by raising expectations about the success of their efforts, will increase such efforts to succeed" (p. 71).

The concept of visionary leadership (Sashkin, 1988a, 1988b, 1990; Sashkin & Burke, 1990) dovetails with charismatic and transformational theories, as well as with the Pygmalion approach. In Sashkin's (1988b) words:

Only if there exists the belief that the organization can control its destiny is it likely to even try. Moreover, such trials may well change the 'reality,' so that the organization becomes more capable of controlling its environment and its ultimate destiny. Thus, while it is foolish and perhaps even destructive to hold to values that are in obvious conflict with reality, there is much to be said for taking 'optimistic' positions, even when one realizes that there may be some question about whether the value is, in fact, consistent with objective reality (p. 242).

Sashkin thus described the effective leader's impact in terms of getting people in the organization to share in an optimistic vision (i.e., high expectations) of the organization's future. Adopting a rosy vision sparks an organizationwide SFP that contributes to the ultimate realization of the vision. Through the concerted action of the individuals affected, the vision ultimately transforms reality.

In a similar vein, Bennis and Nanus (1985) described the "transformative" leaders whom they interviewed as visionary: "The visions these various leaders conveyed seemed to bring about a confidence on the part of the employees, a confidence that instilled in them a belief that they were capable of performing the necessary acts" (p. 30). Believing one is capable of performing the necessary acts is precisely Bandura's (1986) definition of self-efficacy. "Positive self-regard seems to exert its force by creating in
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others a sense of confidence and high expectations, not very different from the fabled Pygmalion effect" (Bennis & Nanus, 1985, p. 65).

Thus, both Bass, and Bennis and Nanus have incorporated the Pygmalion effect into their descriptions of how inspirational and visionary leaders transform their subordinates and bring out the best in them. Transformational leadership creates productive SFP on a grand scale, as each individual worker touched by the transformational leader’s confidence becomes a party to a positive expectation effect. The more visible the inspirational manager and the greater the number of individuals affected by his positive vision, the larger the number of individual Pygmalion effects that combine in producing the dramatic boost in organizational effectiveness. Through the collective action of the individuals affected, the vision ultimately transforms reality.

Creating productive SFP is thus centered at the confluence of much current thinking in the fields of leadership, organization development, and organizational culture. Conceptualizing these processes in terms of SFP links them all together and gives the manager a tool that can be used at many levels under highly varied circumstances. That tool is expectancy raising.

Molding the organization’s culture is a prime means for exercising transformational leadership. Thus, transformational leadership and organizational culture are intimately related. By changing culture, the transformational leader influences many members with whom he never even comes into direct personal contact. This is the crossroads at which SFP, transformational leadership, and the management of culture, all meet. By creating a high-expectancy culture, the transformational leader produces productive SFP at many levels in the organization. Changing organizational culture is an act of transformational leadership, and transformational leadership is implemented most effectively by means of culture change.

Thus, since Livingston’s early application of the Pygmalion notion to managerial leadership, through the growing research base, Pygmalion has become an integral part of the latest and most far reaching approaches to leadership. Pygmalion and the other transformational models share recognition of the role of leader expectations in inspiring followers to give their best efforts. However, the Pygmalion model is unique in its emphasis on raising leader expectations as a means of initiating a more effective leadership process. Being focused on expectation raising, it is relatively easy to propose myriad practical ways of effectuating transformational leadership.

Creating Productive SFP: Pygmalion Leadership Style

The Pygmalion Leadership Style (PLS) is comprised of the behaviors that facilitate productive SFP effects in organizations. Based on evidence for the interplay between leadership, culture, and SFP, some components of PLS are described below. They are intended to provide practitioners with suggestions for expectation raising in their field work and to stimulate further thinking about expectation effects on the part of leadership scholars.

Create the Pygmalion and Galatea Effects

The prime practical implication of the leader expectation research is that leaders should create the Pygmalion effect by expecting high performance from their followers.
At the same time, they should do all in their power to get followers to feel more efficacious and to expect more of themselves. In the course of day-to-day interaction with subordinates, the manager who wants to be a more positive Pygmalion should point out to the subordinates that they have untapped potential, and in general get them to believe that they can achieve more. Many of the proposals below are variations on this theme.

**Eradicate the Golem**

Low expectations are the bane of multitudes of people who are not utilizing their potential. Underachievers grow accustomed to getting by with minimally acceptable performance simply because nothing more is expected of them. The debilitating Golem effect is undoubtedly widespread and costly in terms of wasted human potential. Raising the currently low expectations harbored toward underachievers should yield appreciable productivity gains because underachievers, by definition, have great potential for improvement before reaching the limits of their ability. The number of underachieving members in organizations who are blighted by Golem effects is undoubtedly large; eradicating these effects would make a lot more people a lot more productive. In a retrospective commentary on his earlier article on Pygmalion in management, Livingston (1988) wrote that more attention should be focused on negative SFP effects because there are more “negative Pygmalions” than positive Pygmalions in U.S. industry. Our (Eden & Aviram, in press) training experiment and that of Caplan et al. (1989) focused on boosting the sagging self-efficacy of newly unemployed workers show how resources can be applied to reverse a Golem effect. Gist et al. (1989) used self-efficacy training to prevent otherwise competent employees from turning themselves into “computer Golems.” Our (Eden & Kinnar, 1991) dissemination of self-efficacy boosting information to candidates to increase volunteering for special forces illustrates prevention of a Golem effect at virtually no cost.

A narrative example of the shrewd demise of a costly Golem effect will show how easy it can be to apply the SFP concept. A plant manager in Israel, who had heard a lecture about SFP and expectation effects, was having a problem with the low productivity of consecutive waves of new employees. Production workers in the plant, who assembled and packaged disposable sterile medical kits for use in blood dialysis and transfusions, were native or immigrant women from Eastern Europe. In this plant, “everyone knew” that, in comparison to immigrants, natives were poor workers, adjusted slower, were undisciplined, took longer to reach standard production, and had difficulty maintaining it. In particular, the head production supervisor, who for years had been responsible for putting new hires to work, “knew” that the native women would give her trouble and not reach standard soon, if ever.

The plant manager believed that the native workers were as capable as the immigrants. Suspecting the operation of a Golem effect, he summoned the head production supervisor and told her that he had personally hand-picked the group of native new hires slated to come on board the following week and that they were excellent people. They should be expected to give her no problem and should attain standard production quickly. As usual she, the head supervisor, was to assume responsibility for their integration into the plant and to report any problems to him. This was followed by
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the smoothest intake of native new hires that anyone in the plant could remember. They achieved standard in record time and soon appreciably exceeded it. The supervisor complimented the plant manager for having improved his hiring decisions. Opportunities for such inexpensive, quick applications of SFP abound.

Expectation and Self-efficacy Training

This is the practical application that comes closest to qualifying as a stand-alone SFP intervention, as it most literally grabs the expectation bull by its horns. Rather than seeking some surreptitious channel to convey high expectations to unwitting managers, expectation training educates them about SFP, expectation effects, and Pygmalion, and teaches them how judicious utilization of this knowledge might improve motivation and boost productivity.

Expectation training is best illustrated by the United States Navy’s Pygmalion-at-Sea project. Crawford, Thomas, and Fink (1980) at the Navy Personnel Research and Development Center undertook a novel SFP intervention aimed at improving the productivity of low performing sailors on a combatant ship. They targeted chronically low performers for remedial treatment designed to improve their motivation and performance. While the ship was docked, supervisory personnel were given a leadership workshop intended to change their negative expectations toward the problem sailors. The high expectations aroused among the supervisors were buttressed by behavioral skill building. Crawford et al. taught the supervisors the principles of behavior modification and then had them brainstorm actions that the low performers would perceive as positive reinforcers. This training gave the supervisors tools to support their newly acquired high expectations. This procedure is not only sensible; it is essential. It is unfeasible to convince managers to expect more of their subordinates by merely lecturing to them, showing them a film, and exhorting them to expect more. An expectation-raising program needs solid moorings. Second, 15 additional senior enlisted supervisors, who had been carefully selected to serve as mentors for the low performers, were given a workshop in counseling and guidance skills. Finally, 12 low performers participated in a workshop devoted to personal growth and self-improvement.

The communication and cultivation of high performance expectations—among both the supervisors and the subordinates themselves—were the hallmark of this intervention. One of Crawford et al.'s underlying assumptions was that if the low performers could be made aware of the role of negative expectations in depressing their performance, they would be able to overcome these debilitating SFP effects and improve their performance. Thus, the Pygmalion-at-Sea program can be seen as an attempt to "immunize" these men against the Golem effect. Without using the term "self-efficacy," the authors clearly targeted the sailors' initially low general and specific self-efficacy.

The low performers on the experimental ship were compared to some of their shipmates and to similarly low performers on other ships. There were significant improvements in the experimental sailors in overall performance as rated by their supervisors. The authors concluded that the program succeeded in engendering SFP in the sailors and their supervisors. Crawford et al. pioneered in practical application of leader expectation effects. Their example is worthy of emulation. In several field experiments now in progress, my students and I are testing the effectiveness of SFP workshop training among leaders. Our
field experiment (Eden & Aviram, in press) among unemployed persons demonstrated that self-efficacy training can increase the performance of requisite behaviors and speed reemployment. Together with other recent field-experimental research on self-efficacy training, it is clear that self-efficacy training is emerging as a practical tool to aid individuals in mustering the wherewithal to tackle challenges in the workplace. The leader who facilitates this is fulfilling a Pygmalion role.

**Immunize Potential Victims against the Golem Effect**

Individuals who perform far below their ability due to the negative influence of their superiors’ low expectations on their own-expectations may be unaware of the process, and therefore defenseless. Training could make them conscious of the process, immunize them against it, and thereby help prevent its recurrence. Immunization training should have two focuses. One focus should be on what potential victims can do, behaviorally, to raise the expectations of their superiors in order to prevent having their superiors treat them as Golems. The second focus should be on the considerable power that the potential victims have to disrupt the SFP process by not responding to low expectations in a manner that turns them into Golems.

**Fight Negative Stereotypes**

Stereotypes produce SFP because they involve expectations toward individuals on the basis of their belonging to some social group or class (Snyder, Tanke, & Berscheid, 1977). Negative stereotypes produce Golem effects. Two of Merton’s (1948) classic examples of SFP involve blacks and Jews who, as targets, come to behave in ways that fulfill the expectations of those who hold the stereotypes. When individuals are expected to perform poorly because of their race, age, sex, or any other ascribed characteristic not related to actual competence, a Golem effect is likely. The locations in organizations where counterproductive stereotypes are most likely to be operating are those staffed by racial and ethnic minorities, women, very old and very young employees, and others about whom stereotypes abound. The case of the medical-kit assembly plant described earlier exemplifies a Golem effect deriving from a stereotype (“natives”) and how it can be profitably overcome.

Not all stereotypes are negative. Positive stereotypes should not be discouraged. Belonging to a minority group that is stereotyped as industrious or intelligent can be a boon to individual members of that group and help make them more productive. There is no reason to deprive either individuals or organizations of this SFP-based blessing.

**Set Challenging Goals and Objectives**

The goal-setting and the Management-by-Objectives (MBO) approaches converge in dealing more or less explicitly with performance expectations and in prescribing that performance goals and output objectives be high and difficult to achieve. “Objectives are statements of expected output” (Odiorne, 1969, p. 20, italics in original.) Successful MBO may be SFP. Challenging objectives are explicit expressions of high expectations. When a manager and a subordinate agree upon challenging objectives, they are setting
the stage for double expectation effects, i.e., a Pygmalion effect on the part of the manager and a Galatea effect on the subordinate's part. Similarly, goal-setting experimentation has shown that difficult goals, when clearly stated, result in greater output than do intermediate or easy goals (Locke & Latham, 1990). Furthermore, Garland (1984) revealed how expectations mediate the influence of goals on output. Setting hard goals raises expectations, which in turn spur improved performance. In other words, one effective way to produce a Pygmalion effect is to set difficult goals, or, in MBO terminology, to set high objectives. Conversely, setting easy goals or low objectives produces a Golem effect in which subordinates realize that little is expected of them and adjust their efforts downward accordingly. Thus, MBO and goal setting trigger SFP and owe much of their success to expectation effects. However, MBO and goal setting share a limitation; output must be specifiable, and preferably quantifiable, in order to set goals or objectives. This limitation is not shared by other approaches to expectation-raising.

Clear the Record

Individuals who get off to bad start in school, in a job, or in life, are often locked in to their past by an unforgetting—and unforgiving—record. Worse perhaps even than the living memory of teachers, supervisors, and peers who have witnessed past failure, the written record remains as an indelible reminder that refreshes memories and contaminates—lowers—the expectations of persons who had no involvement in the original disgrace. Perusing a record rife with failure creates expectations for "more of the same." Many people never realize their potential because they are victimized by their past record. Managers' ready access to the record thus contributes materially to low-performer recidivism through the operation of self-sustaining prophecy. Although the present leader had no part in producing the record, his or her expectations for future achievements are influenced by it. A record of failure leads one to expect more poor performance and to treat the individual accordingly as a poor performer, thereby sustaining the underachievement. This self-sustaining Golem scenario is most widespread "in nature."

We need to find ways of freeing individuals from the shackles of their records. This could be done by clearing the record of entries likely to arouse negative expectations in a new supervisor. Information retained in dossiers is often notoriously mistaken, ambiguous, irrelevant, outdated, and meaningless (Laudon, 1986). Stigmatizing labels, if they must be used at all, should be expunged at the end of a reasonable period of time. Like foodstuffs on the supermarket shelf and moving-violation points on the driving record, a diagnostic, disciplinary, or evaluative entry in an employee's record should include an expiration date. Furthermore, a company could withhold the record of a new hire or a new transfer from the supervisor for an initial period of, say, a month or two, during which time expectations would be formed on the basis of first-hand experience rather than on the basis of the past preserved in the record. An obvious limitation to this kind of solution exists in companies in which it is easy for a manager to phone a new transfer's previous supervisor and obtain a quick evaluation. It is more applicable to new hires.
Organizations could install “worker protection programs,” akin to the witness protection programs used by the FBI and INTERPOL to save the lives of criminals who turn State’s evidence and then have to be obscured from the long arm of mob revenge. Employees with a bad performance record could be relocated in the same company or elsewhere, be given a new occupational identity, and get “another chance” at a job free from the persecution of their own work history and the inevitable Golem effect that it triggers each time anew. The recurrence of a destructive SFP would be blocked and their chances of utilizing their potential would be greater. Both the supervisor and the organization would enjoy the benefits of having a more productive employee.

Piggyback on Changes in Personnel and Organization

The interminable changes in organizational structure, personnel assignments, product lines, work methods, and operating procedures provide virtually limitless opportunities for raising expectations. The unfreezing of expectations wrought by organizational changes, whether “natural” or planned, can be utilized opportunistically for expectation-raising. Any nontrivial change unfreezes expectations, as members anticipate repercussions that might impact positively or negatively on their work and career. These vague moments of unclear expectations, when members are unsure what is in store for them, invite the alert leader to intervene with timely words of assurance, encouragement, and optimism, to implant positive expectations. When members are apprehensive due to their anticipation of an imminent turn for the worse in their situation, the reassuring words of a sanguine leader can reduce the suspense and potentially avert a Golem effect as negative expectations are replaced by positive ones. The medical-kit plant illustrates how a manager altered expectations concerning the impact of a naturally occurring change in personnel—the intake of a new group of workers. He piggybacked onto what was happening anyway and opportunistically raised naturally low expectations. He thereby successfully disrupted an entrenched, recurring Golem effect.

There are countless examples of changes whose success was augmented by positive expectations and changes that failed at least in part due to negative expectations. Elsewhere I have mustered documentation in support of the argument that even the classical Hawthorne experiments may have succeeded in boosting productivity by unwittingly raising expectations (Eden, 1986). It is also possible that participative management, when it succeeds, owes part of its success to raised expectations. When participation is implemented properly, participants have higher post-decision performance expectations than those who have not participated. Such expectation effects may contribute as much to the success of participation as the mediating variables commonly cited, such as psychological “ownership” and acceptance of the decisions and improved information flow (Sashkin, 1976). The practical implication is that leaders using participation, as other management techniques, should piggyback and use these opportunities deliberately to raise participants’ expectations.

Ruinous debilitating effects can be wrought on any change program by individuals who harbor negative expectations toward it. A strategically placed skeptic can doom a program by saying to peers and subordinates, “Those Whiz Kids up there have cooked
up another one of their ingenious inventions for us; personally, I don’t think it has a chance.” The added thrust of the piggyback proposal is that even changes undertaken for extraneous reasons and unanticipated changes initiated by force majeure should be seized upon as opportunities for creating productive SFPs. Announcing that the new computer system, the friendlier software, the redesigned office layout, the revised procedure, the improved routing, the replacement engineer, the new warehouse forms, the change in materials suppliers, the week-end retreat, the divisional reorganization, the new chief of accounting, or any other change should be expected to improve productivity may make such changes more productive. The cost of piggybacking is nil, and the potential payoff is appreciable.

**Foster High-expectation Culture**

Culture is intimately involved in organizational SFP because it is a rich source of performance expectations. Schein (1985) has described how organizational culture influences organizational effectiveness. In his words, “productivity is a cultural phenomenon par excellence, both at the small-work-group level and at the level of the total organization” (p. 43-44).

Myth making is a promising way of molding organizational culture to create productive SFP. Boje, Fedor, and Rowland (1982) have proposed ways of intervening in the myth-making process in the interests of organizational effectiveness. Their recommendations can be applied to building up the stock of myths that convey high performance expectations and to rooting out negative myths that imply organizational impotence or helplessness. Consider the positive SFP inspired by the widespread belief that “we are in a can-do organization” or that we are “lean and mean” compared to the collective Golem effect that flows from myths such as “Nothing ever gets done right around here” or “We operate on Murphy’s Law and the Peter Principle.”

Mastery of myth making requires macro-level leverage over a pervasive, systemwide source of expectations. The impact of myths on expectations can be particularly insidious and persistent because, as part of the organization’s culture, myths summarize complex, underlying beliefs and assumptions about the organization’s capabilities and frailties, assumptions that have slipped out of awareness and become highly resistant to change. In short, it is tough to change culture. Top executives wield unique leverage over organizational culture, and the performance expectations that it implies. Therefore, it is the job of the CEO and other top leaders with high visibility and credibility to change organizational culture and replace pernicious myths with positive ones. Managing myths is a worthy task for those at the organization’s pinnacle, for “...the unique and essential function of leadership is the manipulation of culture” (Schein, p. 317, italics in original).

Symbolic expressions of a high-achievement culture should be devised and enhanced where they already exist. Properly arranged props can be used to fortify performance-oriented leadership. Clinical psychologists are aware of the effects of physical artifacts such as office location, decor, dress, and grooming on client expectations, and use them deliberately. Coe (1980) has discussed how to arrange props for maximal positive impact under the heading “Techniques for Enhancing Expectation Effects.” Similarly, some managers are masters at arranging furniture, visual aids, schedules, and other nonverbal,
environmental cues in ways that create and sustain high expectations. We need research on the effectiveness of various such arrangements.

Undaunted by the elusiveness of culture, some investigators have devised tools for quantitative cultural analysis. Cooke and Rousseau's (1988) *Organizational Culture Survey* assesses culture in terms of the dominant norms and expectations in organizations. One of their dimensions is "achievement culture," a feature of high expectation culture. Using such tools, we may achieve a better grasp of the nature of organizational culture than its qualitative explorers have given us so far. This will make it possible to diagnose an organization's culture in terms of its potential for SFP and to spell out in more operational terms the SFP applications that target culture.

**EXPECTING TOO MUCH: A NOTE OF CAUTION**

Anything can be overdone. Sky-high expectations can be intimidating. Expecting too much too fast overwhelms people and demotivates them, resulting in a sense of failure, frustration, and low expectations for the future. Therefore, expectations should be high, but not too high. After each successful vault, the bar should be raised a notch, but just one notch, to keep the goal challenging but realistically within the reach of spirited effort. A big project can be defined in terms of a series of small stages. This is what Weick (1984) calls a strategy of "small wins." It builds into a long-term program opportunities for interim expectation-bolstering. Leaders can build momentum toward eventual overall success by encouraging participants to savor the rewards of successive small accomplishments that signal milestones along the way toward achieving more ambitious goals. Reaching each milestone augments self-efficacy and reinforces high expectations. Failure in any particular stage need not be a devastating setback, since it can be interpreted as a surmountable delay in progress toward ultimate success, not total program failure. "The important tactic for dealing with the flops implicit in trying for small wins is to localize the disconfirmation of expectations" (Weick, 1984, p. 48). The small-wins strategy circumvents the threat of highly ambitious programs by simultaneously defining relatively easy short-term goals and more challenging long-term goals. Expectations at different levels are established and fulfilled at different stages.

**THE FUTURE OF PYGMALION LEADERSHIP STYLE**

The Pygmalion leadership behaviors described above are not the only ones conceivable. As more scholars and practitioners consider the possibilities, novel ways for leaders to produce productive SFP will be innovated and tested. Merton's (1948) analysis of the operation of the Federal Deposit Insurance Corporation (FDIC) exemplifies the direction our thinking can take to devise innovative means of disrupting negative SFP. Banks were failing at a horrendous rate during the Depression. Depositors who lost faith in their bank—even if actually solvent—and expected it to fail, panicked and precipitously withdrew their deposits in order to get out in time with their savings intact. This action by hordes of "prophets of banking doom" created the kind of pressure that no bank, no matter how solvent, could withstand, and the prophecy was fulfilled as bankruptcy rapidly ensued in bank after bank. The establishment of the FDIC has largely protected the banks and their depositors from this tragic SPF by eliminating
depositor anticipation of personal financial loss in the event of bank failure. We need similar innovations to enrich the existing inventory of leadership tools and consulting interventions to give practitioners the means to control SFP. No leader should be without such tools. However, practical utilization of SFP theory depends on our ability to develop new organizational inventions to provide FDIC-like blocks to negative SFP, as well as innovative means to facilitate positive SFP. This may not come easily.

The most promising avenue for dissemination of practical knowledge about leader-inspired SFP effects is probably executive training. My students and I have embarked on a program of field experimental research on the effectiveness of PLS workshop skill-training that emphasizes the kinds of behaviors found in previous research to be salient in leaders’ treatment of those they expect to excel. The basic aim of the training is to get managers to do knowingly what Pygmalion experimenters have gotten them to do unwittingly. Training effectiveness is to be evaluated in terms of the subsequent performance of the participants’ subordinates. Evaluation research on PLS training is quite different from the basic research undertaken to confirm the Pygmalion hypothesis, which used deception to raise leader expectations. The true aims of the training are stated to the participants explicitly at the outset. The aims include understanding SFP at work, raising participants’ leadership self-efficacy and expectations concerning what their subordinates are capable of accomplishing, and mastering the behavioral skills required to be an effective Pygmalion. A comprehensive workshop may include informative lecturettes and brief written material about SFP and Pygmalion research, small-group exercises that demonstrate expectation effects, role playing to try out PLS behaviors, brainstorming ways of creating Galatea effects, and cultural analysis geared to facilitating organizationwide SFP. We include introspective, individual work in which participants clarify for themselves what they truly expect of each of their current subordinates and how these expectations manifest themselves in how they treat the subordinates. In addition, we conduct role playing in which leaders rehearse giving self-efficacy-enhancing feedback to others in the wake of success and failure, based on the relevant principles of attribution theory (see Eden, 1990d).

It is apparent that Pygmalion-inspired concepts have found their way into many varieties of executive training. However, besides the Pygmalion-at-Sea study, no research has been reported on the effectiveness of dedicated Pygmalion training. Moreover, as most past Pygmalion-at-Work research has been done in military settings, replication and application in civilian organizations are overdue. We also need to know more about the organizational circumstances in which SFP can and cannot be produced.

The tenor of this article is decidedly upbeat. Optimism is part and parcel of the approach presented here. Obviously, expectations are not the only item on the leadership agenda. Stressing SFP does not mean other things are unimportant. However, the research evidence shows that focusing on expectations can make more than a just-noticeable-difference in enriching human assets and in productivity. My own high expectations have been reinforced by confirmatory results from over half a dozen field experiments and by innumerable “Oh, now let me tell you one!” stories told by practicing managers in consulting and training situations. Nature creates too few Pygmalias and to many Golems. Reversing the proportion may be too much to hope for. But every Pygmalion we create and every Golem whose self-efficacy we raise results in greater realization of human potential and improved organizational effectiveness.
If we keep our expectations high but realistic, we shall certainly succeed with this ambitious agenda.

REFERENCES


Leadership and Expectations: Pygmalion Effects


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