

*Like the wings of Icarus, goal setting and monetary incentives can be both effective and destructive. The difference lies in how they are used.*

# *Goal Setting and Monetary Incentives:* Motivational Tools That Can Work Too Well

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**R**ecall the story of Icarus, who was held hostage with his father, Daedalus, on the island of Crete. To escape from the prison tower, Daedalus molded two great sets of wings, warning his son to fly neither too low, lest the spray from the ocean clog the wings, nor too high, lest the heat of the sun melt them. When they flew from the tower, Icarus forgot his father's warnings and began to soar higher and higher, thinking only of his own excitement and glory. As he flew nearer to the sun, his wings slowly began to soften. One by one the feathers fell, and he plunged into the sea. When Daedalus reached land, he hung up his wings, never to fly again.

Like the wings of Icarus, two motivational techniques, goal setting and monetary incentives, have proven extremely effective in motivating higher performance; but also like those wings, these techniques can produce disastrous consequences for those who mishandle them. The purpose of this article is to show how goal setting and monetary incentives can actually work *too* well and produce counterproductive effects. The analysis is based on research I and

others have conducted, as well as on numerous examples from corporate America.

## THE CHALLENGE OF MOTIVATING EMPLOYEES

Motivating employees is one of a manager's greatest challenges. Therefore, many managers seek that one special technique or set of techniques that will help them get the job done most effectively. Much has been written on such techniques as Management By Objectives (MBOs), Organizational Behavior Modification (OBM), and Performance Planning and Evaluation Systems (PP&Es), and both research and practice prove that a number of these are effective. The elements that these organizational interventions share are *goal setting* and *monetary incentives*, two techniques with substantial empirical evidence proving their usefulness.

More than 30 years of research (including more than 400 studies in 1990) demonstrate the efficacy of goal setting as a motivational tool. In

fact, one review found that goal-setting interventions resulted in a median performance increase of 11%. Most important, the research consistently shows that difficult, specific goals lead to higher performance than easy or “do your best” goals.

Similarly, studies also show that linking an individual’s pay to his or her performance can significantly increase that performance. For example, a review of the research found that in 75% of laboratory and 87.5% of field experiments, performance increases were associated with individual incentives. To be sure, both academic and field research and writings, including Alfie Kohn’s ground-breaking “Why Incentive Plans Cannot Work,” (*Harvard Business Review*, September-October 1993), reveal ambiguous findings on whether merit pay in particular increases intrinsic motivation. Nevertheless, as a whole, the large body of research referred to above provides substantial, highly convincing evidence that piece-rate arrangements, gainsharing, and similar systems result in higher productivity.

## HISTORICAL ROOTS OF GOALS AND INCENTIVES

Goal setting as a theory of motivation stems from two distinct historical foundations in the management literature. The first, an academic foundation, is derived from “level-of-aspiration” laboratory studies conducted in the 1930s and 1940s. The purpose of these studies was to examine the determinants of an individual’s “level of aspiration”—that is, the level of performance (goal) an individual would seek to achieve on a particular task. This work was extended in the late 1950s and 1960s by Thomas Ryan, who focused on the effects that goals have, noting that performance goals are related to task performance.

The second foundation, an applied-practice foundation, is derived from Frederick Taylor’s work on scientific management. In his book, *Principles of Scientific Management*, originally published in 1911, which examined how to select, train, and motivate workers, he noted that the two main motivators of worker performance

are the task and the bonus. The task, he said, consists of a clear-cut standard for a day’s work, so that the employee “can measure his own progress.” In this way, Taylor was one of the first to suggest using goals and incentives to raise performance levels.

The early applications of goal-setting theory form the basis for the most common form of goal-setting/incentive systems in organizations today: Management by Objectives (MBOs). This term generally refers to a process by which each level of the organization sets goals that complement those set at the next highest level. In many cases, individuals’ monetary rewards (bonuses, merit increases, etc.) are tied to the attainment of goals set during the MBO process.

## GOAL MECHANISMS FOR MOTIVATING EMPLOYEES

These two streams of writing have culminated in what is now considered a theory of goal setting and task performance. As mentioned above, the theory posits that difficult, specific goals that are accepted by individuals result in higher performance than either easy or do-best goals. According to this theory, such goals boost individuals’ efforts, increase their persistence, direct their attention, and cause them to develop strategies for goal attainment. In *A Theory of Goal Setting and Monetary Incentives* (Prentice Hall, 1990), Edwin Locke and Gary Latham have summarized these mechanisms by stating:

Goals affect arousal by regulating the intensity of effort the individual expends on the task and they affect its duration by leading people to persist in their actions until the goal is reached. They affect choice by leading people to direct attention to and take action with respect to goal-relevant activities while ignoring nongoal-relevant activities.

. . . Sometimes . . . the individual also has to engage in a process of problem solving in order to discover how the goal can be reached. This process involves discovering suitable task strategies.

According to goal-setting theory, monetary incentives also play an important role in determining task performance by (1) encouraging individuals to set higher goals, (2) causing individuals to set goals spontaneously when they would not have done so otherwise, and/or (3) increasing individuals' commitment to achieving a goal. While research has not supported the second point above, it has shown fairly consistent support for the other two.

Clearly, then, goal setting and incentives can effectively motivate individuals to perform at higher levels. Yet if motivation is so easy to accomplish, why can't every organization increase task performance simply by setting up goals and incentives? Because just as a hammer can both imbed a nail and smash a thumb, goal-setting/incentive schemes can be both beneficial and destructive. Their effect depends on how they are used.

## POTENTIAL PITFALLS IN DEVELOPING GOAL/INCENTIVE SYSTEMS

Many examples from both controlled laboratory studies and real-world applications illustrate the potential dysfunctional effects of goal setting and monetary incentives. These effects are discussed below.

### *Quality trade-offs*

Numerous studies demonstrate that individuals who are assigned and accept difficult goals will exert greater effort than individuals operating without goals. That effort may be measured by objective ratings (e.g., with a hand dynamometer), subjective ratings, or the perceptions of others, or may be inferred from higher performance. However, while the increased effort in most cases is beneficial, it can also result in costs.

For example, in a series of four laboratory studies on goal setting conducted in 1978, Janet Bavelas and Eric Lee had subjects work on a creativity task (in three studies) and a simple addition task. They found that, consistent with goal theory, performance was a function of the difficulty of the goal, with higher goals associated

with higher productivity. However, they also found that the quality of performance was negatively related to goal difficulty. They explained that individuals make systematic trade-offs between quantity and quality: When they are assigned difficult goals, they may increase their effort in pursuit of quantitative performance, but this increased effort will entail quality costs.

Given today's demand for high-quality products and services, managers must take great care so that their goal-setting programs do not undermine quality. Consider that Lincoln Electric, a manufacturing firm well known for a goal-setting / incentive scheme that has allowed it to have one of the most cost-effective production systems in the world, has implicitly recognized the tendency of workers to trade quality for quantity.

While its system combines performance standards (goals) with piece-rate type incentives, employees receive no credit for units that do not meet a quality standard. In addition, employees are responsible for correcting defects. Thus, the system does not allow for quantity/quality trade-offs. (See Nov./Dec. 1993 *Compensation & Benefits Review*, page 21, for a complete description of Lincoln Electric's system.)

### *The inertia effect*

Inertia refers to the tendency of an object at rest to remain at rest and an object in motion to remain in motion. With regard to goal setting, the inertia effect refers to individuals' tendency to continue to do things the same way, regardless of whether this is the most effective course of action. Recent research has revealed that one of the major problems with goal setting—and particularly with setting difficult goals—is that it can produce a dysfunctional inertia, encouraging individuals to cling to ineffective approaches rather than developing better ways of doing things.

For example, work procedures, job descrip-

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tions, and role expectations often require individuals to perform tasks in ways that are neither maximally efficient nor maximally effective. In these cases, it would benefit the company if employees would take the initiative and revise the way they perform these tasks. Goals, however, can inhibit task revision. Consider that in two studies, researchers asked participants to revise a promotional brochure that had mistakes in grammar and syntax as well as some very inappropriate content. The individuals assigned a specific goal (i.e., a certain number of errors to correct) were less likely to remove or rewrite the inappropriate content than were individuals given a do-your-best goal.

The inertia effect often results in an escalation of resources committed to a failing course of action. For example, in 1966 the Long Island Lighting Company (LILCO) set out to construct a nuclear power plant in Shoreham, N.Y. LILCO originally estimated the plant would cost between \$65 and \$75 million to build and would provide 540 megawatts of power when service began in 1973. However, a number of setbacks—most notably strong protests by environmental and antinuclear groups—began to work against the utility. But rather than revise either its goal (i.e., build a different type of power plant) or its strategy (e.g., build a nuclear plant somewhere else), LILCO held firm to its construction plans. How effective was this strategy? The plant, which ended up costing more than \$5 billion, has never been operational and is currently being dismantled.

### ***The “goal only” effect***

Significant evidence points to the fact that goals, particularly when tied to incentives, can create a “goal only” mentality, whereby individuals focus all of their time and energy on the goal-driven task and fail to perform other behaviors that may be quite important. This effect is often observed with MBO programs. For example, one negative consequence of results-based appraisal systems is that when appraisals are based on individual performance results, each individual has little incentive to engage in behaviors that help his or her co-workers. As Gary Latham and Kenneth Wexley stated in *Increasing Productivity Through Performance Appraisal* (Addison-Wesley, 1981), “Loaning a truck to a fellow super-

intendent may hurt the monthly cost sheet of the loaner, but it may significantly increase the profits of the organization as a whole.”

Consider, also, one laboratory study, in which participants checking information on order forms were assigned either easy, moderate, or difficult performance goals. The study also assigned some individuals a flat rate and others a goal-driven bonus and asked participants to rate their own level of commitment. The results showed a positive relationship between goals and task performance, and performance was higher among those committed to the goals than among those not committed. After the participants had begun their work, a confederate, posing as a co-worker, entered the room and began to ask questions about how to complete the task. Among those who had low goal commitment and those who were highly committed but paid a flat rate, the incidence of helping behavior was relatively high. However, a high commitment to goals coupled with bonuses for goal attainment was strongly negatively related to helping behavior.

While these results were revealed in a sterile laboratory setting, few would deny that the same outcomes occur in the real world. For example, consider the following anecdote about the vice president of materials for a large defense contractor. The executive stood to earn a significant (in excess of \$30,000) bonus if inventories were below a set level on a specific date at the end of the fiscal year. During the two weeks prior to the date of measurement, his employees reported they were told to send orders back to suppliers and ramrod parts through the system. Ultimately the VP met his goal; but his focus on achieving that goal resulted in innumerable costs to the organization, such as additional shipping expenses, overtime, and goodwill lost among suppliers and other departments.

### ***The “end justifies the means” effect***

Probably the most dangerous potential pitfall of goal-setting and incentive programs is their tendency to encourage individuals to develop strategies that are destructive to the organization. A glance at just about any recent major business publication will reveal an example of individuals who engaged in ineffectual, unethical, or even

illegal behavior to meet some standard within an organizationally developed goal/incentive scheme.

For example, one recent scandal involved the upselling of repairs at Sears automobile repair shops in California. In 1990, under pressure to shake up the retail giant, Chairman Edward A. Brennan sought to focus every employee on profits. The retailer introduced commissions and by-the-job pay rates, and instituted product-specific quotas for auto-service employees nationwide. The result? A number of employees "cheated," attempting to make their goals by performing unnecessary repairs. Not surprisingly, customer complaints about Sears to California's Consumer Affairs Department increased 29% in 1990 and another 27% in 1991. In addition, in an undercover investigation, Consumer Affairs found that on 34 of 38 visits, the "customer" was charged an average of \$235 for unnecessary repairs. This scandal is expected to hurt Sears' market position in the long run. As one customer stated, "Trust shaken is not easily gained back."

Sears is not alone in feeling the effects of motivational schemes working *too* well. Nordstrom, a retailer renowned for its excellent service, has also observed employees engaging in unprofessional activities as a result of a goal/incentive system. At Nordstrom, the key performance measurement is sales per hour (SPH). Employees who maintain high SPH are assigned the best shifts, while those not maintaining adequate SPH risk termination. In addition, virtually all Nordstrom employees are part of a heavily commission-based pay system. This emphasis on SPH and commissions has encouraged employees to perform a number of unethical and illegal behaviors. For example, employees have been known to purchase goods on their own credit cards on days when their SPH might end up low, only to return the purchases later at another Nordstrom store. In addition, some employees claim they were pressured to engage in many of their service activities—such as writing thank-you notes, stocking merchandise, and attending meetings—while not on the clock.

### ***The "easy goal" effect***

When it comes to goal setting, one of the major challenges facing managers is how to determine

the level of goal. Few academics and managers advocate setting easy goals, as these goals seldom elicit higher performance than no goals at all; however, if one sets too difficult a goal, he or she faces the potential for subordinates to reject it, which would also negate the value of the goal-setting intervention. Thus, academics and managers usually call for involving employees in the goal-setting process. Yet recent research reveals that employee involvement can create its own set of problems, particularly when goal attainment is tied to incentives.

For example, in one study, researchers asked participants to self-set performance goals on a number of trials. They also assigned them to one of four pay systems: piece-rate, hourly, bonus, or competitive bonus (a bonus awarded to the top third of performers). It should come as no surprise that the individuals who could earn bonuses set significantly lower goals than the other groups. Perhaps more surprising, however, is that these individuals also expressed lower opinions about their own abilities. A second study replicated these results. Thus, it appears that individuals assigned to goal/incentive systems engage in impression-management tactics: They seek to convince others of their lack of ability in an effort to justify setting what are actually easy goals.

Certainly no organization allows employees solely to determine the goals they must achieve to earn a bonus. However, most organizations that use goal/incentive programs such as MBOs want employees to participate. So what types of goals do their employees negotiate? In another study, individuals were told their bonus would be tied to a goal to be assigned later. They were then asked to set what they thought was a reasonable goal. The subjects who were to be paid based on goal attainment set significantly lower goals than did individuals who were paid by the piece or the

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hour. Thus, it appears that even when individuals know their bonus will not be based on a goal they set by themselves, they still seek to negotiate easier goals.

To combat the tendency of individuals to set easy goals, managers might simply remove employees from the goal-determination process. However, two studies have found that when individuals are assigned goal-based bonuses, an inverted-U relationship exists between goals and performance, with the lowest performance observed among those assigned the most difficult goals. Thus, it appears that when individuals are assigned difficult goals under a goal-based incentive scheme, many simply reject them and set much lower, personal goals.

## GUIDELINES FOR USING GOALS AND INCENTIVES

The above discussion of goal-setting pitfalls is by no means intended to suggest that organizations should eliminate goal setting and monetary incentives. However, it certainly points to the need for caution in designing and implementing programs. Specifically, organizations that want their goal-setting/incentive programs to be effective should heed the following guidelines.

**1. Don't tie incentives to goal attainment.** Even though incentives can tremendously increase individuals' commitment to goals, the negative consequences of tying incentives to goal attainment far outweigh the benefits. Goal-driven incentives can cause employees to set lower goal levels, reject difficult goals, and over-emphasize goal attainment regardless of the organizational, social, or ethical costs.

Nevertheless, it is possible to use incentives *in conjunction* with goals. An ideal motivational program would direct supervisors and employees to agree on performance goals based on the employee's ability and the organization's needs. The reward system would then reward performance, regardless of the individual's ability. For example, consider two employees: Employee X, who can produce 100 units per week, and Employee Y, who can produce 150. Employee X might be encouraged to accept a goal of 110 units (i.e., a 10-unit increase), and Employee Y, 160

units (a similar increase). Obviously, if both attain their goals, then both should receive praise and encouragement.

However, if the organization were to provide both with equal rewards for attaining their respective goals, Employee Y would likely perceive this as unfair, and might be encouraged to produce fewer units in the future. Thus, for the organization to maintain an equitable reward system and encourage the highest performance, it should provide a greater financial reward to Employee Y.

This kind of equity occurs naturally with piece-rate systems. However, in situations in which piece-rate incentives are impossible, rewards must be tied to absolute levels of performance, rather than to increases in performance relative to an individual's ability or past accomplishments. Organizations should decide, *a priori*, what rewards will be associated with various levels of performance or, when a subjective rating system is used, with various ratings. In either case, the goals motivate individuals to increase their own level of performance; the incentives reward performance based on the contribution that performance makes to organizational success.

**2. Find the right goal levels.** Many of the studies on goal setting have assigned a single goal level to a number of individuals with different abilities. Similarly, many organizational interventions assign performance goals to a group of employees, failing to take into account the fact that the same goal is not equally difficult for all. In these cases, the goal will likely motivate only a very few individuals to achieve higher performance.

Few would recommend setting easy goals for individuals, yet if one sets goals based on the average performance of a group of employees, that goal will be quite easy for top performers. On the other hand, if one sets a goal that will make top performers stretch, lower performers will find it virtually unattainable—and will either resort to unethical or even illegal means to reach the goal, or reject the goal completely. The key to effective goal setting is to decide upon goals that encourage employees to improve their performance—but not at the expense of other important aspects of the job.

Thus, the goal-setting manager must be deeply familiar with each employee's perfor-

mance capabilities. He or she must view each employee as an individual with different strengths, weaknesses, and potential. Each employee's goals should differ from those of other employees, because they should reflect that individual's own capabilities. In this way, the best goal-setting process calls for managers and employees to agree on goals that will be challenging but will by no means require an individual to devote all of his or her energy and attention to achieving them.

**3. Set goals for all performance-related activities.** Too often managers attempt to motivate employees by specifying goals for the most important or most easily evaluated activity. Obviously, in most jobs some activities lend themselves to objective evaluation (e.g., for university professors, the number of articles published; for salespeople, the number of units sold) while other activities are much more difficult to measure (e.g., for professors, teaching; for salespeople, customer service). However, as we've discussed above, when only one goal exists, employees will often seek to reach only that goal, ignoring other important performance-related activities. Thus, a key challenge for managers is to set goals for *all* major aspects of job performance.

How does the manager accomplish this? First, the manager must identify all important performance-related activities. For example, in the case of the Sears auto-repair scandal, Sears managers should have explored all components of effective auto-repair performance, rather than focusing only on the dollar value of repairs or the number of certain types of repairs. These other components probably would have included customer service (meeting customer needs), customer satisfaction (keeping customers coming back), and repair quality.

Second, the manager must set goals for each activity, regardless of whether the goal can be measured objectively. Turning again to the Sears situation, we can see that customer service and customer satisfaction probably could not have been objectively measured. However, managers could have set such goals as "Meet the needs of every customer who brings his/her car to Sears," and "Make sure every customer is satisfied with the work performed." Obviously Sears' managers might never have been able to measure the extent to which each mechanic attained these

goals; but if the mechanics were working to meet customer needs, they would not have been so ready to perform unnecessary repairs.

Finally, the manager should prioritize the employee's goals to demonstrate how each contributes to the organization's success. Imagine service managers at Sears seeking to prioritize the goals above. How many managers would have put "Perform 100 oil changes per week" ahead of "Meet the needs of every customer who brings his/her car to Sears?" Very few. But if the managers had specified that customer service was more important than a certain number of repairs, the scandal would have been much less likely to occur.

**4. Specify, monitor, and revise strategies.** Once they have agreed on a goal or set of goals, the manager and employee need to specify the means for attaining them, keying in on the most effective, efficient, and ethical strategies. They must then constantly evaluate these strategies to ensure their efficacy. If the chosen strategies falter, the manager and employee must devise new ones.

In evaluating strategies, the manager should play the role of devil's advocate, since the most obvious strategies may not produce the most effective results and may actually inhibit creativity, new ideas, and flexibility. Thus, managers should often ask, "What are all of the possible ways this goal can be achieved?" The goal-setting process can provide a unique opportunity for managers to question the basic structure of tasks and jobs; managers may even be able to implement changes that will produce productivity increases above and beyond those produced by the motivational effects of the goals. For this reason, any new strategies that may entail a rethinking, or even a reengineering, of the work process should be explored.

For example, in the studies discussed earlier in which participants were asked to revise a

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brochure, the second group was assigned the goal of changing the content (the other group of subjects, which had been assigned only performance goals, had failed to perform this type of task revision). This second set far outperformed the other participants, coming up with many more ideas for changes. These results suggest that when individuals are told to pay attention to *what* they should do (i.e., the task strategy), as opposed to *how much* they should do, their effectiveness increases. In this way, managers might be well served by setting a new goal for subordinates—to find better strategies for achieving their performance goals.

## CONCLUSION

Returning to the story of Icarus, we should note some similarities between the wings

Daedalus invented and the motivational tools of goals and incentives. First, Daedalus's wings were extremely effective: Both he and Icarus soared in the skies and marvelled at the abilities the wings provided. Similarly, goals and incentives, if used properly, are valuable tools for increasing productivity. Second, Icarus's wings had disastrous results only because he ignored Daedalus's guidelines and flew too close to the sun. Likewise, when managers misapply goals and incentives, negative consequences can occur.

Finally, as a result of the tragedy, Daedalus hung up his wings, never to fly again. Managers, too, may be inclined to reject certain goal-setting/incentive schemes that have counterproductive outcomes. However, it is important to recognize that it is their *misapplication* that causes the negative results. Managers should not hang up these managerial wings, never to fly again.

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A number of recent research articles provide examples of some of the dysfunctional effects of goals. Barry Staw and Richard Boettger demonstrate how goals can inhibit individuals from revising tasks in their article, "Task Revision: A Neglected Form of Work Performance," in *Academy of Management Journal*, Vol. 33, pp. 534-559. For an example of how goals and incentives can discourage individuals from helping their co-workers, see Patrick Wright, Jennifer George, S. Regena Farnsworth, and Gary Mc-Mahan's article, "Productivity and Extra-Role Behavior: The Effects of Goals and Incentives on Spontaneous Helping," in *Journal of Applied Psychology*, Vol. 78, pp. 374-381.

While the articles cited above focus on laboratory studies, examples abound regarding the negative effects of goals and incentives in American business organizations. For examples of how goal-setting and incentive systems caused problems at Sears' auto-repair shops, see Kevin

Kelly and Eric Schine's *Business Week* article, "How did Sears Blow this Gasket?" (June 29, 1992, p. 38).

The negative outcomes of goals and incentives at Nordstrom are discussed in Susan Faludi's *Wall Street Journal* article, "At Nordstrom Stores, Service Comes First—But at a Big Price"

(Feb. 20, 1990, p. A1, A16). Finally, a thorough description of the problems associated with the Shoreham nuclear power plant can be found in Jerry Ross and Barry Staw's *Academy of Management Journal* article, "Organizational Escalation and Exit: Lessons from the Shoreham Nuclear Power Plant" (Vol. 36, pp 701-732).



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