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# Reinforce for performance: The need to go beyond pay and even rewards

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## Executive Overview

*Perhaps the most talked about, if not actually implemented, practical solution for making human resources more productive is pay for performance. Yet many researchers and practitioners doubt the true effectiveness of this approach. To help solve this controversy, we suggest drawing from reinforcement theory and behavioral management. This approach can be used to explain the simple statements: You get what you reinforce, but you do not necessarily get what you pay for. We first critically review the traditional pay for performance practices and address the question of whether rewards, not reinforcers, do more harm than good. Next, we discuss the theoretical foundation that you get what you reinforce. Finally, we outline the behavioral management steps of organizational behavior modification (O.B. Mod.). When O.B. Mod. has been systematically applied over the years using both monetary and nonmonetary reinforcers, our recent meta-analysis found that performance on average increased 17 percent. The contingencies and practical implications of this behavioral management approach that advocates reinforce for performance instead of pay or even reward for performance are discussed.*

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Management practitioners, professors, and students identify two major issues going into the 21st century: globalization and information technology. As an afterthought, most will also cite the importance of people in gaining competitive advantage. While considerable deserved attention is being given to developing global strategies and information systems, the human side of enterprises still tends to be slighted or given a low priority. As Pfeffer notes in his recent book, *The Human Equation*: "Rather than putting their people first, numerous firms have sought solutions to competitive challenges in places and means that have not been very productive—downsizing and outsourcing in a futile attempt to shrink or transact their way to profit, and doing myriad other things that weaken or destroy their organizational culture in efforts to minimize labor costs—even as they repeatedly proclaim, 'people are our most important assets'."<sup>1</sup> Some recent widely publicized debacles that depict what Pfeffer is talking about include such well-known firms as Boeing Aircraft, which was caught shorthanded in filling customer orders,

and the Union Pacific Railroad, which experienced a severe decline in performance and safety.

This is not to say that people are the answer to everything, nor that areas such as information technology are not important. There is little question that IT can lead to improvements not only in productivity, but in such areas as better customer service. For instance, the use of hand-held computers by Hertz and Avis lot attendants eliminated lines at check-in and return counters. It can also result in cost savings such as software that allows customers direct access through the Internet to find the status of packages. This procedure saved FedEx an estimated \$16 million in its first year.

The development and innovative application of IT, however, may not be sufficient in sustaining competitive advantage. As Bill Gates argued in reaction to the Justice Department's antitrust case against Microsoft, little of today's technology is proprietary.<sup>2</sup> Technology is easily obtained and replicated and only levels the playing field. An organization's valued human assets cannot be copied. As one executive put it: "Machines do not

make things, people do."<sup>3</sup> Rapidly advancing technology makes human resources even more critical to organizational success. Similarly, the general manager of Boise Cascade observed: "Capital and machinery make it possible, people make it happen."<sup>4</sup>

For sustainable competitive advantage going into the 21st century, human resources are still the major force for creating distinctive core competencies.<sup>5</sup> As the CEO of Chrysler (now Daimler-Chrysler) succinctly stated: "The only way we can beat the competition is with people."<sup>6</sup> The real challenge is to find ways to manage human resources as effectively as possible in order to attain world-class performance.

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The alternatives offered to enhance employee performance are not always discernable or easy to implement. Finding out and replicating what makes Southwest Airlines able to turn around 80 percent of its flights in 15 minutes, while other airlines on average need 45 minutes, can be a difficult assignment, since at Southwest the management of human assets is a very complex dynamic process.<sup>7</sup> This article offers a practical solution for effective human resources management that is relatively easy to implement and has been proven to work. The approach we propose is based on reinforcement theory and is systematically and simply applied through the steps of organizational behavior modification, or O.B. Mod.<sup>8</sup> The effectiveness of this behavioral management approach was recently supported by our comprehensive analysis of 20 years of empirical evidence.<sup>9</sup>

The basis of the behavioral approach is that employee behavior is a function of its contingent consequences. Something that strengthens and leads to an increase in the frequency of a behavior is called a reinforcer, not a reward. Behaviors that positively affect performance must be contingently reinforced rather than indiscriminately rewarded. Pay is by far the most recognized reward in human resource management, and pay for performance is closely equated with a reward system.

### **Pay for Performance**

With some exceptions, most of the evidence regarding the effectiveness of pay for performance is

based on survey data, anecdotal testimonials, and one-time company cases.<sup>10</sup> This has resulted in mixed and even confusing guidelines of how, where, and even if, to use pay for performance to improve employee performance.

### **Traditional Approach**

Incentive pay approaches can be traced to Taylor's scientific management at the beginning of the century. Traditionally, these pay-for-performance plans have been associated with piece-rate systems for blue-collar factory workers, commissions for salespeople, and merit pay or bonuses for supervisors and managers.

Most organizations today use some type of reward system based on pay. For example, a recent survey of *Fortune* 1000 firms found that a majority of organizations used monetary reward systems, and another survey reported that 80 percent of U.S. companies use some form of merit pay.<sup>11</sup> Most recently, with the recognition and use of work groups and teams, gainsharing plans have become increasingly popular.

### **New Pay for Performance**

With the latest emergence of process-based, network organizations and knowledge workers, a new pay-for-performance framework has emerged. Edward Lawler, who is most closely associated with compensation and reward systems, cautions that "the new pay is not a set of compensation practices at all, but rather a way of thinking about the role of reward systems in a complex organization."<sup>12</sup> Compensation experts Patricia Zingheim and Jay Schuster have identified several specific new pay-for-performance techniques:<sup>13</sup>

1. **Commissions beyond sales to customers.** As with all the new pay plans, the commissions paid to sales personnel would be aligned with the organization's strategy and core competencies. The commission may be determined by customer satisfaction and/or sales team outcomes such as meeting revenue or profit targets.
2. **Rewarding leadership effectiveness.** This newly emerging technique is based on factors beyond the financial success of the organization. In particular, it may include an employee satisfaction or commitment measure to recognize a manager's skills in handling people.
3. **Rewarding new goals.** This approach rewards all relevant employees who contribute to such goals as customer satisfaction, cycle time, or quality measures.

4. **Pay for knowledge workers in teams.** With the increasing use of teams, pay under this approach is linked to the performance of knowledge workers or professional employees who are organized into reengineering, product development, interfunctional, or self-managed teams.
5. **Skill pay.** This technique recognizes the need for flexibility and change by paying employees based on their demonstrated skills rather than the jobs they perform. Although it is currently used with procedural production or service skills, the challenge is to apply this concept to the more varied, abstract skills needed in the new paradigm organizations, such as development of cross-cultural communication skills.
6. **Competency pay.** This approach rewards the more abstract knowledge or competencies of employees, such as those related to technology, the international business context, customer service, or social skills.

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#### ***Evidence of the Effectiveness of Pay for Performance***

Both traditional and new pay techniques have largely depended on testimonial evidence and questionnaire responses for evaluation.<sup>14</sup> Although a few methodologically rigorous empirical studies on merit pay<sup>15</sup> and gainsharing<sup>16</sup> note the problems and complexities of pay for performance, the literature is still dominated by mostly glowing reports coming from survey information. A comprehensive survey sponsored by the American Compensation Association (ACA) placed a dollar value on the positive impact of pay for performance techniques. It found a 134 percent net return; i.e., for every \$1 of payout, a gain of \$2.34 was attained.<sup>17</sup> A recent survey of 400 British and 100 American firms found that those using pay for performance had on average over twice the shareholder returns of those with low variable pay.<sup>18</sup> Although these find-

ings appear impressive, we still lack experimentally derived causal evidence that would indicate more effective guidelines for application.

The new pay techniques have no direct empirical research to date, and support for their performance depends on testimonies and anecdotal evidence. Carol De La Cruz, vice president of human resource development for AT&T Credit, said of her firm's new pay plan: "We expect to see significant productivity gains in the organization in the years to come."<sup>19</sup> A recent survey sampling *Fortune* 1000 firms concluded: "Companies using reward innovations tend to view them as successful."<sup>20</sup> Since the effectiveness of both traditional and new pay-for-performance techniques has depended on such evidence, many questions remain about their application.

#### ***Do Rewards Really Work?***

An unconvinced few still support the position that rewards do more harm than good. Alfie Kohn, author of *Punished by Rewards*, declares that "any incentive or pay-for-performance system tends to make people less enthusiastic about their work and therefore less likely to approach it with a commitment to excellence."<sup>21</sup> He unequivocally states: "The bottom line is that any approach that offers a reward for better performance is destined to be ineffective."<sup>22</sup> These statements are largely based on Kohn's own assumptions, and are in stark contrast to a large body of reinforcement theory that is backed by empirical research. In contrast, Albert Bandura insightfully notes that "social scientists who warn that high pay will ruin the interest and motivation of . . . workers, rarely counsel low reward of professional services and creative efforts."<sup>23</sup>

Edward Deci and his colleagues conducted widely publicized laboratory experiments in the 1970s that found that rewards decreased subjects' intrinsic motivation, task interests, and creativity.<sup>24</sup> These controversial findings have generated considerable follow-up research, with mixed results.<sup>25</sup>

A comprehensive review of about 100 relevant studies over the past two decades found a number that indicate that some rewards may have a detrimental effect, and an equal number of studies that found no effect, or a positive effect.<sup>26</sup> Another review of 96 studies found that the only detrimental effect of rewards was the time spent carrying out laboratory activity following a performance-independent or noncontingent reward.<sup>27</sup>

A recent review of studies accumulated over a quarter of a century concluded that: (1) the detrimental effects of rewards occur under highly re-

stricted, easily avoidable conditions; (2) mechanisms of instrumental and classical conditioning are basic for understanding incremental and detrimental effects of reward on task motivation; and (3) positive effects of rewards on performance are easily attainable using procedures derived from behavioral theory.<sup>28</sup>

### You Get What You Reinforce

Although cognitively-based arguments have been used extensively to counter pay for performance, reinforcement theory has not necessarily been used to support it. Yet even such pioneers of the cognitive approach to organizational behavior as Victor Vroom recognize that "without a doubt the law of effect or principle of reinforcement must be included among the most substantiated findings of experimental psychology and is at the same time among the most useful findings for an applied psychology concerned with control of human behavior."<sup>29</sup> A brief review of reinforcement theory can serve as a useful point of departure for a behavioral management approach to pay for performance.

### Reinforcement Theory

Reinforcement theory had its beginnings in Pavlov's conditioning experiments and has evolved through Skinner's operant conditioning to Bandura's social learning and social cognitive theory.<sup>30</sup> Its basic premise, that human behavior is a function of contingent consequences, has survived stormy debates over the past 30 years. As Bandura forcefully points out in his book on social cognitive theory: "If people acted . . . on the basis of informative cues but remained unaffected by the results of their actions, they would be too insensible to survive very long."<sup>31</sup> When this premise is applied to the workplace, it yields the concept that you get what you reinforce.

Today's organizations may have visionary strategies, networks, team-based designs, and the latest advanced information technologies in place, but unless organizational participants are reinforced for their performance-related behaviors, these strategies, designs, and technologies may have little impact. In fact, empirical evidence supporting reinforcement theory has long established that the antecedent cues, such as strategies, designs, technologies and even leadership styles, have the capability to direct employee behavior only if reinforcing contingent consequences are forthcoming. As one behavioral management consultant points out: "A company is always perfectly

designed to produce what it is producing. If it has quality problems, cost problems, productivity problems, then the behaviors associated with those undesirable outcomes are being reinforced. This is not conjecture. This is the hard, cold reality of human behavior."<sup>32</sup>

A major challenge for today's management is to recognize this behavioral reality. As Steven Kerr pointed out in his classic article on "Rewarding A, While Hoping for B,"<sup>33</sup> reinforcers currently maintaining the dysfunctional behaviors must be eliminated and the functional performance behaviors must be reinforced. As we are suggesting, reinforce, not necessarily reward or pay, for performance.

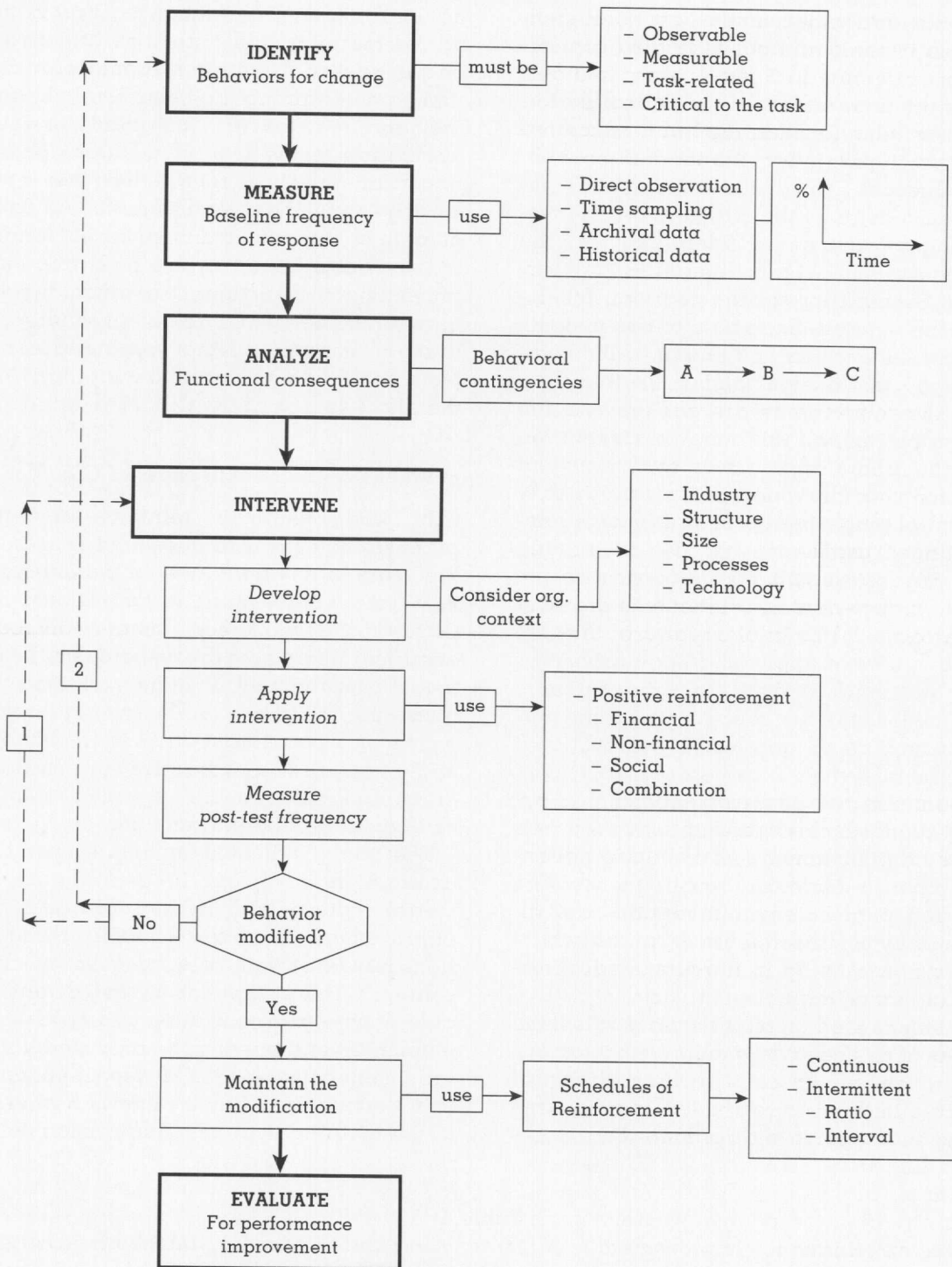
In suggesting that you get what you reinforce and that managers should reinforce and not necessarily reward or pay for performance, we are recognizing two major premises from reinforcement theory. The first is that a reinforcer is not the same as a reward. A reward is something that is perceived as valuable by the reward giver, whereas a reinforcer always increases the strength and frequency of the desired functional, performance-related behaviors. Thus, not every reward is a reinforcer, but every reinforcer is a reward. Second, by reinforcing we mean systematic application of reinforcement theory are outlined in the procedures of the O.B. Mod. approach to behavioral management.

### The O.B. Mod. Approach

The O.B. Mod. model, shown in Figure 1, represents a problem-solving, analytical, and action-oriented approach to identifying and contingently managing critical performance-related behaviors of participants in all types of organizations. It provides managers with a systematic, easy-to-apply behavioral management framework to identify, analyze, and modify employees' behaviors for performance improvement. Most succinctly, the O.B. Mod. model can be summarized by five one-word steps: identify, measure, analyze, intervene, and evaluate.<sup>34</sup>

The first step of the O.B. Mod. application model is to identify critical observable performance-related behaviors. These behaviors must be observable and performance-related. Since not every behavior accounts for an equal portion of the variance in performance outcomes, the behaviors must be critical to the task in question. The guideline is to identify the 20 percent of critical behaviors that account for about 80 percent of the performance outcome.

The second step of the O.B. Mod. model is to measure the baseline frequencies of the critical



**FIGURE 1**  
O.B. Mod. Application Model

behaviors identified in step one. Although there are many ways to record frequency of the response, the key is to reliably record frequencies of occurrence. Because of their unobtrusiveness and reliability, archival records tend to be a desirable source of data for measuring behavioral outcomes

such as quality or productivity. However, trained observers can also directly record behavioral frequencies. Baseline frequencies of the critical behaviors should be displayed in a graph when possible, such as frequency over time.

The next step of the O.B. Mod. model is to ana-

lyze the behavioral antecedents and contingent consequences in the performance-related context. This analysis attempts to answer two questions: (1) What are the antecedents of the critical performance-related behavior identified and measured in the first two steps? and (2) What are the contingent consequences for desired behavioral responses? Antecedents of the critical performance-related behavior must be identified in the functional analysis in order to determine what factors cue the behavior or set the occasion for the behavior to be emitted. Examples of antecedents include variables such as equipment, technological processes, job design and/or performance training. If the antecedents are not present, the employee cannot exhibit the behaviors. However, the key to the whole approach is the contingent consequences since the antecedents assume only stimulus control properties in the presence of reinforcing contingent consequences. Thus, identifying the reinforcing contingent consequences of the critical performance-related behaviors is the most important process in this analysis step of the O.B. Mod. model.

After the functional analysis, an intervention is applied to increase the frequency of functional performance behaviors or decelerate dysfunctional behaviors. The intervention strategies involve contingently administered positive reinforcers to accelerate functional behaviors, and extinction—or, as a last resort, punishment—of dysfunctional behaviors in order to decrease their frequency. The extinction and punishment interventions are always followed by positive reinforcers of the behaviors that are now moving in the functional direction for performance improvement.

The final step of the O.B. Mod. model is to test the effectiveness of this behavioral approach to performance improvement. An empirical evaluation of performance outcomes is conducted to determine whether the intervention did, in fact, lead to be-

havioral change, performance improvement, sustained learning, and a positive affective reaction on the part of the organizational participant. Although determining the behavioral change, learning, and reaction are important for the overall evaluation of the O.B. Mod. approach, the most important question is whether the intervention strategy did indeed lead to performance improvement in observable and measurable terms. Charts of behavioral frequency are most frequently used in behavior modification to evaluate the difference between baseline and treatment conditions. Quantitative analysis, using appropriate statistical tests, should also be used to quantitatively test for the effectiveness of the O.B. Mod. application.

#### *Evidence of the Effectiveness of O.B. Mod.*

O.B. Mod., using a reinforce-for-performance premise, has been applied and researched over the years in a wide variety of manufacturing, service, and not-for-profit organizations, and even across cultures.<sup>35</sup> A recent meta-analysis of all the empirical findings of the research on the O.B. Mod. model over the past 20 years examined two major questions: (1) What was the average treatment effect on task-performance across all examined studies? and (2) Did any variables systematically moderate the relationship between reinforcement contingencies and performance?<sup>36</sup>

The study indicated an impressive 17 percent average improvement in performance. This increase represents a greater gain in performance improvement than, for example, those obtained from meta-analysis of approaches such as goal setting.<sup>37</sup> The study also revealed that two variables—type of organization and type of reinforcement intervention—significantly moderated the relationship between the O.B. Mod. applications and task performance. Table 1 shows a brief summary of the meta-analytic results transformed into per-

**Table 1**  
Percentage Performance Improvement in Manufacturing and Service Organizations According to Different Types of O.B. Mod. Reinforcers

Type of Organization	Overall Effect	Monetary (I)	Performance Feedback (II)	Social Atten/Recog. (III)	Simultaneous application of I & II	Simultaneous application of II & III	Simultaneous application of I, II, & III
Manufacturing	33%	39%	41%	N/A	N/A	41%	44%
Service	13%	14%	6%	15%	30%	30%	9%

Note 1. Overall effectiveness of O.B. Mod. in terms of performance improvement regardless of type of organization and reinforcer is 17 percent. The results are drawn from the Stajkovic and Luthans meta-analysis cited in endnote 9.

Note 2. All percentages presented in this table are based on the value of the unbiased average effect size statistic (*d*) (from Hedges and Olkin's 1985 meta-analysis book) respectively for each category. All *d* < .05 statistical significance.

centages and classified according to type of organization and type of reinforcement intervention.

The meta-analysis found that the magnitude of the relationship between O.B. Mod. applications and performance could be first distinguished depending on the type of organization. The average increase in performance—33 percent in manufacturing and 13 percent in service organizations—is important for practicing managers, since the service sector has reached almost 80 percent of the U.S. economy and is still growing. The difference in application effectiveness of O.B. Mod. between manufacturing and service organizations could be explained in two ways: (1) the definition and accurate assessment of performance outcomes; and (2) the nature of the employee behaviors and work processes involved in the delivery of performance outcomes. The first point refers to the difference between the definition and measurement of the more vague and complex service organization performance outcomes (e.g., customer satisfaction, return business) versus tangible performance outcomes (e.g., productivity and quality) in manufacturing organizations. The second point refers to the difference between specifying service delivery employee behaviors and processes and the employee behaviors and processes that go into making a tangible product. Service performance behaviors and outcomes are more complex and less identifiable than those found in manufacturing organizations.

The results in Table 1 indicate that different O.B. Mod. reinforcement interventions, including monetary and non-financial such as performance feedback, and social recognition and attention, tend to produce different gains in performance both in manufacturing and service organizations. The O.B. Mod. performance feedback intervention involves providing objective, usually graphed information about the employee's performance behaviors. Examples are frequency of performing preventative maintenance, but most often data are obtained from manufacturing archival productivity and quality. This feedback contingently administered as an O.B. Mod. reinforcement intervention to employee performance behaviors follows the guideline of being positive, immediate, graphic, and specific. The social reinforcers as an O.B. Mod. intervention involve trained supervisors and managers providing verbal or written recognition (e.g., "I saw that you stayed past quitting time to finish that important project I gave you at the last minute") and attention ("I noticed that you were helping the new guy out when I passed your work station"). These social reinforcers do not praise or thank people for doing assigned duties or coming

to work on time. They are contingently administered to employee behaviors identified in the first step as critical to performance improvement.

All three of these O.B. Mod. reinforcement interventions produced significant results. However, some of these effects were not statistically different from each other. For example, in manufacturing organizations, although the simultaneous application of monetary, performance feedback, and social reinforcers produced the strongest effect on performance, the size of that effect was not statistically different from the effect produced by the performance feedback alone. Also, the effect for monetary reinforcers was not statistically different from the one for performance feedback.

Based on these findings, it does not appear cost-effective for human resource managers to spend extra time and financial resources to simultaneously apply monetary, performance feedback and social reinforcers, when non-financial reinforcers alone produce the same results.

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Although pay has been found to be a reinforcer, not just a reward, in the O.B. Mod. approach, other reinforcers of performance feedback and social recognition and attention appear to be as effective.

Table 1 also indicates that service organizations varied in performance while using the O.B. Mod. interventions. Non-financial interventions, such as performance feedback, produced the weakest, but still statistically significant, results in service organizations. However, when social reinforcers of attention and recognition are used in combination with performance feedback, and monetary and performance feedback reinforcers are applied together, these combinations produced the strongest effects on task performance in service organizations. To complicate matters further, the effects of monetary reinforcers were not statistically different from those produced by social reinforcers. In service organizations, as in manufacturers, the same effects on performance can apparently be obtained by applying social reinforcers as by applying costly financial ones.

When simultaneous application of monetary reinforcers, performance feedback, and social attention and recognition was statistically compared with simultaneous application of nonfinancial reinforcers and social attention and recognition, the latter produced significantly stronger effects on performance. It appears that when monetary reinforcers are used in combination with feedback and social attention and recognition, the costly reinforcer may have actually diminished the effect of the whole intervention. In fact, performance improvement decreased from 30 to 9 percent.

## Conclusion

As with any scientifically-based approach, sound theory and basic research provide the foundation and point of departure for more effective application. Many areas of organizational behavior and human resource management, most notably self-efficacy<sup>38</sup> and goal setting, but also areas such as job design, have followed and draw from theory and research in order to make more effective applications. Pay for performance has not. Reinforcement theory, through the O.B. Mod. process implementation, now supported by the meta-analytic results of 20 years of research, can provide the needed foundation and contingency guidelines for more effective application of pay for performance.

Specifically, both the management literature and real-world experience indicate that there may be less than satisfactory results with the traditional pay-for-performance reward system. Reinforcement theory and meta-analytic research results indicate the problem may be in the way the system has been applied and managed. Reinforcement theory would say that pay may be a reward, but not necessarily a reinforcer, and our meta-analysis found that monetary, nonfinancial, social and the combined reinforcers tend to yield differing impacts on performance. The implication for practice is that the feedback and social reinforcers may have as strong an impact on performance as pay.

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Before concluding that pay is somehow not as important as it was thought to be, or, even worse, reexperiencing the controversy initiated by Deci's research many years ago, two important points

must again be emphasized: (1) pay can significantly increase performance, yet (2) pay is not the only, nor necessarily the best, reinforcer for performance improvement. For example, a large firm with two manufacturing facilities recently implemented the O.B. Mod. approach using monetary incentives in one of the plants, and supervisors' feedback and social recognition and attention in the other. Performance improved using all three types of reinforcers—money, feedback, and social.

In a service-sector application, bank supervisors used contingently administered feedback and social recognition and attention reinforcers for teller customer service behaviors. This included using the customer's name, providing a balance, and making eye contact. These behaviors led to increases in measured customer satisfaction. In this same bank, the earlier use of monetary rewards had had no measurable effect on customer satisfaction. The money turned out to be a reward, not a contingently administered reinforcer that strengthened teller customer service behaviors or produced customer satisfaction. The feedback and social recognition and attention contingently administered by the supervisors through the O.B. Mod. approach was indeed a reinforcer for the tellers because it had the intended effect of increasing customer satisfaction.

Based on the theory and research evidence put forth in this article, we suggest that you may get what you reward, but you do get what you reinforce. Thus, a more comprehensive and effective application guideline for performance improvement would be: Reinforce for performance. Pay for performance may not always lead to performance improvement, but reinforcing for performance will always improve performance.

## Endnotes

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<sup>2</sup> Gates, B. 1998. Compete, don't delete. *The Economist*, June 13: 19-21.

<sup>3</sup> Pfeffer, J. 1995. *Competitive advantage through people: Unleashing the power of the workforce*. Boston: Harvard Business School Press: 9.

<sup>4</sup> Pfeffer, *The human equation*: 305.

<sup>5</sup> See: Cappelli, P., & Crocker-Hefter, A. 1996. Distinctive human resources are firms' core competencies. *Organizational Dynamics*, Winter: 7-22.

<sup>6</sup> This quote is found in Sherman, S. 1993. Are you as good as the best in the world? *Fortune*, December 13: 96.

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<sup>10</sup> For example, see: Gupta, N., & Shaw, J. D. 1998. Let the evidence speak: Financial incentives are effective. *Compensation and Benefits Review*, March/April: 27-32.

<sup>11</sup> The results of the *Fortune* 1000 survey is reported in Ledford, G. E., Lawler, E. E., & Mohrman, S. A., 1995. Reward innovations in *Fortune* 1000 companies, *Compensation and Benefits Review*, July-August: 76-80. The merit pay percentage is reported in Mitra, A., Gupta, N., & Jenkins, G. D. 1995. The case of the invisible merit raise: How people see their raises. *Compensation and Benefits Review*, May-June: 71.

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<sup>13</sup> See: Zingheim, P. K., & Schuster, J. R. 1995. Introduction: How are the new pay tools being deployed? *Compensation and Benefits Review*, July-August: 10-11.

<sup>14</sup> For example, see: Ledford, Lawler, & Mohrman, *op. cit.*, and Imberman, W. 1996. Gainsharing: A lemon or lemonade? *Business Horizons*, January-February: 36-40.

<sup>15</sup> Mitra, Gupta & Jenkins, *op. cit.*

<sup>16</sup> Hanlon, S. C., Meyer, D. C., & Taylor, R. R. 1994. Consequences of gainsharing: A field experiment revisited. *Group and Organizational Management*, 19: 87-111.

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<sup>19</sup> De La Cruz is quoted in *Management Review*. 1995. Aligning work and rewards. February: 22.

<sup>20</sup> Ledford, Lawler & Mohrman, *op. cit.*: 79.

<sup>21</sup> See: Kohn, A. 1993. Why incentive plans cannot work. *Harvard Business Review*, September-October: 62-63.

<sup>22</sup> Kohn, A. 1993. *Punished by rewards*. Boston: Houghton Mifflin: 119.

<sup>23</sup> Bandura, A. 1986. *Social foundations of thought and action*. Englewood Cliffs, NJ: Prentice-Hall: 236.

<sup>24</sup> Representative of this stream of research is Deci, E. L. 1971. Effects of externally mediated rewards on intrinsic motivation. *Journal of Personality and Social Psychology*, 18: 105-115 and Leeper, M. R., Greene, D., & Nisbett, R. E. 1972. Undermining children's intrinsic interest with extrinsic reward: A test of the 'overjustification' hypothesis. *Journal of Personality and Social Psychology*, 28: 129-137.

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<sup>26</sup> Eisenberger, R., & Cameron, J. 1996. Detrimental effects of reward: Reality or myth? *American Psychologist*, 51: 1157.

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<sup>31</sup> Bandura, *Social foundations of thought and action: A social cognitive theory*, *op. cit.*: 228.

<sup>32</sup> Daniels, A. C. 1995. *Bringing out the best in people*. New York: McGraw-Hill: 27.

<sup>33</sup> Kerr, S. 1995. On the folly of rewarding A, While hoping for B. *Academy of Management Executive*, February: 7.

<sup>34</sup> Luthans & Kreitner, *op. cit.*

<sup>35</sup> For example, see Luthans, F., & Davis, T. R. V. 1990. Applying behavioral management techniques in service organizations. In D. E. Bowen, R. B. Chase & T. G. Cummings (Eds.), *Service management effectiveness: 177-209*. San Francisco: Jossey Bass; Luthans, F., Paul, R., & Baker, D. 1981. An experimental analysis of the impact of contingent reinforcement on salespersons' performance behavior. *Journal of Applied Psychology*, 66: 214-223; Welsh, D. H. B., Luthans, F., & Sommer, S. M. 1993. Managing Russian factory workers: The impact of U.S.-based behavioral and participative techniques. *Academy of Management Journal*, 36: 58-79; and Luthans, F., Stajkovic, A. D., Luthans, B. C., & Luthans, K. W. 1998. Applying behavioral management in Eastern Europe. *European Management Journal*, 16: 466-475.

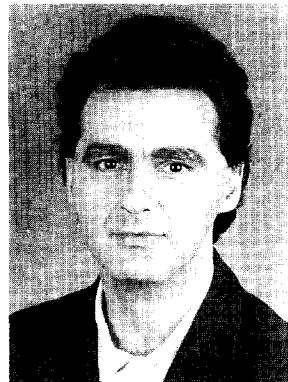
<sup>36</sup> Stajkovic, & Luthans, A meta-analysis of the effects of organizational behavior modification, *op. cit.*

<sup>37</sup> See: Wood, R. E., Mento, A. J., & Locke, E. A. 1987. Task complexity as a moderator of goal effects: A meta-analysis. *Journal of Applied Psychology*, 72: 416-425. This meta-analysis found that goal setting had an overall effect of 10.39 percent on task performance.

<sup>38</sup> See: Stajkovic, A. D., & Luthans, F. 1998. Self-efficacy and work-related performance: A meta-analysis. *Psychological Bulletin*, 124(2):240-261.



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