

# Rewards Versus Learning: A Response to Paul Chance

*Mr. Kohn raises some questions about Paul Chance's article in the November 1992 Kappan and suggests that an engaging curriculum — not manipulating children with artificial incentives — offers a genuine alternative to boredom in school and to diminished motivation when school lets out.*

---

ALFIE KOHN

---

*ALFIE KOHN is an independent scholar living in Cambridge, Mass., who writes and lectures widely on human behavior and education. His newest book is Punished by Rewards: The Trouble with Gold Stars, Incentive Plans, A's, Praise, and Other Bribes (Houghton Mifflin, October 1993). ©1993, Alfie Kohn.*

---

**I**N THE COURSE of offering some suggestions for how educators can help children become more generous and empathic ("Caring Kids: The Role of the Schools," March 1991), I argued that manipulating student behavior with either punishments or rewards is not only unnecessary but counterproductive. Paul Chance, taking exception to this passage, wrote to defend the use of rewards (Backtalk, June 1991). Now, following the publication of his longer brief for behaviorism ("The Rewards of Learning," November 1992), it is my turn to raise some questions — and to continue what I hope is a constructive

dialogue between us (not to mention a long overdue examination of classroom practices too often taken for granted).

To begin, I should mention two points where our perspectives converge. Neither of us favors the use of punishment, and both of us think that rewards, like other strategies, must be judged by their long-term effects, including what they do for (or to) children's motivation. Chance and I disagree, however, on the nature of those effects.

Rewards, like punishments, can usually get people to do what we want for a while. In that sense, they "work." But my reading of the research, corroborated by real-world observation, is that rewards can never buy us anything more than short-term compliance. Moreover, we — or, more accurately, the people we are rewarding — pay a steep price over time for our reliance on extrinsic motivators.

---

## REWARDS ARE INHERENTLY CONTROLLING

Applied behaviorism, which amounts to saying, "Do this and you'll get that," is essentially a technique for controlling people. In the classroom, it is a way of doing things *to* children rather than working *with* them. Chance focuses on the empirical effects of rewards, but I feel obliged to pause at least long enough to stress that moral issues are involved here regardless of whether we ultimately endorse or oppose the use of rewards.

By now it is not news that reinforcement strategies were developed and refined through experiments on laboratory animals. Many readers also realize that underlying the practice of reinforcement is a theory — specifically, the assumption that humans, like all organisms, are

basically inert beings whose behavior must be elicited by external motivation in the form of carrots or sticks. For example, Alyce Dickinson, the author Chance cites six times and from whom he borrows the gist of his defense of rewards, plainly acknowledges the central premise of the perspective she and Chance share, which is that "all behavior is ultimately initiated by the external environment."<sup>1</sup> Anyone who recoils from this theoretical foundation ought to take a fresh look at the real-world practices that rest on it.

I am troubled by a model of human relationship or learning that is defined by control rather than, say, persuasion or mutual problem solving. Because the reinforcements themselves are desired by their recipients, it is easy to miss the fact that using them is simply a matter of "control[ling] through seduction rather than force."<sup>2</sup> Rewards and punishments (bribes and threats, positive reinforcements and "consequences" — call them what you will) are not really opposites at all. They are two sides of the same coin. The good news is that our options are not limited to variations on the theme of behavioral manipulation.<sup>3</sup>

---

## REWARDS ARE INEFFECTIVE

The question of how well rewards *work*, apart from what they do to children's long-term motivation, is dispatched by Chance in a single sentence: "No one disputes the effectiveness of extrinsic rewards in teaching or in maintaining good discipline" (p. 203). I found myself re-reading the paragraph in which this extraordinary claim appears, searching for signs that Chance was being ironic.

In point of fact, the evidence over-

reconstructed behaviorists — have gotten the message that, on most tasks, a Skinnerian strategy is worse than useless: it is counterproductive.

#### REWARDS MAKE LEARNING LESS APPEALING

Even more research indicates that rewards also undermine *interest* — a finding with obvious and disturbing implications for the use of grades, stickers, and even praise. Here Chance concedes there may be a problem but, borrowing Dickinson's analysis, assures us that the damage is limited. Dickinson grants that motivation tends to decline when people are rewarded just for engaging in a task and also when they receive performance-contingent rewards — those "based on performance standards" (Dickinson) or "available only when the student achieves a certain standard" (Chance).

But Dickinson then proceeds to invent a new category, "success-contingent" rewards, and calls these innocuous. The term means that, when rewards are given out, "subjects are told they have received the rewards because of good performance." For Chance, though, a "success-contingent" reward is "given for good performance and might reflect either success or progress toward a goal" — a definition that appears to diverge from Dickinson's and that sounds quite similar to what is meant by "performance-contingent." As near as I can figure, the claim both Dickinson and Chance are making is that, when people come away thinking that they have done well, a reward for what they have achieved doesn't hurt. On this single claim rests the entire defense against the devastating charge that by rewarding students for their achievement we are leading them to see learning as a chore. But what does the research really say?

Someone who simply glances at the list of studies Dickinson offers to support her assertion might come away impressed. Someone who takes the time to read those studies will come away with a renewed sense of the importance of going straight to the primary source. It turns out that two of the studies don't even deal with rewards for successful performance.<sup>12</sup> Another one actually *disproves* the contention that success-contingent rewards are harmless: it finds that this kind of reward not only undermines intrinsic motivation but is more destructive than

The good news  
is that our  
options are not  
limited to variations  
on the theme  
of behavioral  
manipulation.

other hand, you think that our actions reflect and emerge from who we *are* (what we think and feel, expect and will), then you have no reason to expect interventions that merely control actions to work in the long run.

As for the effect on performance, I know of at least two dozen studies showing that people expecting to receive a reward for completing a task (or for doing it successfully) don't perform as well as those who expect nothing. The effect is robust for young children, older children, and adults; for males and females; for rewards of all kinds (including money, grades, toys, food, and special privileges). The tasks in these studies range from memorizing facts to engaging in creative problem solving, from discriminating between similar drawings to designing collages. In general, the more cognitive sophistication and open-ended thinking required, the worse people do when they are working for a reward.<sup>9</sup>

At first researchers didn't know what to make of these findings. (A good sign that one has stumbled onto something important is the phrase "contrary to hypothesis" in a research report.) "The clear inferiority of the reward groups was an unexpected result, unaccountable for by theory or previous empirical evidence," a pair of experimenters confessed in 1961.<sup>10</sup> Rewards "have effects that interfere with performance in ways that we are only beginning to understand," said Janet Spence (later president of the American Psychological Association) in 1971.<sup>11</sup> Since then, most researchers — with the exception of a small cadre of un-

whelmingly demonstrates that extrinsic rewards are ineffective at producing lasting change in attitudes or even behaviors. Moreover, they typically do not enhance and often actually impede — performance on tasks that are any more complex than pressing a bar. This evidence, which I have been sorting through recently for a book-length treatment of these issues (*Punished by Rewards*, scheduled for publication this fall), is piled so high on my desk that I fear it will topple over. I cannot review all of it here; a few samples will have to do.

Consider first the matter of behavior change. Even behaviorists have had to concede that the token economy, a form of behavior modification once (but, mercifully, no longer) popular for controlling people in institutions, doesn't work. When the goodies stop, people go right back to acting the way they did before the program began.<sup>4</sup> Studies have found that rewarding people for losing weight,<sup>5</sup> quitting smoking,<sup>6</sup> or using seat belts<sup>7</sup> is typically less effective than using other strategies — and often proves worse than doing nothing at all.

Children whose parents make frequent use of rewards or praise are likely to be less generous than their peers.<sup>8</sup> On reflection, this makes perfect sense: a child raised a treat for acting responsibly has been given no reason to keep behaving that way when there is no longer a reward to be gained for doing so. The implications for behavioristic classroom management programs such as Assertive Discipline, in which children are essentially bribed or threatened to conform to rules that the teacher alone devises, are painfully clear.

Rewards (like punishments) can get people to do what we want in the short term: buckle up, share a toy, read a book. In that sense, Chance is right that their effectiveness is indisputable. But they rarely produce effects that survive the rewards themselves, which is why behaviorists are placed in the position of having to argue that we need to keep the goodies coming or replace one kind of reward with another (e.g., candy bars with grades). The fact is that extrinsic motivators do not alter the attitudes that underlie our behaviors. They do not create an enduring *commitment* to a set of values or to learning; they merely, and temporarily, change what we do. If, like Skinner, you think there is nothing to humans other than what we do, then this criticism will not trouble you. If, on the

#### 4. LEARNING AND INSTRUCTION: Behavioristic Learning

rewards given just for engaging in the task!<sup>13</sup>

The rest of the studies cited by Dickinson indicate that some subjects in laboratory experiments who receive success-contingent rewards are neither more nor less interested in the task than those who get nothing at all. But Dickinson curiously omits a number of *other* studies that are also set up so that some subjects succeed (or think they succeed) at a task and are presented with a reward. These studies have found that such rewards *do* reduce interest.<sup>14</sup>

Such a result really shouldn't be surprising. As Edward Deci and his colleagues have been pointing out for years, adults and children alike chafe at being deprived of a sense of self-determination. Rewards usually feel controlling, and rewards contingent on performance ("If you do a good job, here's what I'll give you") are the most controlling of all. Even the good feeling produced by doing well often isn't enough to overcome that fact. To the extent that information about how well we have done is interest-enhancing, this is not an argument for Skinnerian tactics. In fact, when researchers have specifically compared the effects of straightforward performance feedback ("Here's how you did") and performance-contingent rewards ("Here's a goody for doing well"), the latter undermined intrinsic motivation more than the former.<sup>15</sup>

Finally, even if all the research really did show what Dickinson and Chance claim it does, remember that outside of the laboratory people often fail. That result is more likely to be de-motivating when it means losing out on a reward, such as an A or a bonus. This Chance implicitly concedes, although the force of the point gets lost: students do not turn off from failing *per se* but from failing when a reward is at stake. In learning contexts free of extrinsic motivators, students are more likely to persist at a task and to remain interested in it even when they don't do it well.

All of this means that getting children to think about learning as a way to receive a sticker, a gold star, or a grade — or, even worse, to get money or a toy for a grade, which amounts to an extrinsic motivator for an extrinsic motivator — is likely to turn learning from an end into a means. Learning becomes something that must be gotten through in order to receive the reward. Take the depressingly pervasive program by which children receive certificates for free pizza when they

have read a certain number of books. John Nicholls of the University of Illinois comments, only half in jest, that the likely consequence of this program is "a lot of fat kids who don't like to read."

Educational psychologists such as Nicholls, Carol Dweck, and Carole Ames keep finding that when children are led to concentrate on their performance, on how well they are doing — an inevitable consequence of the use of rewards or punishments — they become less interested in *what* they are doing. ("Do we have to know this? Will it be on the test?") I am convinced that one of the primary obligations of educators and parents who want to promote a lasting commitment to learning is to do everything in their power to help students forget that grades exist.

#### REWARDS IGNORE CURRICULAR QUESTIONS

One last point. Chance's defense of the Skinnerian status quo might more properly have been titled "The Rewards for Learning." My interest is in the rewards of learning, a concern that requires us to ask whether we are teaching something *worth* learning. This is a question that behaviorists do not need to ask; it is enough to devise an efficient technique to reinforce the acquisition of whatever happens to be in someone's lesson plan.

Chance addresses the matter of intrinsic motivation just long enough to dismiss it as "too remote to be effective." He sets up a false dichotomy, with an abstract math problem on one side (Why would a child be motivated to learn that  $7 + 3 = 10$ ? he wants to know) and reinforcements (the solution to this problem) on the other. Indeed, if children are required to fill in an endless series of blanks on worksheets or to memorize meaningless, disconnected facts, they may *have* to be bribed to do so. But Chance seems oblivious to exciting developments in the field of education: the whole-language movement, the emphasis on "learner-centered" learning, and the entire constructivist tradition (in which teaching takes its cue from the way each child actively constructs meaning and makes sense of the world rather than treating students as passive responders to environmental stimuli).

I invite Chance to join the campaign for an engaging curriculum that is connected to children's lives and interests, for an approach to pedagogy in which students

are given real choices about their studies, and for classrooms in which they are allowed and helped to work with one another. Pursuing these approaches, by manipulating children with artificial incentives, offers a *real* alternative to boredom in school and to diminished motivation when school lets out.

1. Alyce M. Dickinson, "The Detrimental Effects of Extrinsic Reinforcement on Intrinsic Motivation," *The Behavior Analyst*, vol. 12, 1989, p. 12. Notice the quotation marks around "intrinsic motivation," as if to question the very existence of the phenomenon — a telltale sign of Skinnerian orthodoxy.

2. Edward L. Deci and Richard M. Ryan, *Intrinsic Motivation and Self-Determination in Human Behavior* (New York: Plenum, 1985), p. 70.

3. Behaviorists are apt to rejoin that control is an unavoidable feature of all relationships. In response I would point out that there is an enormous difference between saying that even subtle reinforcements can be controlling and asserting that all human interaction is best described as an exercise in control. The latter takes on faith that selfhood and choice are illusions and that we do only what we have been reinforced for doing. A far more defensible position, it seems to me, is that some forms of human interaction are controlling and some are not. The line might not be easy to draw in practice, but the distinction is still meaningful and important.

4. "Generally, removal of token reinforcement results in decrements in desirable responses and a return to baseline or near-baseline levels of performance," as the first major review of token economies concluded. In fact, not only does the behavior "to generalize to conditions in which [rewards] are not in effect" — such as the *work* outside the hospital — but reinforcement programs used each morning generally don't even have much effect on patients' behavior during the afternoon! See Alan E. Kazdin and Richard R. Bootzin, "The Token Economy: An Evaluative Review," *Journal of Applied Behavior Analysis*, vol. 5, 1972, pp. 359-60. Ten years later, one of these authors — an enthusiastic proponent of behavior modification, incidentally — checked back to see if anything had changed. "As a general rule," he wrote, with an almost audible sigh, "it is still prudent to assume that behavioral gains are likely to be lost in varying degrees once the client leaves the program." See Alan E. Kazdin, "The Token Economy: A Decade Later," *Journal of Applied Behavior Analysis*, vol. 15, 1982, pp. 435-37. Others reviewing the research on token economies have come to more or less the same conclusion.

5. The only two studies I am aware of that looked at weight loss programs to see what happened when people were paid for getting slimmer found that the incentives either had no effect or were actually counterproductive. See Richard A. Diemstrier and Gary K. Leak, "Overjustification and Weight Loss: The Effects of Monetary Reward," paper presented at the annual meeting of the American Psychological Association, Washington, D.C., September 1976; and F. Matthew Kramer et al., "Maintenance of Successful Weight Loss Over 1 Year: Effects of Financial Contracts for Weight Maintenance or Participation in Skills Training," *Behavior Therapy*, vol. 17, 1986, pp. 295-301.

6. A very large study, published in 1991, recruited subjects for a self-help program designed to help people quit smoking. Three months later, *no* had been offered a prize for turning in weekly prog-

ness reports were lighting up again more often than were those who had received a no-reward treatment — and even more than those who didn't take part in any program at all. In fact, for people who received both treatments, "the financial incentive show diminished the positive impact of the personalized feedback." See Susan J. Curry et al., "Evaluation of Intrinsic and Extrinsic Motivation Interventions with a Self-Help Smoking Cessation Program," *Journal of Consulting and Clinical Psychology*, vol. 59, 1991, p. 323.

7. A committed behaviorist and his colleagues reviewed the effects of 28 programs used by nine different companies to get their employees to use seat belts. Nearly half a million vehicle observations were made over six years in the course of this research. The result: programs that rewarded people for wearing their seat belts were the least effective over the long haul. The author had to confess that "the greater impact of the no-reward strategies from both an immediate and [a] long-term perspective . . . [was] not predicted and [is] inconsistent with basic reinforcement theory." See E. Scott Geller et al., "Employer-Based Programs to Motivate Safety Belt Use: A Review of Short-Term and Long-Term Effects," *Journal of Safety Research*, vol. 18, 1987, pp. 1-17.

8. Richard A. Fabes et al., "Effects of Rewards on Children's Prosocial Motivation: A Socialization Study," *Developmental Psychology*, vol. 25, 1989, pp. 509-15. Praise appears to have a similar detrimental effect; see Joan E. Grusec, "Socializing Concern for Others in the Home," *Developmental Psychology*, vol. 27, 1991, pp. 338-42. See also the studies reviewed in Alfie Kohn, *The Brighter Side of Human Nature: Altruism and Empathy in Everyday Life* (New York: Basic Books, 1990), pp. 201-4.

9. A complete bibliography will be available in my forthcoming book, *Punished by Rewards*. Readers unwilling to wait might wish to begin by reading Mark R. Lepper and David Greene, eds., *The Hidden Costs of Rewards* (Hillsdale, N.J.: Erlbaum, 1978), and some of Teresa Amabile's work from the 1980s documenting how rewards kill creativity.

10. Louise Brightwell Miller and Betsy Worth Estes, "Monetary Reward and Motivation in Discrimination Learning," *Journal of Experimental Psychology*, vol. 61, 1961, p. 503.

11. Janet Taylor Spence, "Do Material Rewards Enhance the Performance of Lower-Class Children?," *Child Development*, vol. 42, 1971, p. 1469.

12. In one of the studies, either money or an award was given to children just for taking part in the experiment — and both caused interest in the task to decline. See Rosemarie Anderson et al., "The Undermining and Enhancing of Intrinsic Motivation in Preschool Children," *Journal of Personality and Social Psychology*, vol. 34, 1976, pp. 915-22. In the other, a total of three children were simply praised ("good," "nice going") whenever they engaged in a task; no mention was made of how well they were performing. See Jerry A. Martin, "Effects of Positive and Negative Adult-Child Interactions on Children's Task Performance and Task Preferences," *Journal of Experimental Child Psychology*, vol. 23, 1977, pp. 493-502.

13. Michael Jay Weiner and Anthony M. Mander, "The Effects of Reward and Perception of Competency upon Intrinsic Motivation," *Motivation and Emotion*, vol. 2, 1978, pp. 67-73.

14. Chance doesn't like Deci's 1971 study, but there are plenty of others. In David Greene and Mark R. Lepper, "Effects of Extrinsic Rewards on Children's Subsequent Intrinsic Interest," *Child Development*,

vol. 45, 1974, pp. 1141-45, children who were promised a reward if they drew very good pictures — and then did receive the reward, along with a reminder of the accomplishment it represented — were less interested in drawing later than were children who got nothing. See also James Garbarino, "The Impact of Anticipated Reward upon Cross-Age Tutoring," *Journal of Personality and Social Psychology*, vol. 32, 1975, pp. 421-28; Terry D. Orlick and Richard Mosher, "Extrinsic Awards and Participant Motivation in a Sport Related Task," *International Journal of Sport Psychology*, vol. 9, 1978, pp. 27-39; Judith M. Harackiewicz, "The Effects of Reward Contingency and Performance Feedback on Intrinsic Motivation," *Journal of Personality and Social Psychology*, vol. 37, 1979, pp. 1352-63; and Richard A. Fabes, "Effects of Reward Contexts on Young Children's Task Interest," *Journal of Psychology*, vol. 121, 1987, pp. 5-19. See too the studies cited in, and conclusions offered by, Kenneth O. McGraw, "The Detrimental Effects of Reward on Performance: A Literature Review and a Prediction Model," in Lepper and Greene, eds., p. 40; Mark R. Lepper, "Extrinsic Reward and Intrinsic Motivation," in John M. Levine and Margaret C. Wang, eds., *Teacher and Student Perceptions: Implications for Learning* (Hillsdale, N.J.: Erlbaum, 1983), pp. 304-5; and Deci and Ryan, p. 78.

15. Richard M. Ryan et al., "Relation of Reward Contingency and Interpersonal Context to Intrinsic Motivation: A Review and Test Using Cognitive Evaluation Theory," *Journal of Personality and Social Psychology*, vol. 45, 1983, pp. 736-50. "Rewards in general appear to have a controlling significance to some extent and thus in general run the risk of undermining intrinsic motivation," the authors wrote (p. 748).