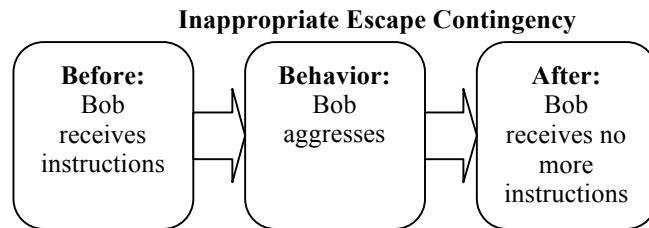


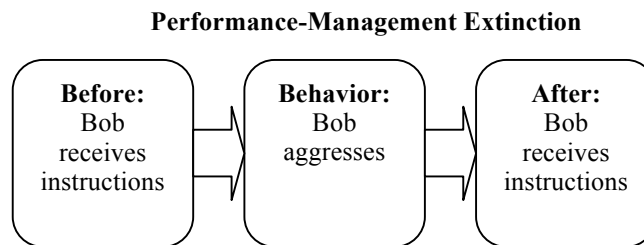
AGGRESSION¹

“Bob, sit in your chair. I said, sit down . . . Don’t you hear me? *Sit down!*” Fourteen-year-old Bob jumped at the teacher, hitting him, scratching him, biting him, and kicking him—drawing blood and bruising the teacher’s arms and legs. After his assault, Bob sat on the floor in his favorite corner of the classroom for mentally handicapped children. For the last 9 years, Bob had attacked adults and sometimes a child. Nothing helped. The medical doctors had failed, with their heavy-duty drugs like the major tranquilizers Thorazine, Stelazine, and Mellaril. Nothing cooled out Bob’s aggression. So behavior analyst Dr. Edward Carr and his associates came on the scene.

We know behavior results from reinforcement contingencies. But what reinforced Bob’s aggressive attacks? The behavior analysts tried to answer that question first. They guessed that stopping the teacher’s instructions reinforced Bob’s aggression. In other words, reinforcement by the removal of an aversive condition—escape.



Now they needed to test their guess—to find out if Bob’s aggression really was an escape response from adult instructions. They would use extinction of the escape response; they would no longer allow Bob to escape instructions by aggressing.



A dangerous task! The behavior analyst working directly with Bob needed to protect himself. So he wore a thick corduroy coat and rubber gloves during the 5-minute observation sessions. He sat facing Bob’s chair; the other two behavior analysts sat safely on the opposite side of the room, recording the frequency of Bob’s aggression.

They required that Bob sit in the chair. Whenever he raised himself 3 inches off the chair, the behavior analyst facing Bob would say, “Sit down,” and physically would prompt this response, if needed. That was enough to cause Bob to kick, hit, bite, and scratch more than 120 times in each 5-minute session. But in conditions where the behavior analyst made no requests, Bob did not aggress at all; instead, he spontaneously sat on the floor in one corner of the room. It looked more and more as if Bob’s aggression was an escape response from instructions.

The behavior analysts used the extinction procedure to get rid of Bob’s aggression so he could function well in a regular class. The behavior analysts working directly with Bob still wore protective clothing during each 1-hour extinction session, though they fastened Bob to his chair with a seat belt across his thighs in order to keep him in place.

“Sit down,” the behavior analyst said. (*These instructions were aversive for Bob.*) And Bob, as usual, hit, kicked, bit, and scratched as much as the seat belt allowed. (*He made his escape response.*) “Sit down, sit down, sit down,” the behavior analyst kept repeating while Bob aggressed. (*They were no longer reinforcing the escape response; they were no longer stopping the instructions; they were extinguishing the escape response.*) He aggressed over 500 times in each of the first 3 sessions; but after 5 grueling hours of this procedure, Bob emitted only one or two aggressive acts per session (Figure 6.6-in the book). (*His aggressive behavior had extinguished.*)

¹ Based on Carr, E., Newsom, C. D., & Binkoff, J. (1980). Escape as a factor in the aggressive behavior of two retarded children. *Journal of Applied Behavior Analysis*, 13, 101–118.

But a seat belt and protective gloves are not appropriate for a regular class. So the behavior analysts slowly made the intervention conditions more like a regular class. They removed the seat belt first, the coat second, and the gloves third. They also reinforced compliance to instructions; eventually, they would say, “Do this.” Then, for example, a behavior analyst would clap his hands, and they would praise Bob’s compliance or prompt the correct response when he didn’t comply. By the end of this intervention, Bob responded correctly to instructions 97% of the time, and his aggression dropped to nearly 0. This was extinction of a response that escape from an aversive condition had reinforced.

QUESTIONS

1. As always, when you see contingency diagrams in the text, be able to reproduce and explain them—in this case, it’s the inappropriate contingency and the performance-management contingency.
2. How did the behavior analysts make the conditions of their intervention more similar to the conditions of the regular class?

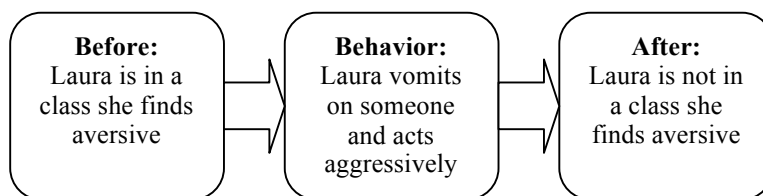
Example of Two Types of Extinction
Behavioral Medicine

A MENTALLY HANDICAPPED CHILD’S VOMITING²

Nine-year-old Laura could not speak. Physicians diagnosed her as “suffering from mental retardation, cerebral palsy, aphasia, hyperirritability, and brain damage.” She entered the Rainier School, an institution for the retarded in the state of Washington. When Laura arrived, she had a strange tendency to vomit frequently, but within a few weeks, her vomiting decreased to once or twice a month. Soon everybody forgot the vomiting. After 6 months at the school, Laura started a class that met every day. A month later, she began vomiting occasionally in class, and within 3 months, she vomited nearly every day. Laura became a markswoman with her vomiting. Her favorite targets included the teacher’s desk and the table where other members of the class sat.

Each time she vomited, Laura also screamed, tore her clothes, and destroyed nearly everything she could. She often vomited on her dress; whenever this happened the teacher took her back to the residence hall.

Dysfunctional Escape Contingency

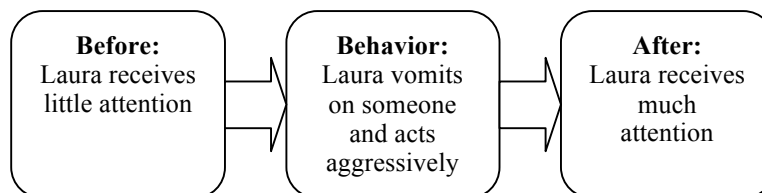


Physicians used drug therapy, but it didn’t help. After 3 months, the teacher permanently excused Laura from class because of her vomiting.

Two months later, a brave teacher volunteered to take Laura into her class with the idea that Dr. Montrose Wolf and his colleagues would help her, because a physician said medical factors hadn’t caused Laura’s vomiting.

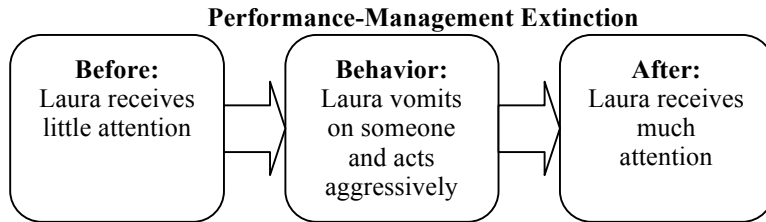
People often assume that reinforcement cannot control vomiting; but Dr. Wolf decided to see if it could. He guessed that the consequences of vomiting reinforced Laura’s vomiting. As you can well imagine, her vomiting attracted attention even in an institution for the mentally handicapped, where bizarre behavior is the rule.

Dysfunctional Reinforcement Contingency



² Based on Wolf, M., Burnbrauer, J., Williams, T., & Lawler, M. (1965). A note on apparent extinction of the vomiting behavior of a retarded child. In L. P. Ullmann & L. Krasner (Eds.), *Case studies in behavior modification* (pp. 364–366). New York: Holt, Rinehart & Winston.

Dr. Wolf and his colleagues decided to stop the special attention everybody paid her and to stop taking her from the classroom, because that might be reinforcing the vomiting. The only attention following her vomiting was the removal of her mess as soon as possible.

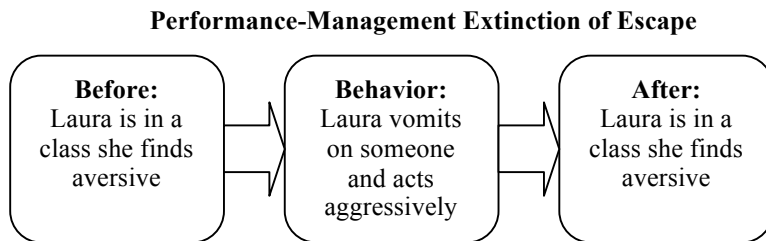


At the beginning of the extinction procedure, Laura vomited many times in each daily, 1½ hour class. The frequency of vomiting was so great that, in one class, she vomited 21 times (behavior may at first increase in frequency during extinction, especially aggressive behavior). The teacher who put up with this to help Laura deserved the humanitarian-of-the-year award. By the end of 30 days, the frequency of vomiting had gradually decreased to zero. Surely, that teacher felt relieved when the vomiting had finally extinguished.

Notice that Dr. Wolf’s intervention involved the combination of two extinction procedures. One extinction procedure involved breaking a reinforcement contingency. Attention produced by Laura’s vomiting might have reinforced such undesirable behavior. So, in extinction, Laura’s vomiting no longer resulted in the presentation of the reinforcer—attention.

The other extinction procedure involved breaking an escape contingency. Being in class might have been an aversive condition for Laura. And vomiting ended this aversive condition when the staff removed her from the class—an escape contingency.

But during extinction, vomiting no longer resulted in removal from class. In the next section, we’ll look more at extinction following escape reinforcement.



QUESTIONS

1. Diagram a dysfunctional reinforcement contingency and a dysfunctional escape contingency that might maintain vomiting.
2. Also diagram the relevant performance-management escape contingencies.