A couple who had been living together for three years began to fight frequently. The issues of disagreement ranged from who was going to do the dishes to the quality of their love life.

Disturbed, the couple went to a behavior analyst, a psychologist who specialized in behavior-modification techniques. He asked them to keep a detailed written record of their interactions over the next two weeks.

When they returned with the data, he carefully reviewed the records with them. In doing so, he noticed a pattern: Each of their arguments had occurred just after one or the other had left a household chore undone, such as leaving dirty dishes in the sink or draping clothes on the only chair in the bedroom.

Using the data the couple had collected, the behavior analyst asked them to list all the chores that could possibly arise and assign each one a point value depending on how long it took to complete. Then he had them divide the chores equally and agree in a written contract to fulfill the ones assigned to them. If either failed to carry out one of the assigned chores, he or she would have to place $1 per point in a fund for the other to spend. They also agreed to a program of verbal praise, promising to reward each other verbally for completing a chore.

The couple agreed to try it for a month and to keep careful records of the number of arguments they had during that period. To their surprise, the number declined rapidly.

This case provides an illustration of behavior modification, a formalized technique for promoting the frequency of desirable behaviors and decreasing the incidence of unwanted ones. Using the basic principles of learning theory, behavior-modification techniques have proved to be helpful in a variety of situations. People with severe mental retardation have, for the first time in their lives, started dressing and feeding themselves. Behavior modification has also helped people lose weight, give up smoking, and behave more safely (Wadden, Crerand, & Brock, 2006; Delinsky, Latner, & Wilson, 2006; Ntinas, 2007).

The techniques used by behavior analysts are as varied as the list of processes that modify behavior. They include reinforcement scheduling, shaping, generalization training, discrimination training, and extinction. Participants in a behavior-change program do, however, typically follow a series of similar basic steps that include the following:

- **Identifying goals and target behaviors.** The first step is to define desired behavior. Is it an increase in time spent studying? A decrease in weight? An increase in the use of language? A reduction in the amount of aggression displayed by a child? The goals must be stated in observable terms and must lead to specific targets. For instance, a goal might be “to increase study time,” whereas the target behavior would be “to study at least two hours per day on weekdays and an hour on Saturdays.”
- **Designing a data-recording system and recording preliminary data.** To determine whether behavior has changed, it is necessary to collect data before any changes are made in the situation. This information provides a baseline against which future changes can be measured.
- **Selecting a behavior-change strategy.** The most crucial step is to select an appropriate strategy. Because all the principles of learning can be employed to bring about behavior change, a “package” of treatments is normally used. This might include the systematic use of positive reinforcement for desired behavior (verbal praise or something more tangible, such as food), as well as a program of extinction for undesirable behavior (ignoring a child who throws a tantrum). Selecting the right reinforcers is critical, and it may be necessary to experiment a bit to find out what is important to a particular individual.
• **Implementing the program.** Probably the most important aspect of program implementation is consistency. It is also important to reinforce the intended behavior. For example, suppose a mother wants her son to spend more time on his homework, but as soon as he sits down to study, he asks for a snack. If the mother gets a snack for him, she is likely to be reinforcing his delaying tactic, not his studying.

• **Keeping careful records after the program is implemented.** Another crucial task is record keeping. If the target behaviors are not monitored, there is no way of knowing whether the program has actually been successful.

• **Evaluating and altering the ongoing program.** Finally, the results of the program should be compared with baseline, pre-implementation data to determine its effectiveness. If the program has been successful, the procedures employed can be phased out gradually. For instance, if the program called for reinforcing every instance of picking up one’s clothes from the bedroom floor, the reinforcement schedule could be modified to a fixed-ratio schedule in which every third instance was reinforced. However, if the program has not been successful in bringing about the desired behavior change, consideration of other approaches might be advisable.

Behavior-change techniques based on these general principles have enjoyed wide success and have proved to be one of the most powerful means of modifying behavior. Clearly, it is possible to employ the basic notions of learning theory to improve our lives.

**RECAP/EVALUATE/RETHINK**

**RECAP**

What is the role of reward and punishment in learning?

- Operant conditioning is a form of learning in which a voluntary behavior is strengthened or weakened. According to B. F. Skinner, the major mechanism underlying learning is reinforcement, the process by which a stimulus increases the probability that a preceding behavior will be repeated. (p. 185)

- Primary reinforcers are rewards that are naturally effective without prior experience because they satisfy a biological need. Secondary reinforcers begin to act as if they were primary reinforcers through association with a primary reinforcer. (p. 187)

- Positive reinforcers are stimuli that are added to the environment and lead to an increase in a preceding response. Negative reinforcers are stimuli that remove something unpleasant from the environment, also leading to an increase in the preceding response. (p. 187)

- Punishment decreases the probability that a prior behavior will occur. Positive punishment weakens a response through the application of an unpleasant stimulus, whereas negative punishment weakens a response by the removal of something positive. In contrast to reinforcement, in which the goal is to increase the incidence of behavior, punishment is meant to decrease or suppress behavior. (p. 188)

- Schedules and patterns of reinforcement affect the strength and duration of learning. Generally, partial reinforcement schedules—in which reinforcers are not delivered on every trial—produce stronger and longer-lasting learning than do continuous reinforcement schedules. (p. 190)

- Among the major categories of reinforcement schedules are fixed- and variable-ratio schedules, which are based on the number of responses made; and fixed- and variable-interval schedules, which are based on the time interval that elapses before reinforcement is provided. (p. 191)

- Stimulus control training (similar to stimulus discrimination in classical conditioning) is reinforcement of a behavior in the presence of a specific stimulus but not in its absence. In stimulus generalization, an organism learns a response to one stimulus and then exhibits the same response to slightly different stimuli. (p. 192)

- Shaping is a process for teaching complex behaviors by rewarding closer and closer approximations of the desired final behavior. (p. 194)

- There are biological constraints, or built-in limitations, on the ability of an organism to learn: Certain behaviors will be relatively easy for individuals of a species to learn, whereas other behaviors will be either difficult or impossible for them to learn. (p. 194)

What are some practical methods for bringing about behavior change, both in ourselves and in others?

- Behavior modification is a method for formally using the principles of learning theory to promote the frequency of desired behaviors and to decrease or eliminate unwanted ones. (p. 196)