TECHNIQUES BASED ON OPERANT CONDITIONING

Contingency Management

Contingencies are the "if, then ..." statements that, according to behavioral therapists, govern our behavior. So if the goal is to change behavior, a powerful way to do so is to change the contingencies controlling it. Behavioral psychotherapists call this process **contingency management.** All behavior occurs because of its consequences, and if those consequences change, the behavior will change correspondingly (Drossel, Garrison- Diehn, &. Fisher, 2008; Kearney &. Vecchio, 2002; Villamar, Donahue, &. Allen, 2008). Behaviorists emphasize that powerful but often overlooked contingencies—for example, "If I behave in a depressed way, I get attention from friends and family and I am excused from responsibilities"—can contribute to the development and maintenance of mental disorders (e.g., Anderson, 2007).

Extinction

When behavior therapists consider the contingencies that have maintained a behavior or new contingencies that may modify it, they often pay close attention to issues involving extinction. In the context of contingency management, **extinction** refers

to the removal of an expected reinforcement that results in a decrease in the frequency of a behavior (Kearney &. Vecchio, 2002; Poling, Ehrhardt, & Jennings, 2002; Sturmey et al., 2007).

As an example, consider Wendy, an 8-year-old second grader whose parents brought her to Dr. Evans, a clinical psychologist with a behavioral orientation. Wendy's parents explained that in the past 2 weeks, Wendy had become extremely difficult at meal times: She cried and screamed about the food that had been prepared, saying that she didn't like it and it made her stomach hurt. Wendy's parents expressed confusion at her behavior, specifically because it was the same food she had eaten many times before, and they had taken her to her pediatrician who assured them that Wendy had no stomach ailments. When Dr. Evans asked Wendy's parents what happened after Wendy cried and screamed at meal times, they explained that they typically allowed her to eat something else. When Dr. Evans inquired further, the parents added that they allowed Wendy to choose any food she wanted, and Wendy usually selected her favorite junk food. Dr. Evans developed a contingency management plan based on extinction. His conceptualization was that Wendy's crying and screaming behavior was being positively reinforced by the junk food she

received after doing so. He explained this conceptualization to Wendy's parents and recommended that they remove those positive reinforcements—in other words, don't let her replace the family meal with junk food. They did, and although her behavior initially got worse, within a few days, Wendy stopped crying and screaming at meal time and resumed eating with her family as she had previously.

Wendy's case exemplifies an important aspect of extinction-based therapies: the **extinction burst** (Kazdin, 1980; Poling, Ehrhardt, &.Jennings, 2002; Spiegler & Guevremont, 2010). Immediately after the reinforcement was removed, Wendy's crying and screaming actually increased—she did it more often and more intensely. Only after her parents "stood their ground" by continuing to withhold the reinforcement did Wendy's crying and screaming dwindle. It is important for behavior therapists and those working with them to anticipate the extinction burst that predictably occurs immediately after the removal of the reinforcement; otherwise, the person controlling the contingency might mistakenly think that the strategy is backfiring and resume the reinforcement again. If Wendy's parents had done this—if they had given in to her especially intense fits on the first days of the extinction process—they

would have taught Wendy that if she ups the ante, she can still get what she wants. This would have strengthened, rather than extinguished, her crying and screaming behavior.

Token Economies

A **token economy** is a setting in which clients earn tokens for participating in predetermined target behaviors (Ghezzi, Wilson, Thrbox, &. MacAlesse, 2008). These tokens can be exchanged for a number of reinforcements, including food, games, toys, privileges, time participating in a desired activity, or anything else deemed desirable by the client. In some token economies, clients can also lose tokens for engaging in undesired behaviors (Stuve & Salinas, 2002). Tbken economies are used most often in settings such as inpatient units, correctional facilities, and other sites where clients' behavior is under ongoing surveillance by supervisory staff. A strength of token economies is their versatility across clients. For example, on a psychiatric inpatient unit, different target behaviors may be identified for each client. One client may earn tokens for making the bed, another for taking a shower, and another for interacting with a group rather than staying alone. Of course, the success of the token economy depends on the perceived value of the reinforcements for which the tokens can be

exchanged, so behavioral therapists are careful to select reinforcements that will motivate each client. If you have ever spent any time in Dave and Buster's or Chuck E. Cheese's, you're familiar with the fact that the same "prize" may be valued very differently by different people. When you were 6 years old, you might have spent a lot of time, energy, and money earning enough tokens (tickets) to exchange for stuffed animals, plastic toys, or candy. Today, you might not find those prizes quite as motivating, and your behavior would decrease accordingly. Likewise, a poker chip may not have meant much to you when you were 6, but now, you may have a greater appreciation for its value as a token exchangeable for money (which itself is exchangeable for many reinforcements).

A potential limitation of token economies involves generalization (Spiegler &. Guevremont, 2010). As discussed above, generalization refers to the application of a learned contingency to similar behaviors or situations. The goal of any token economy is not only to modify behavior in that environment but to modify it across all settings. For example, the psychiatric inpatients mentioned in the preceding paragraph would ideally apply thelessons learned about bed making, bathing, and socializing to the outside world in addition to the psychiatric unit in which they temporarily live.

Behavior therapists can use a number of strategies to maximize generalization, including tapering clients off tokens gradually rather than all at once, using naturally occurring reinforcements (such as social praise) rather than artificial reinforcements, gradually increasing the delay between the behavior and the reinforcement, and providing reinforcement in as wide a variety of settings as possible (Stuve &. Salinas, 2002).

Shaping

Contingency management is often based on reinforcing target behaviors in order to increase their frequency. Sometimes, however, the target behavior is so complex, challenging, or novel for a client that, at the outset of treatment, it simply can't be done in its entirety. In these cases, behavioral therapists use **shaping,** which involves reinforcing successive approximations of the target behavior. Put another way, shaping is a technique in which the behavior therapist reinforces "baby steps" toward the desired behavior (Kazdin, 1980; Kearney & Vecchio, 2002; Sturmey et al., 2007).

As an example, consider Dina, a 59-year-old client with serious depressive symptoms. Since she began feeling depressed about 3 months ago, Dina has become increasingly

withdrawn. She has neither contacted any of her friends (of which she has many), nor has she returned their many calls. She has declined when her husband has asked her to go out to dinner, and she has refused invitations from her grown daughter to come to her house for a visit. Dr. Stein, Dina's clinical psychologist, conceptualizes Dina's problem from a behavioral point of view. That is, Dr. Stein has identified social behavior as the area for improvement and has specifically defined the goal as much more frequent social interactions for Dina: during each week, three phone cedis with friends, one dinner out with her husband, and one get-together with her daughter. Dr. Stein realizes, however, that Dina is far from that level of social functioning at the moment. If she waits for Dina to complete all these tasks in a particular week, the wait may be excessive. So Dr. Stein uses a shaping strategy. First, she determines jointly with Dina a personally meaningful reinforcement: renting a DVD. Then she establishes the contingency for the first week: If Dina completes at least one socialactivity (a call to a friend, dinner out with her husband, or a get-together with her daughter), then she can rent a DVD of her choice. The next week, Dr. Stein raises the bar: at least two social activities, one of which must be in person. Dr. Stein continues to raise the bar each week until Dina is completing the full set of target

behaviors for several consecutive weeks.

A key variable in any shaping program is the increment between each successive approximation. Behavior therapists must be careful not to make the steps between each new challenge too difficult for the client. By the same token, the steps should not be so small that therapy takes an unnecessarily long time. Thus, in Dina's case, Dr. Stein should adjust the amount by which she raises the bar if it is evident that Dina finds the tasks either too easy or too hard.

Behavioral Activation

Behavioral activation is a form of behavior therapy designed to treat depression that has received significant attention in recent years. It is based on the simple yet profound notion that in the day-to-day lives of depressed people, there is a shortage of positive reinforcement. So the goal of behavioral activation is to increase the frequency of behaviors that are positively reinforcing to the client. Clients therefore experience more positive emotions and become more fully engaged in their lives. Their tendencies to avoid unpleasant experiences diminish as their depression lifts (Dobson &. Dobson, 2009; Kanter, Busch, S. Rusch, 2009; Martell, 2008).

At the outset of behavioral activation, one of the most

important questions that the clinical psychologist can ask is, “Are there things that you are not doing now that you typically do when you are not depressed?” (Martell, 2009, p. 140). From the client’s response to such questions, the client and psychologist can collaborate to form a list of rewarding behaviors and a plan to integrate them into the client’s life. Often, clinicians help clients develop a structured routine to guide them through each day’s events. Martell (2009) highlights that it is important to understand the function of a behavior from the client’s point of view. In particular, it is crucial to know whether a client is engaging in a particular behavior because it brings positive reinforcement or enables the client to avoid something unpleasant. For example, a client may choose to go to the movie theater because the movie brings her pleasure or because doing so allows her to avoid an argument with her roommate about the overdue rent. From the point of view of the clinician conducting behavioral activation, the avoidance in the latter scenario is actually part of the problem, so if that is indeed the function of the behavior, an alternative behavior should be used instead.

It is clear that operant conditioning forms the basis of behavioral activation, but classical conditioning may play a role as well. In a manner that resembles the countercondi-

tioning in systematic desensitization (described earlier in this chapter), behavioral activation takes advantage of the fact that depression and reinforcing activities tire incompatible. In other words, behaviorists make the argument that it's impossible to feel the reinforcement of a favorite activity and feel depressed at the same time. In this way, behavioral activation is a method of planning and encouraging activities that bring pleasure and preclude depression (Martell, 2008, 2009).

Observational Learning (Modeling)

So far, all the clinical applications of operant conditioning that we have discussed involve clients learning directly from their own experiences. However, much of what we learn comes from contingencies we see applied to other people. This phenomenon is known as **observational learning** but has also been called modeling and social learning. As tin example of observational learning, briefly reconsider the broken soda machine scenario described in Box 14.2. If the soda machine stole the dollar of the person in front of you while you were waiting your turn, would you step up and put your dollar in next?

In clinical practice, observational learning is a technique in which the client observes a demonstration of the desired behavior and is given chances to imitate it (Freeman, 2002;

Spiegler & Guevremont, 2010). The client typically receives constructive feedback on these imitation efforts as well. The person acting as the model can be the therapist, another live model, or a model who has been video- or audio-recorded. The effects of modeling have been studied extensively by **Albert Bandura** and others (e.g., Bandura, 1977), producing a sizable body of knowledge regarding key variables in the modeling process. Among the findings are that models are most effective when they are similar to the client, an especially relevant point regarding client diversity in terms of cultural and demographic variables. For example, if Ana, a 19-year-old, homosexual, Hispanic, female college sophomore, is struggling with social skills, the success of an observational learning intervention may depend on the degree to which the model matches Ana in terms of age, sexual orientation, ethnicity, gender, and student status.

Observational learning strategies actually afford clients two different ways to learn. The first is **imitation,** in which the client simply mimics the modeled behavior. The second is **vicarious learning,** in which the client observes not only the modeled behavior but also the model receiving consequences for that modeled behavior. In other words, even without imitation, a client can learn to expect reinforcement or punishment for a target behavior by observing what the model

receives (Freeman, 2002). In the case of Ana, vicarious learning would take place if Ana observed the model initiating a conversation with an unknown person and receiving obvious feedback—a kind greeting, a snub, or a neutral response—as a consequence. Of course, Ana's behavior therapist would try to ensure to the extent feasible that when the desired response is modeled, it is followed by a reinforcement.