

# FUNCTIONAL BEHAVIORAL ASSESSMENT, DIAGNOSIS, AND TREATMENT

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A COMPLETE SYSTEM FOR EDUCATION  
AND MENTAL HEALTH SETTINGS

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and  
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## PREFACE

### PURPOSE OF THIS BOOK

This book provides a comprehensive approach to designing behavioral treatments for children in homes and residential facilities, students in special and general education settings, and adults residing in inpatient units and facilities. Providing effective behavioral treatment strategies in these settings requires a greater knowledge of behavioral assessment and intervention than simply identifying the target behavior! An understanding of the problem behavior's environmental function is essential in designing behavioral interventions. This book provides a comprehensive approach to functional behavioral assessment, function-based diagnostic classification of the target problem, and functional behavioral treatment.

How is a functional approach different from merely prescribing treatment based on the form of behavior? Let's say we have identified the following target behaviors for a student in a special education class for behavior disorders: aggressive behavior, noncompliance, and tantrum behaviors. Suppose behavioral assessment data reveal that all these behaviors occur when the student is asked to read a passage aloud. The child may initially refuse to read when called upon. If this is unsuccessful, as the teacher moves closer to the child to "coax" him, he then throws a tantrum. If the tantrum doesn't work, the teacher becomes more coercive. In the attempt to get him to read, he tries something else. Finally, he gets up and issues profanities about the assignment. By understanding that all these behaviors have the same environmental function, a functional treatment can address them as a response class. Further, one may be able to determine why such a task generates escape behavior with this child!

In the 21st century, selecting effective treatment for specific individual problem behaviors requires a greater understanding of the environmental function of problem behavior. This book addresses that need for a variety of potential users of behavioral technology. At the heart of this approach are the three phases: (1) a functional target behavior assessment (FTBA), (2) a function-based diagnostic classification of problem behavior, and (3) a functional behavior analytic treatment.

This functional approach is suited for cases in which the problem behavior(s) are primarily operant in nature. The rate of operant behaviors are determined by their consequences. In some cases, referred problems may be respondent in nature (e.g., crying due to extreme physical pain (see Bailey & Pyles, 1989, for greater delineation of these factors). In these cases, this system is not applicable, because the behavior may not be a function of any desired consequence (on the part of the client). Under these circumstances, it might be advisable to consult with a professional who may have experience with such problems, such as a behavioral psychologist or medical personnel.

### AUDIENCE

This book is primarily intended for personnel who design behavior programs for persons with challenging behaviors in a variety of settings, such as individual or group residences; public or private facilities; schools; hospital, community, or clinic settings; and inpatient

settings. This book should be helpful to people who are trained in applied behavior analysis (ABA) and just need some additional resource to guide them in their assessment and treatment design activities. The unique function-based diagnostic system detailed in Chapter 3 also makes this book an excellent text for students in graduate programs specializing in applied behavior analysis. In that regard, it is an excellent primary or supplemental text for an advanced course in ABA.

It also is written to serve personnel who have some familiarity with behavioral programs but have not discerned how to provide a functional behavioral treatment for specific functions of target problem behavior. The following areas are particularly pertinent for personnel having knowledge in functional behavior analytic treatments.

### **Personnel in Special Education**

This material is well suited to the needs of personnel in special education. The 2004 Federal re-authorization of the 1997 Individuals with Disabilities Education Act (IDEA) contained a number of provisions that have significantly altered the delivery of special education services. One of the provisions mandates that a functional assessment be conducted for students whose behavior jeopardizes the quality of their educational experience. Such legislation has set the occasion for school personnel to acquire skills in conducting such assessments. Unfortunately, there are many misconceptions about what a functional behavioral assessment (FBA) constitutes. This book, unlike other published materials, provides the reader from the field of special education with an understanding of basic principles and tenants of ABA, which forms the building blocks of an FBA and subsequent positive behavioral interventions. To not understand what constitutes an environmental contingency and its relationship to FBA is to be unprepared in conducting an FBA. Chapter 1 illustrates how basic principles of behavior analysis blend in with the three phases of functional behavior-analytic treatment.

### **Personnel Who Work in Inpatient Units and Residential Facilities**

The use of behavior analytic treatments is finding its way into inpatient units, residential facilities, and community settings for persons with severe mental illness, developmental disabilities, and sustained brain injury. Although there is no federal or state imperative requiring an FBA or functional behavioral intervention plan in these settings, simply designing arbitrary contingency interventions can lead to ineffective treatment or worse, disastrous treatment. Mental health providers in these settings who determine what the function of presenting problem behaviors serve will be able to be more capable in ameliorating behavior problems. The client's possible re-integration into mainstream settings will hinge on such progress.

### **Personnel Who Provide Parent Training/Consultation**

Parent training and consultation, from a behavioral framework, has been verified as an efficacious treatment for child problems in home settings. Unfortunately, talk therapy with children demonstrating behavioral problems is still the primary mode of intervention despite the lack of substantial evidence regarding efficacy in solving child behavior problems. Psychologists, psychiatrists, nurses, and other mental health providers should be providing technical behavioral assistance to parents who need specific help for problem behaviors (Cipani, 1999). This book provides such professionals with a resource for designing individualized functional behavioral treatment programs.

### **OVERVIEW OF BOOK**

This book is divided into five chapters. In chapter 1, material will be presented that will allow the reader to acquire the basics of an ABA approach to understanding human

behavior. Chapter 2 allows the user to develop skills in collecting the requisite behavioral data needed for an FBA. Each step of data collection is detailed with multiple examples of hypothetical data provided for the reader. Chapter 3 covers the four major categories of our unique function-based, diagnostic classification system for problem behavior. This function-based classification system provides a distinctive numbering system for delineating major diagnostic categories as well as sub-categories within each major category.

Chapter 4 covers the identification of the replacement behavior and the delineation of a number of replacement behavior options for each major function. In addition, a unique, three-category, classification system for determining the current strength of the replacement behavior(s) is presented in the Appendix. Chapter 5 provides a compendium of behavioral treatment protocols that match each replacement behavior option delineated. A hypothetical example taken from the previous chapters is used to illustrate how all the phases are linked in designing a functional treatment. Each functional treatment program follows a uniform format in Chapter 5. First, a brief description of the procedures involved are presented, as well as definitions of terms. Next, the procedures for collecting baseline data are delineated. The procedural components of the treatment are then presented. Lastly, a hypothetical example illustrating the application is presented.

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The functional behavioral diagnostic systems delineated in this text are an outgrowth of both authors' collective experience in clinical and teaching positions over a several-decade period. An earlier version of this system, called the Cipani Behavioral Assessment and Diagnostic (C-BAD) System had many behavior analysts who provided feedback and input into that system. Such feedback improved either the basic concepts presented in the current version and/or the instructional content. In particular, the authors would like to recognize Dr. Heidi Toro of the Florida Department of Children and Families, Dr. Merrill Winston of Professional Crisis Management, Dr. Steve Eversol of Behavior Development Solutions, and Mr. Chris Clay of the Community Re-Entry Program for their valuable suggestions to us over the years. Our association with them has allowed us to improve our analysis and presentation of the C-BAD system into its current form.

# 1

## BASIC CONCEPTS AND PRINCIPLES

### WHY DOES HE DO THAT?

Why does he do that? This is the age-old question. People ask this question when they see a child throw a “fit” in the store. Why does he behave like that? To date, an often-cited explanation of such undesirable behavior involves a hypothesis about the brain’s development in the child “afflicted” with such behavior. The underpinning of the undesirable tantrum behavior is hypothesized to be the result of some abnormality or underdevelopment of some part(s) of the brain. As further evidence of brain involvement, in some cases, such behavior along with other behaviors forms the basis for a mental disorder. Below is an excerpt from a hypothetical lecture in a Child Psychology class.

*Student:* Dr. Trait. I have a question. Why do some children have tantrums that are clearly inappropriate for their age?

*Dr. Trait:* The child throws the tantrum because he is immature for his age; his brain has not fully developed (in some hypothesized fashion). Once his brain matures, particularly the frontal lobe that is responsible for executive functioning, he will not respond to social situations in that manner. Until that point, we can expect this child to continue behaving in such a fashion because of his inability to process events adequately. Teenagers have a similar problem with brain immaturity when they behave impulsively. Their brain is not like the adult brain; hence, they too cannot be fully responsible for their impulsivity.

There are variations and extensions of this immature brain explanation. The following is the same conversation in a class in developmental psychology, with a slightly different explanation.

*Student:* In Dr. Trait’s class, we were told that children who have severe tantrums that are clearly inappropriate for their age do so because their brain is not fully developed. Is there any experimental cause-and-effect evidence for such an assertion?

*Dr. Stager:* Well, I believe there is more to it than just the brain’s development, although I would concur that neurological issues are part of the problem. Children behave in a certain manner because they have not proceeded through certain invariant developmental stages. I would say that these children have not progressed past the egocentric stage. Of course once the brain has developed, it is more likely that these children will interpret the actions of others as reasonable and not view everything from a “me first” perspective. When this happens, s/he will not react in such a manner, but will respond to conflict in a more age-appropriate manner.

Suppose we believe that the child throws a tantrum because his brain is not yet fully developed. What are the ramifications for dealing with such behavior when the supposed cause is brain malfunction? Do we wait until his brain becomes more fully developed? For clients who have continued such “immature” behaviors throughout their adolescence,

and into adulthood, do we still continue to wait? What can be done in the interim to reduce tantrums and/or develop a more acceptable manner of dealing with his social environment?

What is wrong with these interpretations about tantrum behavior? The role of the environmental response to such behavior is trivialized! If the brain has not developed, apparently what people do in response to the child's behavior, whatever the form, is insignificant and, therefore, irrelevant. One can only hope that the child's brain becomes more fully developed. We believe there is a better conceptualization of why tantrum behavior occurs.

Instead of saying that the child throws a tantrum because he is immature, we would possibly ascribe such an incident to the purpose or function such tantrum behavior serves in that child's environment. That conceptualization would generate an examination of observable events in the social environment. In the case of a child's tantrum behavior, one would examine what the social environment does when the child has a "fit" in the store. What is the antecedent context for such tantrum behavior? How does the social environment react to these tantrums in the short and long term? This examination of temporally ordered environmental events can reveal the purpose of this behavior in this context.

This approach is termed a functional behavior-analytic approach to understanding human behavior (Bailey & Pyles, 1989; Cipani, 1990; Cipani & Trotter, 1990; Iwata, Vollmer, & Zarcone, 1990; LaVigna, Willis, & Donnellan, 1989; Lennox & Miltenberger, 1989). In a functional behavior-analytic approach, all behavior is viewed as serving an environmental function, either to access something or terminate/avoid something (not withstanding genetic influences for some behaviors). Although other psychological explanations invoke hypothesized traits or developmental stages to explain behavior, a functional behavior-analytic viewpoint examines the role of the social and physical context. It deals with events that are observable to us and measurable.

For example, to say that a seven-year-old child named Oskar, diagnosed with oppositional defiant disorder (see DSM-IV-R manual) is aggressive is sufficient for many mental health professionals. When asked why this child is aggressive, their response would be, "It is a symptom of his underlying disorder, that being oppositional defiant disorder. He acts aggressively because he has this disorder." As you can see this is a trial lawyer's dream. People do things because they have a disorder. If they have this disorder, they cannot help it.

Whenever the behavior occurs, it is the disorder that made them do it. One should expect that they will engage in this behavior from time to time. It further presumes that such a behavior will occur irrespective of context and consequences. The child engaged in the aggressive behavior because of his malfunctioning brain. Such brain malfunctions are not predicated on any environmental context being present. One never knows when the neurons misfire! When they misfire, aggressive behavior results!

In contrast, a functional behavior-analytic view would explain such behavior more from the social context of the behavior. One would examine Oskar's history of aggressive behavior and how it alters his existing social environment when exhibited. An understanding of why the behavior occurs is accomplished through an analysis of the behavior's ability to produce desired events or terminate undesirable events.

For example, we may find out that Oskar often engages in aggressive behavior when he comes home from school. Oskar's mother wants him to stay in the house for a while and either do his homework or finish cleaning up his room. Oskar, of course, wants to go outside and play with his friends. He sometimes will complain and whine. His mother will respond to such complaining with the following retort: "You need to finish your homework. How do you expect to pass third grade? Once you are done with your homework, then you can go outside." This parental response to his behavior incurs more arguing from him, with retractions for each of his assertions by his mother. When Oskar sees that his arguing with his mother is not helping his cause (i.e., getting to go outside) he tries another tact. He states, "I'm going to leave and you can't stop me." When he begins to exit the house, she grabs him. At this point, he yells at her, calls her names, and hits her. After a struggle,

Oskar pulls away and heads out the door. The mother, tired of fighting with her son, lets him go, complaining he is just like his father.

With the above information, what is a more plausible explanation for this child's behavior during these circumstances? Does he do this because he is disordered? Or does the explanation lie in an understanding of how such a behavior impacts his environment? Does arguing with his mother result in him going outside? Or does he get to go outside when he becomes assertive (walking to the door) and combative (when he hits his mother as she tries to get him to stay inside)? What is the best explanation for his aggressive behavior in the afternoon? He does it because it "works" for him when he wants to go outside, and other behaviors such as complaining are less effective.

**WHY IS TRADITIONAL COUNSELING NOT EFFECTIVE WITH MANY CLIENTS WITH SEVERE PROBLEM BEHAVIORS?**

In 2006, many people believe that sending children or clients with severe problem behaviors to counseling is the best method for changing these behaviors. This is despite a lack of empirical evidence demonstrating that severe behavior problems of clients or children are effectively treated with such an approach. But let's look at the nature of this intervention and what we now know about client behavior. Perhaps we can determine why such an approach may be doomed for many children and clients with problem behaviors.

Can anyone (through counseling) convince Oskar that crying or later property destruction is not in his best interest? What is in the child's best short-term interest when he is placed in time out? It is getting out of time out. What behaviors are most effective at producing such? Crying and property destruction. As a reader of these materials, do you believe that any adult, no matter how many degrees s/he may possess, can talk to Oskar once or twice a week and convince him not to throw shoes at the wall when in time out?

What will work is to alter the maintaining contingency? This translates to what? How will the child's behavior change when he is placed in time out? Through insight or self-awareness developed by seeing a professional? Or by changing the manner in which the parent reacts to the behavior? The answer should now be obvious. Ultimately, it is up to the care providers/parents to change their behavior in order to change the child's behavior! If the adults continue to handle this child's behavior in the same manner, we cannot see where anyone who talks to this child for 1, 2, or 3 hours a week is going to convince him to "straighten up" when he is in time out. The problem is not just with the child! It is also with the way the child's environment responds to his/her behavior.

*You change child behavior by changing the behavior of the adults who deal with that child. Pure and simple!*

**THE CORNERSTONE FOR UNDERSTANDING WHY**

In a functional behavior-analytic approach, behavior is viewed as functional (i.e., purposeful) for certain antecedent contexts because of the contingency(ies) involved. A contingency is the temporal relationship between behavior and a consequence. It is often stated as an "If, then" rule. If you get an A on your quiz, I will take you out for ice cream. If you stick your hand in the door and it closes on your hand, you will experience pain and yell loudly. Such social and environmental consequences influence whether the behavior that produces them will become more or less probable in the same or similar context.

For example, the manner in which Oskar's mother responds to his complaining behavior makes it ineffective. If Oskar wants to go out, and he complains, it seems that such behavior is not instrumental in getting him outside in the immediate future. Therefore,

4 *Functional Behavioral Assessment*

complaining behavior becomes less likely in subsequent afternoons when Oskar wants to go outside. The current arrangement between complaining and not getting to go outside makes complaining a less viable alternative in these circumstances.

However, the story for verbal and physical aggression is quite the opposite! These behaviors, including defying her wish to stay inside by physically leaving, are (functional) in accessing the desired event. When Oskar's request to go outside tomorrow is denied, what is he likely to do? You guessed it. If Oskar's mother continues to respond to her son's defiance and aggression in the same manner, such behaviors become functional in that context. If this relationship between aggressive behavior and going outside becomes strengthened, under certain motivational and antecedent conditions, then such a relationship defines a *maintaining contingency*. There are two types of maintaining contingencies for problem (or other) behavior: positive reinforcement contingencies and negative reinforcement contingencies.

**DISCUSSION QUESTION**

What argument(s) can be advanced for understanding a client's behavior from the perspective of maintaining contingencies?

**MAINTAINING CONTINGENCIES INVOLVING POSITIVE REINFORCEMENT**

Positive reinforcement contingencies involve behaviors that produce an environmental event, that subsequently increase the level of occurrence of that behavior under the same or similar conditions. In other words, the operation of positive reinforcement involves a behavior that produces an event (activity, object) that subsequently strengthens the occurrence of that behavior in the future (under certain motivational contexts). Note the two requirements for identifying a contingency as one involving positive reinforcement: (1) that the level of the behavior is at higher or increased levels than the level without the contingent relation, and (2) that the contingency is one of a behavior producing an environmental event. For purposes of the function-based diagnostic system delineated in Chapter 3, behaviors that are maintained because of positive reinforcement are termed *access behaviors*, that is, access positive reinforcers.

What are some examples of behaviors maintained by positive reinforcement? Milton, an inpatient client with schizophrenia, frequently pinches other clients. Is this pinching behavior the result of his schizophrenia? Is it due to his inability to control his impulses? I believe neither explanation serves a useful or parsimonious purpose. When Milton pinches others, after some duration and frequency (to be explained Chapter 2), staff take him for a walk. Their rationale for such a response to his pinching is that they want to get him away from other clients. They report that Milton seems to be less anxious when he is on his walk and that the walk calms him down. Facility staff thereby interpret their use of a walk as an anxiety reductive procedure and believe this practice is clinically sound. However, what escapes them is the long-term result of this reliable contingency between what Milton does and what they do. The behavior of pinching others subsequently increases to a level that it constitutes a major problem, which now jeopardizes this individual remaining in the current inpatient unit. Note that the effect of the staff providing a walk to the client, contingent upon the pinching behavior, is that of increasing the level of the behavior across time. The client has learned how to get a walk with staff—pinch someone! We would say that pinching other people is a functional behavior when Milton desires a walk. Unfortunately, other, more appropriate, behaviors do not appear to be more functional in getting a walk.

A residential adult female client named Bea throws a tantrum (consisting of screaming and slapping herself) at certain times during the day. Bea's tantrum behaviors can consist

of yelling, hitting/slapping herself, calling staff profane names, claiming she was placed in this facility by the Mafia, and making verbal threatening statements to staff and other residents. When she engages in such behavior for a period of time, some staff members give her something to eat. They interpret her behavior, after some duration, as a “sign” she is hungry and feeding her certainly stops the threats made to them and others. Although this may look good, it creates long-term disaster. Such tantrum behaviors then become more probable for Bea when she is relatively hungry (or at least wants certain food items). You might conclude that Bea’s tantrum behavior is maintained because it is capable of acquiring food when she is hungry. Bea may also learn to engage in the same type of tantrum behavior when she wants her CD player and is told she had to wait until after dinner for it. If such behavior reliably results in getting the CD player before dinner, then such tantrum behavior becomes functional under those conditions as well. When that transpires, tantrum behavior is also positively reinforced under the motivational conditions of Bea desiring the CD. We would expect an increase in the frequency of tantrum behavior across the next few weeks as it becomes strengthened as a functional behavior when she desires the CD player.

Another case can exemplify a positive reinforcement function for tantrum behavior. A four-year-old child named Elvira, who is diagnosed with autism, will engage in screaming and hitting herself multiple times during the day. Many people will explain such behavior by referring to her developmental disorder. They will proclaim, “Elvira throws a tantrum because she is autistic. Her autism is the cause of this behavior.” But is this really a good explanation? Can one predict that all autistic children will engage in such behaviors, independent of social context? Does such behavior differentiate children with autism from other developmental and/or mental disorders (i.e., only autistic children hit themselves)? If such behavior is caused by autism, what option remains for the successful treatment of such behaviors, ameliorating or eliminating autism? Although eliminating or curing autism is certainly a laudable goal, is it reasonable to suspect that this will occur in time to help this four-year-old child before she enters school? How about before she becomes an adult?

A more functional approach is interested in the current maintaining variables. For Elvira, screaming might reliably access parental attention, or hugging, under conditions in which such activities or events are desired by her. When Elvira desires parental attention because it has been some time, tantrum behavior becomes more probable. The production of attention for some level and duration of tantrum behavior then maintains such a child behavior as functional in accessing positive reinforcement.

Is problem behavior always the result of contingent parental attention? There are other contingencies that can strengthen problem behavior in addition to attention. A six-and-a-half-year-old foster child named Serena throws one toy, and is reliably (meaning consistently) given another toy from her foster mother to play with. Traditional psychological theories may resort to fictitious inner dynamics to explain why such behavior occurs. Such explanations and resulting parental advice often exacerbate behavior problems, not ameliorate them. Serena’s foster mother has been told that she must “bond” with this child so that a positive relationship will develop. She has been told by mental health professionals that this child may be difficult, but the key to forming an attachment with Serena is to not put limits on her behavior in the beginning (Note: this theory has no empirical cause and effect evidence). Serena’s foster mother is (mis)guided by such an interpretation of behavior and therefore believes that when Serena throws her toys, it is therapeutic for her. The throwing episodes are an expression of emotional conflict that represent the internal psychic struggle of this child. The letting loose is helpful (according to the unproven theory) so that she can get out her rage against her birth parents’ abandonment of her. Therefore, this mother believes that she is helping Serena when she responds to this behavior in this fashion. It does not occur to her that giving her other toys when she “disrespects” toys by throwing them around the house is not a good parental practice.

As a result of this built-in contingency, Serena’s behavior of throwing toys increases. The foster mother reports that she is now having trouble with Serena because she often throws toys at other children or the walls and floor. What if toy throwing is not an internal

conflict, but just a behavior that has been learned to get other toys! The access to a new toy contingent upon throwing the one you have is the maintaining contingency. One would expect Serena to engage in toy throwing when she wants another toy to play with.

Which interpretation makes better sense? The increase in toy-throwing behavior is a sign of Serena dealing with increased internal emotional turmoil. Or she has learned that when she throws a toy, she gets another one from her mother. First, read this book. Then you be the judge.

#### **DISCUSSION QUESTIONS**

Describe a maintaining contingency involving positive reinforcement for self-injury.  
Describe a maintaining contingency involving positive reinforcement for refusal to comply with a task demand.

#### **MAINTAINING CONTINGENCIES INVOLVING NEGATIVE REINFORCEMENT**

Though many people are familiar with positive reinforcement, negative reinforcement is often misunderstood (Cipani, 1995; Cipani & Spooner, 1997; Iwata, 1987). Particularly if you serve individuals who more often engage in behavior problems during task demands, compliance situations, instructional conditions, or chores/work, an understanding of negative reinforcement operations is critical to the design of effective treatments.

In negative reinforcement, the effect of the behavior is to terminate the existence of, or postpone (for some time) the presentation of, an aversive event. Such an event is commonly referred to as aversive, unpleasant (relative to the individual). It is fine to refer to such stimuli or events as aversive if you realize that such a term is relative. What is aversive to one person may not be to another; what is aversive today may be less aversive next week. The subsequent effect of a negative reinforcement contingency on behavior is one of increasing its probability under the same or similar conditions in the future. All behaviors that are maintained as a result of negative reinforcement are called *escape behaviors*, that is, escape (or avoid) negative reinforcers.

Examples of negative reinforcement of problem behavior can be used with the previous hypothetical cases by altering the behavioral effect of the problem behavior. The form or topography of the behavior does not usually dictate what environmental function exists. Bea's tantrum behavior was illustrated previously as a functional behavior in accessing food, thereby demonstrating a positive reinforcement function. However, tantrum behavior can also be maintained by its ability in terminating an already existing antecedent condition (e.g., noise, task demands, instructional requests, presence of an individual, or other conditions deemed aversive to the individual). In this scenario, Bea is asked to clean up her room. She will often refuse such an initial request. When staff persons at the facility warn her that she will not get TV that night, she screams and yells at them. After an intense episode, Bea sometimes gets put in time out and loses TV. However, with certain staff persons, if she promises not to raise a commotion, the staff person will clean up her room for her so she can watch TV. Such a behavioral effect subsequently increases the probability of Bea screaming in those conditions (or similar conditions) in the future.

The toy-throwing illustration presented above can also be altered to change the effect the behavior has on the environment. Now, let's say that when Serena throws toys, her foster mother often removes her brother from the area. Serena will continue throwing toys until her brother is taken to another room in the house. Although it may look like the right thing to do on the surface, its environmental effect may serve to maintain such an inappropriate and potentially dangerous behavior. What looks like a good short-term response may be disastrous in the long term.

What is the reason for toy throwing? Unlike the previously described contingency, it is not positive reinforcement! Rather, it is the effect the behavior (toy throwing) has on the termination of a relatively aversive condition, relative to this child (i.e., presence of his brother in the toy room area). Note that when his brother is in the room, toy throwing becomes probable until his brother is removed, at which point it ceases.

Can Milton pinch people for a reason other than wanting a walk? In another scenario, Milton often pinches people when he is asked to go to group therapy (which he finds aversive). Why would he now do this? Contingent upon his pinching someone, staff decide that he should be put in time out. When he comes out of the time out, the group therapy hour is almost over. He therefore is often able to shorten his participation with this requirement. As a result, Milton is pinching more often when it is time to go to group therapy. Can you see why he is pinching when it is time to go to therapy? Pinching avoids an activity the client dreads—going to group therapy! As a side note, it might be interesting in this case to find out why Milton does not like to go to group therapy (i.e., what does he wish to avoid) in order to solve this behavior problem in the long term. Beyond that, one might question why he should go to group therapy. If it was to help him uncover the reasons for his pinching mode of interaction, we could now dispense with such a requirement (given its obvious lack of effectiveness)!

Another example illustrating a negative reinforcement function is the self-abusive behavior of a child with pervasive developmental disorder (PDD). As a general note, very often in classroom situations, problem behaviors, such as self-abuse, can often function to avoid or terminate instruction. Hence, under such conditions such behaviors become very “adaptive.” This child hits his head with his open hand or closed fist, and such behavior often seems to occur during group instruction. Self-abuse is a difficult behavior to “work through.” Hence, this teacher will often stop instruction or remove this child to deal with his self-abuse. Self-abuse becomes functional in lessening or avoiding such a context.

Unfortunately, self-abuse is often exacerbated unintentionally. The severity of the head hitting may intensify as a result of staff trying to ignore minor forms of self-abuse. If staff feel that he hits himself for their attention, they think that ignoring such a behavior will make it decrease and eventually disappear. When the function of self-abuse is misdiagnosed (or undiagnosed), ignoring minor forms can lead to more disastrous results. Perhaps, at the beginning of the year, the teaching personnel may have reported to the individual education plan (IEP) team that this child does engage in self-abuse, but they can “handle it.” Of course, this was under the presumption that their ignoring strategy would work. Now, at mid-year, this child may no longer be suitable for this classroom, because his self-injury has resulted in a broken nose and gashes on his forehead. He may now require a placement where a more intensive behavioral approach is available.

#### **DISCUSSION QUESTIONS**

Describe a maintaining contingency involving negative reinforcement for self-injury.  
Describe a maintaining contingency involving negative reinforcement for tantrum behavior when presented with a task demand.

#### **CONTRASTING THE TWO TYPES OF MAINTAINING CONTINGENCIES**

Table 1.1 provides more examples of behaviors illustrating positive reinforcement contingencies. Please note that in all instances, the effect of the reinforcement contingency is one that strengthens the behavior that produces the desired event.

Now examine how the same topographical behaviors in each of the above four circumstances can have a different behavioral function, which maintains their likelihood in given circumstances. In Table 1.2, the middle column illustrates how behaviors that previously

**TABLE 1.1. EXAMPLES OF MAINTAINING CONTINGENCIES INVOLVING POSITIVE REINFORCEMENT OPERATIONS**

Behavior	Contingency Produced	Effect of Contingency on Behavior
Child cries	Gets cookie	Increases likelihood of crying when child wants cookie in the future
Man on inpatient unit stomps foot on floor, kicks wall	Gets nurse to come over and give social attention, engage him in pleasant conversation	Increases likelihood of such behaviors when man wants to socially interact with that nurse in the future
Child hits brother	Mom tells brother, "Give Bobby the toy; he is not as mature as you are" and gets toy	Increases likelihood of aggression when child wants some toy or item his brother has
Student says, "This is not fair, I never get a turn"	Teacher gives child a turn on tetherball	Increases likelihood of such demand/tantrum behaviors when child wants to get tetherball or other activity and does not want to wait for peers to give him access

produced desired events now function to terminate aversive events. You should conclude that the form of the client's problem behavior does not usually give a clue as to behavioral function. Hence, a diagnostic system that focuses exclusively on symptoms to differentiate clients "misses the boat."

These two tables (Tables 1.1 and 1.2) illustrate how the same behavior can produce different environmental effects, that is, consequences that maintain such behaviors. Note that the motivation of the individual is different in each circumstance and the behavior (although the same form of response) produces two different outcomes. In the positive reinforcement example of the child hitting his brother, this behavior resulted in his mother intervening and giving him the toy that his brother had. If hitting behavior reliably results in mom's mediation of the conflict via "giving in" to this child's desire for some object or item, hitting his brother becomes more probable when he wants something his brother has.

In contrast, note how hitting serves to remove an aversive stimulus in the negative reinforcement example of the same topography (form) of behavior. Hitting his brother makes his brother leave the room. Hence, whenever, this child wants to be alone without his brother in the room, what behavior will he now resort to? Hitting! To summarize, hitting that occurs under the context of his brother playing with a toy that he wants functions

**TABLE 1.2. EXAMPLES OF MAINTAINING CONTINGENCIES INVOLVING NEGATIVE REINFORCEMENT OPERATIONS**

Behavior	Contingency Produced	Effect of Contingency on Behavior
Child cries	Released from "room time"	Crying is more likely when child is placed in room for discipline
Man on inpatient unit stomps foot on floor, kicks wall	Gets nurse to leave him alone for awhile instead of taking his medication	Such aggressive behaviors are more probable when nurses are trying to get this man to do something he does not desire
Child hits brother	Brother leaves room	Aggressive behavior becomes more probable when this child wants to be left alone
Student screams, "This is not fair, I always get more work"	Teacher talks to student, agrees to reduce assignment by half	Increases likelihood of such demand/tantrum behaviors when child wants to do less (or no) work

to get the toy via mediation of such behavior by his mother. Hitting that occurs when he wants to be alone results in the removal of the unwanted party via the brother leaving the room shortly thereafter. This is the same behavior, with two different functions.

Compliance situations involve a parent issuing a request or directive toward a child, to engage in some requested behavior (called a “do” command), or in some cases to desist a behavior (called a “don’t” command). Examples of compliance situations involving a do command are: (1) “pick up your trash and place it in the trash can,” (2) “open the door to the laundry room,” (3) “put your sneakers on.” Examples of don’t commands are: (1) “stop running through the hallway,” (2) “stop yelling,” (3) “do not throw the ball against the house again.” When oppositional behavior occurs in compliance situations, that is, the child refuses to follow through with the request, it can be analyzed in terms of function (Cipani, 1998).

In some cases, noncompliance takes an innocuous form, such as the individual simply not attending to the person issuing the command. Such a lack of response is maintained by negative reinforcement. A command is issued and the child or client does not respond but rather continues engaging in the ongoing activity. The form of noncompliance at this moment is simply nonresponding. If the adult making these requests often “forgets” about what task was requested as a result of inactivity on the part of the client, one can see such behavior (nonattending) is negatively reinforced.

Compliance situations can be examined from the perspective of what the client is currently doing and what s/he is asked to do. What the client is currently doing is more preferred than what he is asked to do. Therefore, the client must stop a higher probability behavior to engage in a lower probability behavior. This sets up the conditions for negative reinforcement of escape/avoidance behaviors.

With some children or clients, their opposition to the request or command is comprised of more than just ignoring the request. They are “forced” to engage in other forms of protest by the adult failing to leave them alone upon simply opting out of compliance peacefully. The response of the adult to the child’s deaf ear approach, that is, to request again, does not provide escape from the compliance situation. When the care provider responds with another request, the child now retorts, “I’m not doing it!” Because simply ignoring the request did not work, maybe becoming insolent at the person making the request will force him/her to leave. The form of noncompliance can then become exacerbated as mild forms of opposition do not have the effect desired, that is, termination of the request. Perhaps a scenario with an adult client in a group home will illustrate this point.

*Staff member:* Mr. Smith, please pick up your dirty clothes from the floor and place them in the hamper.

*Mr. Smith:* Leave me alone. I’m watching “American Idol.”

*Staff member:* Mr. Smith, I need you to pick up your clothes. Someone may trip over them when they are in the middle of the day room.

*Mr. Smith:* Then that would be their own stupid fault!

*Staff member:* (Moves closer to Mr. Smith) Mr. Smith, would you like me to help you?

*Mr. Smith:* I would like you to leave me alone! If you are so interested in my dirty clothes, you pick them up.

*Staff member:* Please address me with respect.

*Mr. Smith:* Quit ragging on me, you \*\*\*\*\*.

*Staff member:* OK, Mr. Smith. I will get Raul and Robert to help me assist you.

*Mr. Smith:* (Gets up and runs out of day room with staff in tow. He hides in the bathroom and does not come out. After 25 minutes, he finally opens the door and is allowed to go back and watch TV, with the clothes now having been picked up by someone else.)

Note in the above scenario, simply protesting was not an effective method of being left alone. Such a behavior only resulted in continued verbal requests on the part of the staff. However, with continued requests and the threat of having several staff members help him get his clothes off the floor, Mr. Smith engages in more than just noncompliance. He

runs out of the room and locks himself in the bathroom, which of course makes picking up his clothes very unlikely. Do you think he will figure that the bathroom is a good place to escape from staff?

### **DIRECT VS. SOCIALLY MEDIATED CONTINGENCIES**

There are two ways to access positive reinforcers: direct and socially mediated. Escape behaviors can function to produce termination of an aversive event (i.e., negative reinforcement operations) in the same two ways: direct and through social mediation. This leaves four ways reinforcement can be produced.

#### ***Positive Reinforcement***

Direct access  
Socially mediated access

#### ***Negative Reinforcement***

Direct escape  
Socially mediated escape

### **Direct Access**

With a direct access behavior, the client's behavior immediately produces access to positive reinforcement (Cipani, 1990, 1994; Michael, 1982; Vargas, 1988). In other words, the behavior produces the positive reinforcer. An individual is hungry and therefore goes to the refrigerator, opens the door, selects an apple, and eats it. This chain of behaviors involved in getting the apple directly produced the reinforcer—the ingestion of the apple. We would not say that the individual exhibits those behaviors because of the attention someone gives to him, regardless of whether such attention is positive, negative, or neutral. Attention is a tangential consequent event. Getting the apple is the desired reinforcer. This is an example of a direct access behavior.

What are some other examples of direct access behaviors? Putting the key in the car and turning it produces the desired result (car starting) directly. Lying down on the bed, when one is tired, is a chain of behaviors that produces the reinforcer directly (rest). It is important to note that these behaviors produce the reinforcer immediately and directly.

How many people do you know that sing in the car while driving to work? Or sing in the shower? What motivates this behavior? Does someone reinforce this behavior? Probably not! Their behavior is maintained as a result of the direct environmental effect produced, that is, the sound (hopefully of a somewhat melodious nature). Particularly in the shower, the sound reverberation can be sensorially reinforcing. Such singing behavior in the absence of an audience is reinforced because it produces an inherent relatively pleasurable event (in most cases). The behavior produces its own reinforcer.

Too often, personnel always assume that the problem behavior is maintained because it is mediated, for example, it receives attention, results in physical contact, and so on. However, there are behaviors that occur under specific conditions, not as a result of anything staff or teachers do after the behavior. Rather, some problem behaviors are maintained because of the immediate result they produce. Let's look at an example.

A client in a residential facility for persons with developmental disabilities jumps out of a wheelchair with some frequency (J. S. Bailey, personal communication, 1989). On one of these jumps, he lands on the ground in an unfortunate manner. His head begins to bleed. Obviously, the behavioral treatment program needs some adjustment. The facility calls in a nationally recognized expert in applied behavior analysis (Dr. Jon Bailey). Staff comment that the client does this behavior (jumping out of the wheelchair) because he loves the medical attention he must receive upon getting hurt. (Note to reader: Let us hope there is another reason for this dangerous behavior.)

What is the natural result of jumping out of the wheelchair? On some occasions, it does seem to be contusions and abrasions to this person's body. But without fail, the one result that always occurs is being on the floor (or conversely being out of the wheelchair).

Every time this person pushes himself out of the wheelchair, he gets the freedom to roam around on the floor. Could sitting in a wheelchair for sometimes 12–16 hours a day, every day, be a motivational context for desiring “out of wheelchair” time? For any person who has driven a long time in a car, or flown on a transcontinental nonstop flight, the answer is obvious on a personal level. The problem with this behavior is not what the client wants but the manner in which he seems to have to access it. If this client were unable to verbally communicate his desire to staff, it would seem plausible that he would take matters into his own hands and arms.

### **Socially Mediated Access**

Other behaviors achieve their effect through the behavior being mediated by someone else (Cipani, 1990, 1994; Michael, 1982; Sundberg, 1983). These behaviors produce the desired positive reinforcer through the efforts of someone else.

The following scenario utilizing the previous example can provide the contrast between direct access behaviors and socially mediated access behaviors. Previously, the individual wanting to eat an apple (person is hungry) performed a chain of behaviors that directly produced the apple. The same behavioral effect can occur when the individual requests someone standing next to the refrigerator to hand him an apple. Note that the manner in which the reinforcer (ingesting apple) was gained was different than previously. In the current example, the requesting behavior is mediated by another person, and subsequently the reinforcing event is produced.

Socially mediated access often occurs through some form of vocal request, but it need not be so! A celebrity gestures to his driver, who subsequently opens the door to the limousine for him. The gesture functioned in the same manner as a verbal request, “Henri, the door please.” A child at a residential facility comes to the dinner table and staff provide him with his snack for the afternoon. Coming to the dinner table is “interpreted” as “he is hungry.” In some cases, the vocal request may not even appear to be a request. A client with schizophrenia mutters about people stealing her money. Subsequently, after meeting with the facility administrator, she gets a few dollars to spend on candy and soda in the vending machines.

In the previous case involving a client jumping out of a wheelchair, other behaviors might also produce the same function, through mediation of the behavior from staff. This client may also have learned how to have toileting accidents, if such reliably results in getting pulled out of the wheelchair in order for staff to clean him up. If he is then placed on the floor for some period of time, one can begin to see that urinating in one’s pants is a less dangerous manner of getting the desired event. However, if staff clean him up and then place him back in the wheelchair, such a response is not as effective as jumping out of the wheelchair. Note the role staff, care providers, and adults play in the maintenance of this type of problem behaviors.

### **Direct Escape**

Behavior can also produce direct termination of existing environmental events, serving a direct escape function (Cipani, 1990, 1994). For example, an individual walks into a noisy room, finds the level of noise aversive, and subsequently walks out. Note that the removal of the aversive stimulus (i.e., the heightened noise level in the room) was terminated through a chain of behaviors ending in leaving the room. Walking out of the room is a direct escape behavior because it directly produced the removal of the negative reinforcer. Closing the blinds, when the sun is too bright (for you) directly terminates the aversive stimulus (i.e., bright sun light). Taking a shower involves a chain of behaviors that is highly probable for many of us under conditions of being hot and sweaty (after physical exertion) because it directly terminates that condition (being hot and sweaty). These are all examples of chains of behaviors that produce escape (or avoidance) of aversive stimulation in a direct manner.

### **Socially Mediated Escape Behaviors**

Escape behaviors can often achieve their effect of removing or postponing an aversive condition through the behavior of someone else (Cipani, 1995; Iwata, 1987; Iwata, Dorsey, Slifer, Bauman, & Richman, 1982). In the case of the noisy movie theater, an individual verbally protests to the manager of the facility, who then gets the crowd to quiet down. The verbal protest behavior exerted its desired effect through the behavior of another person—the manager. If the individual yells loudly, “let’s have some quiet in here,” and the room quiets down, the desired result was produced through a verbal request. The result (cessation of noise) was produced through other people becoming more quiet as a result of this behavior. Both of these examples involve a behavior that achieves its effect indirectly, through the behavior of someone else. However, if this annoyed person simply leaves the theatre, thus terminating the noise, such a behavior produced its effect when the chain of behaviors ended in leaving the theatre.

Negative reinforcement effects can also explain why care providers, parents, and staff respond to their child or client’s behavior in the manner they do. In conducting workshops, participants begin to realize how much of a role the client’s social environment plays in the rate of problem behavior. Invariably, someone will make the following comment, “Why doesn’t the parent (care provider/staff members, teachers, aides, etc.) see that they are enabling (now you would say maintaining) the child’s misbehaviors?”

Before ascribing a dim view of such people, realize that maintaining contingencies also explain the behavior of parents/care providers/teachers as well! Analysis of behavioral function is not just for explaining why clients do what they do. Take the case of the child who cries when he is put in the time out room. As delineated above, crying in this circumstance is probable because it affects the length of time the child stays in the time out area. When the child cries, he is more likely to get out early. When he does not cry, he is less likely to get out early. That is an analysis of the child’s crying behavior in time out. But what analysis fits the parent who reinforces (mistakenly) that crying behavior by letting the child out?

When the parent removes the child from the time out, what environmental effect do you think that produces? Does the child exacerbate his crying upon being let out? No, in fact the opposite. The child stops (at some point) his crying and whining. As you can see, the child’s behavior also affects the parent’s behavior. If you put the child in time out, then you fill the room or house with crying. If you take the child out of time out, the crying stops. What operation explains the contingency that results in increasing a behavior that terminates an aversive event? Negative reinforcement! The parent’s response to the child’s crying is under control of the presence of the aversive event (crying). When the parent’s response results in the child stopping his tantrum in time out, such a response becomes more likely in the future. The parent learns to terminate (escape) the aversive state of his/her child crying by terminating the time out prematurely.

In fact, the parent can avoid the crying in the first place, by not putting the child in time out when he is supposed to go. Rather, warnings are issued, which certainly avoid the advent of a tantrum episode. Therefore, time out becomes less frequent even though the parent “knows” that the child should go for the target behavior. The parent learns to avoid the aversive stimulus by not producing time out as frequently as needed. Unfortunately, this does not help the long-term effectiveness of time out in reducing the rate of the child’s target behaviors. This phenomenon explains why follow through on consequences by some personnel and parents is weak and inconsistent. It would be nice if children and clients made it easy for us to administer consequences for behavior, but unfortunately they do not.

#### **DISCUSSION QUESTIONS**

Contrast the difference between a behavior that produces direct access versus one that produces socially mediated access. Contrast the difference between a behavior that produces direct access versus one that produces direct escape.

**TABLE 1.3. RELATIONSHIP BETWEEN MOTIVATIONAL CONDITION AND REINFORCER**

Motivational Condition		Reinforcer for Some Behavior
1. Deprived of food (hungry)	→	Food
2. Deprived of drink (thirsty)	→	Drink, liquids
3. Deprived of physical contact (wants hugs)	→	Physical contact
4. Deprived of attention (wants attention)	→	Attention
5. Deprived of TV (wants TV)	→	TV
6. Deprived of stimulation, all varieties (wants stimulation)	→	Stimulation (specific kind)

**WHAT MAKES A REINFORCER A REINFORCER?**

What can function as a reinforcer for one person may not function as a reinforcer for another person. For the client, Milton, who pinches to get staff to take him for a walk, the walk would be termed the reinforcer. Is getting a walk a reinforcer for all inpatient clients with schizophrenia? Obviously not. Different strokes for different folks. Therefore, various client behaviors would certainly be under control of different maintaining contingencies. For some clients, having a tantrum (pinpointing this behavior is needed) would be functional in getting staff to let them watch more TV. For other clients, tantrum behavior serves the purpose of getting out of the TV room when too many other clients are gathered in there. For other clients, tantrum behavior may serve to avoid chores or nonpreferred tasks.

But is a walk always a desired event for this hypothetical client? Again, obviously not. A walk becomes a desired event for Milton (i.e., reinforcer) when he has not had one for a while. Milton may want a walk around 9 AM, but after having a walk, he does not want one for another 5 or 6 hours. Hence, pinching will cease for a period of time, until getting a walk becomes more of a desire on the part of this client. Pinching as a means to get a walk only becomes functional under the conditions where Milton desires a walk. Realize that the longer the time since the last walk, the greater Milton's motivational condition becomes in desiring a walk.

Behavior comes under control of specific contingencies because of the client being motivated (at that point in time) to access the positive reinforcer or avoid or escape the negative reinforcer. The motivational condition is antecedent to the behavior that produces a specific reinforcer (Hesse, 1993; Laraway, Snyckerski, Michael, & Poling, 2003). A motivating operation (M.O.) is defined by Laraway et al. (2003) as an operation or stimulus condition that (1) momentarily alters the reinforcer effectiveness of stimuli and (2) momentarily alters the frequency of behavior that has a history of producing those stimuli.

To understand the concept of a motivating operation, one must ask why a client would exhibit a particular behavior that has a history of resulting in a specific reinforcer (e.g., food) at a specific time. We have always understood that in order for food to function as a reinforcer, the client must be in some state of deprivation to that event (relative to each individual). This state of deprivation sets up a motivating condition within that individual that strengthens behaviors that have a history of producing the specific reinforcer(s), under such deprivation levels. Table 1.3 illustrates this relationship between the motivating condition and the enhancement of an activity or object to function more effectively as a reinforcer.

Motivational conditions have been described by other theorists as human needs or wants. Realize that needs are transient conditions, affected by the relative level of deprivation (or conversely satiety) to a specific event or object at that time. Once the item or object is acquired to a sufficient degree (e.g., client is fed), the need state no longer exists (client is not hungry anymore) and therefore the event (eating food) no longer maintains its value-altering effect (Michael, 2004). Subsequently, behavior that produces such an event is no longer highly probable for a period of time, and loses its behavior-altering effect (Michael, 2004).

**TABLE 1.4. RELATIONSHIP BETWEEN ANTECEDENT STIMULI AND MOTIVATIONAL CONDITION**

Antecedent Condition	Motivating Operation	Negative Reinforcer
Presence of difficult task	Creates state of aversion to engage in task for that child	Removal of task
Person acting in an obnoxious manner	Creates state of aversion to be in that area	Terminating engagement in social situation
Presence of pain	Creates state of aversion	Termination of painful stimulus

One must also realize that a deprivation state varies across different people as well. For some people, not having eaten food for 2 hours sets up a state of deprivation. For other people, 6 hours would be needed for the same level of deprivation. Similarly, some people want to hear from their loved one every day from work, multiple times. If they don't get a phone call before 10 AM they go into a "panic" and begin frantically calling every number they have at their disposal to track down that person. Other people only call at lunchtime. Still other people don't call at all.

The following context conditions can often set the occasion for behaviors to be positively reinforced. Note that these conditions often involve the absence of some event (at the point in time when the behavior occurs). These conditions combined with a certain level of deprivation, with respect to the event or item, would make behaviors that are capable of producing such conditions become more probable at those times. An existing deprivation state would be relative to each individual and not an absolute value.

- (1) Absence of food (specify types),
- (2) Absence of drink (specify types),
- (3) Absence of toys,
- (4) Absence of attention (specify type),
- (5) Absence of physical contact/touch,
- (6) Absence of peers,
- (7) Absence of staff/care provider/parent,
- (8) Absence of stimulation (social or physical-specify),
- (9) Absence of specific activity (specify type of activity),
- (10) Absence of a normal routine.

People also exhibit behavior to escape or avoid aversive events, thus the operation of negative reinforcement. The motivating conditions involved in negative reinforcement operation are the presence of aversive stimulation or aversive stimulus conditions. Above is an illustration of the relationship between the antecedent stimulus conditions, the motivating condition, and the enhancement of an event, activity, or object to function more effectively as a negative reinforcer (see Table 1.4).

In the first example, the teacher may present a relatively difficult task to the child. Because the child is not capable of performing such a task or demand, he finds the presence of such a task demand aversive. Therefore, a behavior, or set of behaviors, in the repertoire of this child that results in its removal will be strengthened. Realize that what is difficult for one child may be easy for another, hence, difficult task is a relative term.

In example two, a behavior that terminates the presence of a person's obnoxious behavior will be strengthened under conditions involving the presence of the noxious conditions. Let us say this person's obnoxious behavior is using foul language. If a person does something that affects this person, whereby he lessens or eliminates such language from continuing, such behavior will be strengthened in the future when faced with this person's foul language. But let us say that nothing seems to perturb this individual and he goes right on with his rude language. Leaving the area then becomes probable. Why? Because it terminates the person having to listen to and put up with such language.

Painful stimulation also produces motivating conditions that lead to behavior that produces escape or avoidance of such painful stimulation (see example 3 in Table 1.4). Again, painful is a relative phenomenon, varying according to the individual.

The following context conditions can often set the occasion for behaviors to be negatively reinforced. Note that these conditions often involve the presence of some event (at the point in time when the behavior occurs). These conditions combined with a certain level of aversiveness created by the presence of the event or item would make behaviors that are capable of producing escape or avoidance of such become more probable at those times. Again, aversiveness is a relative term, individually determined.

- (1) Presence of difficult instructional tasks,
- (2) Presence of demands/commands,
- (3) Presence of requests,
- (4) Attention to other peers/staff,
- (5) Noisy environment,
- (6) Quiet environment,
- (7) Many people in physical area,
- (8) Presence of attention to individual,
- (9) Presence of specific internal private events,
- (10) Presence of pain,
- (11) Presence of physical discomfort (specify),
- (12) Presence of a specific activity,
- (13) Presenting an undesirable consequence (punishment) for behavior.

### **CHANGING BEHAVIOR BY ALTERING THE CLIENT'S MOTIVATING CONDITION**

The principles of deprivation and satiation as they affect the client's motivating condition can also be used as part of a behavioral intervention strategy. In Chapters 4 and 5, interventions that focus on altering the maintaining contingencies are delineated. However, a supplement to such replacement behavior options is the use of strategies that deal with altering the antecedent context, through manipulation of the client's motivating condition that drives the access or escape behaviors.

Altering the motivating conditions for target behaviors maintained by positive reinforcers involves producing a satiated state relative to the reinforcer. Although this antecedent manipulation does not alter the function of the target behavior directly, it will reduce the behavior in frequency. Let's look at some examples of this methodology in Table 1.5.

For example, if a child engages in a behavior to get a certain preferred activity such as computer time, then increasing the child's time on the computer two- or three-fold over the current access level will do two things. First, such a manipulation will alter the

**TABLE 1.5. ANTECEDENT MANIPULATIONS AFFECTING MOTIVATIONAL CONDITION FOR BEHAVIOR MAINTAINED BY POSITIVE REINFORCEMENT**

Maintaining Reinforcer	Antecedent Motivational Operation (See SMA, NCR in Chapter V)
Adult attention	Increase frequency/duration of attention
Tangible reinforcer (food)	Increase availability of food throughout the day/time period
Tangible reinforcer (free time)	Increase availability of free time throughout the day/time period
Tangible reinforcer (preferred activity)	Increase availability of preferred activity throughout the day/time period

**TABLE 1.6. ANTECEDENT MANIPULATIONS AFFECTING MOTIVATIONAL CONDITION FOR BEHAVIOR MAINTAINED BY NEGATIVE REINFORCEMENT**

Maintaining Negative Reinforcer	Antecedent Operation (See SMA, NCR in Chapter 5)
Presence of unpleasant social situation	Avoid presenting such events, or reduce the level of aversion by altering some aspect of situation
Presence of relatively lengthy task, chore, or assignment	Avoid presenting such tasks, chores, assignments, or reduce the level of aversion by altering the length of the task
Presence of relatively difficult task, chore, or assignment	Avoid presenting such tasks, chores, assignments, or reduce the level of aversion by altering the difficulty of the task
Presence of physically aversive stimulus	Avoid presenting such aversive stimuli, or reduce the level of aversion by altering some critical aspect of the stimulus

state from relative deprivation to satiation for this particular event. Second, it will alter the frequency of the target behavior as a result of the alteration of motivating conditions for this target behavior.

In regards to target behaviors maintained by negative reinforcement, the method of changing the motivating condition for such behaviors is to either eliminate the presence of the item or object, or make it less aversive (see Table 1.6).

**WHY DO SOME CLIENTS ENGAGE IN SEVERE DESTRUCTIVE BEHAVIORS?**

In some settings, clients engage in severe forms of self-injury, aggression to others, and property destruction. Many people take this as an example that these people have uncontrollable rages, as a result of their disorder. “Obviously these people have no control over what they do. They are *driven to destruction!*”

Take the case of the child above who gets sent to the time out room and cries to get “a more lenient sentence” once there. He might be judged to be less “disordered” than another child who does engage in property destruction when placed in time out. Why does he cry and not become destructive? Although this child currently does not engage in property destruction, he may not be far from learning how to do such. This is a scenario of how more severe tantrum behaviors can be “shaped” by the social environment.

Suppose the parent decides to ignore the tantrum behavior in the time out area. He will “stick to his guns,” and not allow the child to get out early. The child goes to time out and begins his crying episode but to no avail. He cries louder and that does not result in removal either. He then throws something at the wall. The parent then comes into the room to find out what has happened. Note the effect of the throwing behavior in the sequence of events. If crying does not work, throw something. That will bring in Dad.

With time, the parent ignores some of the throwing episodes, until a shoe goes through the dry wall near the door. As you can see, with each new exacerbation of behavior, the parent “has to” attend to the child, to stop any further escalation. Hence, months later the child is now destroying the room, as opposed to just crying when placed in time out.

For example, if a student engages in oppositional behavior when given a difficult task, then not providing that task will do two things. First, such a manipulation will remove the controlling stimulus for the behavior, thus affecting the motivational condition for escape or avoidance. Concurrently, it will alter the frequency of the oppositional behavior as a result

of the alteration of relatively aversive motivating conditions that occasion reinforcement for this target behavior.

In regards to behaviors maintained by negative reinforcement, another methodology has been developed that impacts the motivating condition. It may also be possible to alter slightly the conditions, removing just the factor (thus, driving the escape behavior). In the above example, making the instructional task less difficult by teaching the student how to perform such tasks would reduce the problem behavior. By teaching the child directly how to perform the task to mastery, two effects are created. First, the aversiveness of the event is altered, thus affecting the student's motivating condition to escape such a task. Concurrently, it will alter the frequency of the target behavior as a result of the alteration of motivating conditions for this target behavior.

#### **DISCUSSION QUESTION**

Describe how a child's noncompliance can be shaped to greater levels of severity, including aggression and property destruction.

#### **SUMMARY**

Behavior (operant) that occurs with high probability in certain contexts is functional. This is true for both desirable and undesirable behaviors. Functional translates to the behavior producing a stimulus change that maintains such a behavior. Behavior achieves a desired environmental effect through one of two operations: (1) producing a desired event or item or (2) removing or avoiding an undesired event. Further, the manner in which such results are produced can be one of two methods: (1) direct or (2) socially mediated. The following chapters will expound on this concept of specific operant behavior becoming functional under certain motivational contexts as a result of its environmental effect.