

Cognitive Behavior Therapy

Core Principles for Practice

Edited by

William T. O'Donohue

Jane E. Fisher

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and
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We would like to dedicate this book to our lovely daughters, Katie and Anna.

CONTENTS

	<i>Acknowledgments</i>	<i>vii</i>
	<i>Contributors</i>	<i>ix</i>
CHAPTER 1	THE CORE PRINCIPLES OF COGNITIVE BEHAVIOR THERAPY	1
	<i>William T. O'Donohue and Jane E. Fisher</i>	
CHAPTER 2	CLINICAL FUNCTIONAL ANALYSIS: UNDERSTANDING THE CONTINGENCIES OF REINFORCEMENT	13
	<i>Clair Rummel, Christina Garrison-Diehn, Casey Catlin, and Jane E. Fisher</i>	
CHAPTER 3	SKILLS TRAINING	37
	<i>Michael P. Twohig and John P. Dehlin</i>	
CHAPTER 4	EXPOSURE THERAPY: PROMOTING EMOTIONAL PROCESSING OF PATHOLOGICAL ANXIETY	75
	<i>Alyson K. Zalta and Edna B. Foa</i>	
CHAPTER 5	RELAXATION	105
	<i>Holly Hazlett-Stevens and Douglas A. Bernstein</i>	
CHAPTER 6	COGNITIVE RESTRUCTURING	133
	<i>Robert L. Leahy and Simon A. Rego</i>	
CHAPTER 7	PROBLEM SOLVING	159
	<i>Arthur M. Nezu and Christine Maguth Nezu</i>	

CHAPTER 8	SELF-REGULATION <i>Paul Karoly</i>	183
CHAPTER 9	BEHAVIORAL ACTIVATION <i>Jonathan W. Kanter and Ajeng J. Puspitasari</i>	215
CHAPTER 10	SOCIAL SKILLS <i>Joanna E. Strong Kinnaman and Alan S. Bellack</i>	251
CHAPTER 11	EMOTION REGULATION AND CBT <i>Anthony Papa, Matthew Boland, and M. Todd Sewell</i>	273
CHAPTER 12	COMMUNICATION <i>Justin A. Lavner and Thomas N. Bradbury</i>	325
CHAPTER 13	PRINCIPLES OF POSITIVE PSYCHOLOGY <i>Jeana L. Magyar-Moe</i>	353
CHAPTER 14	ACCEPTANCE AND COGNITIVE BEHAVIOR THERAPY <i>Kelly G. Wilson, Maureen K. Flynn, Michael Bordieri, Stephanie Nassar, Nadia Lucas, and Kerry Whiteman</i>	377
	<i>Author Index</i>	399
	<i>Subject Index</i>	425

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The Core Principles of Cognitive Behavior Therapy

1

Chapter

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Cognitive behavior therapy (CBT) is an important therapeutic paradigm as it has been shown repeatedly to be an efficacious and effective intervention for a wide variety of psychological problems (Chambless & Ollendick, 2001). In fact, it might be argued in an important technical sense that it is the only valid therapeutic paradigm—as the honorific *paradigm* is not a synonym for *theory* or *framework*. Rather, in its canonical sense as originated in Kuhn (1996), a paradigm is viewed as emerging from preparadigmatic pursuits when the program solves a problem or problems. Thus, to deserve the descriptor *paradigm*, the approach has to have a demonstrated problem-solving ability. CBT has shown to be effective for a wide variety of psychological problems while other therapeutic theories simply have not (Chambless & Ollendick, 2001; Fisher & O'Donohue, 2006). In this important sense, CBT may be said to be the only or at least the foremost paradigm in psychotherapy.

For example, in the well-known Chambless report, the techniques of cognitive behavior therapy are nearly exclusively those cited as probably supported or definitely supported. Moreover, the range of effectiveness of these CBT techniques is also quite impressive: enuresis, depression, skill building in the developmentally delayed, and a number of anxiety problems as well as a few dozen other problems (see Fisher & O'Donohue, 2006). It is not a “one problem therapy” as arguably some other interventions are, for example, eye movement desensitization and reprocessing (EMDR) for posttraumatic stress disorder (PTSD). The extension of these core principles has several important practical advantages that are described in more detail further on.

2 Cognitive Behavior Therapy

CBT has other significant advantages. It is often quicker (although there are some notable exceptions to this such as the behavior analytic treatment of autism; see Lovass, 1987). CBT often involves a dozen or a few dozen hourly sessions when it is instantiated in individual therapy—which admittedly is still a significant time commitment, but much shorter than traditional psychoanalytic therapy and much shorter than open-ended supportive psychotherapy, which often has no clear terminus. Also, cognitive therapy can be cheaper, as time is the major driver of cost in most therapies. Perversely, in current practice, customers do not tend to have the information that is needed to purchase effectiveness and quality and thus an hour of CBT can cost the same as an hour of rebirthing or sand tray therapy. Managed care has attempted to curb this lack of differentiation in consumer decision making but largely has not been all that successful. However, healthcare reform is oriented toward increasing the value of healthcare purchases and we believe the demonstrated effectiveness will increasingly be a market differentiator (Cummings & O'Donohue, 2011).

Furthermore, cognitive therapy is often conducive to manualization and it can thus be scaled. Some therapies might depend on difficult-to-define constructs that might be unique to the personality of the founder of the therapy school and thus not easily taught and scaled. For example, Fritz Perls's (1973) Gestalt therapy, with its emphasis on theatrics, confrontation, vague constructs such as authenticity, and in-the-moment interpersonal dynamics might be much less readily taught and disseminated. Scalability is vitally important given the prevalence of the problems psychotherapy attempts to attenuate: The issue is not whether one or a few therapists can master the techniques but whether thousands can.

A significant problem arises, however, with the notion of manualized therapy. It should be understood that the problem attempted to be solved with a treatment manual is fidelity, which is related to generalizability (Haynes, Smith, & Hunsley, 2011). How can the therapy be faithfully executed with other therapists, in other settings, with other clients? With over 600 *Diagnostic and Statistical Manual of Mental Disorders-IV-Text Revision* (DSM-IV-TR) (American Psychiatric Association, 2000) diagnoses, is there to be a manual for each of these and thus a competent therapist must master dozens or even hundreds of these treatment manuals? The fidelity problem becomes more complex when one considers either comorbidity or any other second order variable (for example, therapist experience, intelligence, and clinical judgment). The number of permutations clearly becomes unmanageable. Would there be a manual

for an individual with major depressive episode that also is suffering from comorbid panic disorder? Would there need to be still another manual for an individual with these two problems who is also Hispanic? When one crosses 600 diagnoses with comorbidity with another set of variables such as the therapist variables mentioned earlier, the combinatory number is staggering and practically unfeasible (for example, $600 \times 600 \times 8$). One sees that one treatment manual for each category of problem as delineated by these kinds of parameters clearly produces an unmanageable number of manuals.

Moreover, one still needs to understand the core of the treatment manual. A treatment manual for PTSD may contain many particular requirements and subgoals, but some of these are much more critical than others. All requirements in a manual are not of equivalent importance. For example, in a therapy manual for PTSD clearly instantiating exposure principles is important, and how the therapist goes over homework in session two, less important (Zalta & Foa, this volume, Chapter 4). This kind of consideration suggests that understanding the core principles of behavior therapy can be useful in faithfully and effectively delivering evidence-based treatment.

In addition, manuals cannot anticipate the idiosyncratic nature of many actual clinical cases. An understanding of the core principles embodied in the manual can be helpful to successfully adapting a manual to an idiosyncratic situation. For example, the range of trauma can be unique; for example, viewing one's brother dying from a untreated rattlesnake bite would be an occurrence that could be part of therapy but is not of a frequency that will ever be described in any detail in a treatment manual for PTSD. However, when one understands the core principle of exposure one is more likely to be able to effectively adapt a CBT PTSD treatment to this case.

Thus, one advantage of thinking in terms of principles is that it allows a more parsimonious but at the same time a deeper understanding of the mechanisms of change underlying treatment. This is of importance because although there are currently 600 individual diagnoses in the DSM-IV-TR (American Psychiatric Association, 2000) the trend across additions of the DSM is for new additions to include many additional diagnoses. Our field would be very complex indeed if each diagnosis had its own treatment manual with unique change principles underlying each diagnoses. Instead and quite fortunately it appears to be the case that a set of core principles underlies effective cognitive behavior therapy. For example, exposure therapy and modifying beliefs seems to be key to a

variety of anxiety disorders (see Zalta & Foa, this volume, Chapter 4). Skills acquisition and contingency management seems to be the keys underlying treatments for the developmentally disabled and autism spectrum disorders (see chapters by Twohig & Dehlin, this volume, Chapter 3; Rummel et al., this volume, Chapter 2). Thus, understanding some central core principles can provide a more coherent and parsimonious way of understanding the treatment of a broader range of individual disorders.

Second, these core principles allow a deeper understanding of change processes. Treatment manuals tend, by their nature, to have a fair amount of detail. Each detail specifying some therapeutic requirement does not have equal weight in producing beneficial outcomes. Understanding the principles that are being instantiated in the therapy manual can help the clinician to better understand the key components of treatment. Also, if the therapy needs modifications to meet the individual needs of the patient (for example, the patient needs more compressed treatment because they don't have time for the full 18 sessions that the manual specifies) an understanding of the core principles underlying the manual can help the clinician to accomplish these modifications in a faithful and effective manner.

A corollary of this is that manuals should be explicit on what principles they are attempting to instantiate. These ought to state something along the lines of "in the next two sessions two principles are being implemented: (1) identifying and modifying irrational beliefs and (2) apply behavioral activation principles so as to increase the patient's contact with positive events." This will allow the clinician a better understanding of the underlying importance of some of the goals of the therapy manual.

This can also mean that more process research is needed to better understand the actual mechanisms of change in therapies that have been identified as effective. The Chambless report mentioned earlier sometimes does this but mostly fails to. This is partly due to a notable particularity of trends in CBT research. In the early years, especially in the behavior analytic tradition, process variables were identified and directly manipulated to see their impact on outcome variables (O'Donohue & Houts, 1985). Titles of papers were more along the lines of "The effect of contingency management on increasing homework." The principle—contingency management in the outcome research—was clearly specified. Increasingly, therapeutic packages or therapies with general titles are tested and it is unclear what the active ingredients

of change are. Thus, if the title is something along the lines of “The effect of ACT on depression”; or “DBT reduces parasuicidal behavior,” it is much less clear in these multicomponent packages what principle or principles are being employed. Clearly we need more process research and dismantling research to better identify key elements of change. Otherwise, the relative importance of the components of a manual are not clear.

Therapy Is Not an Art

An implication of the identification of key principles underlying effective behavior change techniques is that therapy is not essentially an art. This is good news, because there are very few good artists and a lot of hacks. However, when something is a technical enterprise—such as civil engineering—there can be a high degree of general competence across practitioners. Therapy is at least in large part a technical enterprise that involves the skillful application of the active ingredients of change. It is thus partly a technology. Certainly this is not to say that therapy is mechanistic or algorithmic. However, a key question each therapist can ask herself in each session is: “What principles of change am I implementing in the treatment design?” If the answer is none, the therapist is likely to be wasting the client’s valuable time and money.

It is certainly the case that these principles can be somewhat artfully instantiated. It is important to note, however, that these principles also provide constraints. It is not acceptable art to do sand tray therapy, or rebirthing, or psychoanalysis, or supportive psychotherapy, as there are no identified causal mechanisms that can bring about change—particularly when compared to the alternatives discussed in this book. That is, if one is doing, say, nondirective therapy with someone who has panic attacks, then this can be legitimately criticized through this observation, “Exposure therapy and cognitive restructuring have been shown to be effective for this problem. The techniques you are implementing have not been. Why are you harming your patient by failing to provide them with a therapy based on principles that have empirical support?” This implies there are right answers in therapy; it is not a free-form art, though, but rather at least partly a technical problem, that is, what regularities have been shown to bring about the ends sought and how do I as therapist instantiate these regularities in this case? These principles need to play a large role in case formulation and treatment planning.

We believe that the principles outlined in this book bring accountability to therapist behavior and treatment planning. Therapists cannot simply implement a therapy that has caught their fancy but rather must design and implement therapies that are based on principles that have been supported as effective. This also implies that those that only rely on nonspecifics when designing or implementing therapy are doing so with the proverbial one hand tied behind their backs. Nonspecifics are clearly important. We believe, however, that the reviews such as the Chambless report entail the following conclusion: "It is important to deliver empirically supported therapy in a warm, empathic manner. Delivering only warmth and empathy, however, is insufficient and constitutes malpractice."

Thus, to some extent, therapeutic eclecticism ought to be dead. However, regrettably, in our field there are too few burials. This was a favored label of many therapists for self-identification for decades. Therapists seemed to describe themselves as eclectic because it connoted open-mindedness, versatility, a breadth of knowledge, and a wide skill set. (This may be more revealing of therapist narcissism than simply a label of therapeutic alliance.) Adding therapeutic techniques that have no known efficacy, however, is subtractive and diluting. The same can be said for those infatuated with therapeutic integration (Norcross & Goldfried, 2005; also see O'Donohue & McKelvie, 1993). *Integration* as a word has a lot of positive connotations but a surgeon who combines voodoo into established scientific surgery techniques is not being integrative in any positive sense but rather unethical and is committing malpractice. Antiseptics are to be used in surgery; throwing powder from a rhinoceros's penis is not. Therapeutic eclecticism can only be justified by adding other empirically supportive techniques (say, for example, interpersonal techniques to CBT techniques in the treatment of depression, since interpersonal therapy has also been shown to be effective) (Klerman & Weissman, 1993). The possibilities for such empirically supported eclecticism are very limited, however, because of the lack of evidence of the efficacy of the techniques from other therapy theories.

The Varieties of Instantiations of These Principles

Another advantage of explicating the core principles of effective therapy is that this can contribute to the exploration of alternative ways these can be instantiated. Individual and group therapy are viable modalities but

cannot meet the need for services. Individual psychotherapy is currently expensive, is of relative long duration (a dozen hours or more) and presents serious problems of accessibility. (The rural and the poor can have grave difficulties getting access to individual therapy.)

There has recently been important moves to instantiate core principles in delivery modalities that are less costly, quicker, and more accessible. This is an important and promising set of developments that again point to the importance of understanding these core principles. For example, the bibliotherapy movement has seen the production of a number of self-help books that contain these principles and that have themselves been subjected to randomly controlled trials showing their efficacy. David Burns's (1999) *Feeling Good* is arguably an instantiation of cognitive restructuring for individuals suffering from clinical or sub-clinical major depression. It has shown to have efficacy in a number of clinical trials (Scogin, Hamblin, & Beutler, 1987). Other books instantiate exposure principles (Foa & Wilson, 2001), contingency management (Patterson, 1977), or even a package of principles such as those found in relapse prevention approaches (Sbraga-Penix & O'Donohue, 2004). This is a very promising development.

Also, ehealth has also grown tremendously in the past couple of decades. This is a further important development that has the potential to allow core principles to be delivered at low cost over the web to millions of consumers (O'Donohue & Draper, 2010). Innovators have attempted to instantiate these core principles in therapy modules delivered in an automated manner on the web. The Australian site ecouch (<http://ecouch.anu.edu.au>) has used behavioral activation and cognitive restructuring in a free site for those with problems with depression. They have also developed web-based programs that have used exposure principles for anxiety disorders. Stoppulling.com uses contingency management principles to address trichotilomania. Lorig, Ritter, Laurent, and Plant (2006) has developed web-based programs that use cognitive restructuring, particularly self-efficacy to help improve treatment compliance in a variety of chronic illnesses such as diabetes. These attempts to provide low cost, effective, and widely disseminable instantiations of the core principles of CBT are important developments, as they have tremendous potential to provide high quality interventions to an enormous number of people for a wide variety of problems (O'Donohue & Draper, 2010).

We welcome these developments. We hope that more innovation will occur along these lines, as there is much to be gained, especially in helping to make progress on some of the facets of the healthcare crisis.

To best design and develop other effective modalities to help individuals either prevent behavioral health problems or resolve them, however, we must first understand the key principles that must be embodied in any such modality. In an important sense, bibliotherapy and ehealth are based on the commitment that it is the change principle that is important to instantiate, not the nonspecifics of the therapeutic relationship. This is controversial to those who have different theoretical commitments.

The Structure of CBT: Where Do Principles Fit In?

Behavior therapy is an increasingly complex approach to the treatment of human problems. In the 1950s, it began with a few simple principles: From Skinner, behavior therapists learned how to use contingency management, and from Wolpe, relaxation and exposure in his systematic desensitization. In the last 50 years, behavior therapy has ballooned to nearly a 100 separate techniques. It is daunting for the student or practitioner to understand and implement each of them (O'Donohue & Fisher, 2009).

We believe, however, that it is important to note that contemporary CBT is not a one- or two-principle therapy. It is based on a number of principles (we have enumerated 13 major principles in this book). These principles are themselves fairly unique—exposure is quite different from the use of positive psychology. To be competent at CBT, one has a large but definable task—understand and be able to implement these principles. It is also important to note that these principles are sometimes interrelated in an interesting web. Contingency management (Rummel et al., this volume, Chapter 2) is highly related to skill building (Twohig & Dehlin, this volume, Chapter 3), which is also related to behavioral activation (Kanter & Puspitasari, this volume, Chapter 9). Important theoretical work can be done in explicating the interrelationships between these principles.

We can thus see that, overall, the intellectual edifice of CBT is also complex. It can be said to have broad philosophical aspects, often involving views of the philosophy of science. Radical behaviorism, for example, makes statements about how a science of behavior ought to be conducted (see O'Donohue & Ferguson, 2001 for an explication of this). Going down from abstract to concrete, the next step in CBT's intellectual edifice might be the theories of CBT (see O'Donohue & Krasner, 1995). Theories such as alarm theory (Carter & Barlow, 1995) or reciprocal

inhibition (Wolpe, 1969) or even feminist theories that identify what the key variables are among thousands of alternatives, provide a broad explanation of what key regularities are, what principles are important, and often a narrative of the interrelationships among the key variables specified by the theory. The next level is the empirical regularities themselves. This level often grounds CBT in basic experimental psychology. Thus, evidence for extinction bursts, the use of positive reinforcement in building and maintaining new operant behaviors that are skills for more effective interactions with the environment, or automatic processing in cognitive experimental psychology to understand the importance of automatic thoughts in cognitive therapy are examples of such key empirical relationships. It is also important to recognize that it is certainly not the case that all CBT emerges from these empirical regularities. Another part of CBT's intellectual edifice is the borrowing of principles from a variety of sources—an example of this is Albert Ellis grounding his rational emotion behavior therapy in stoic philosophy rather than experimental cognitive therapy (Ellis & Whitely, 1979).

The last two other levels are principles and techniques. Techniques are the specific instantiations of principles. They may be fairly detailed descriptions of how to do systematic desensitization, for example, or how to instantiate a time-out from positive reinforcement. Techniques may be how the proverbial “rubber meets the road” in a therapy session. There can be a variety of techniques that can embody the same principle—graduated exposure, flooding, systematic desensitization, imaginal exposure, and EMDR may all be specific techniques, all of which embody the principle of exposure.

Techniques are interconnected, however, with the rest of the CBT intellectual edifice through principles. Each technique should be based on a principle. Time-out is based on contingency management (Friman, 2009). Systematic desensitization depends at least partly on exposure. Principles are like general rules that depict potent causal mechanisms that produce behavior change. They consequently play a key role in the intellectual edifice of CBT.

Major Components of the Intellectual Edifice of CBT

Philosophy (for example, radical behaviorism)

Theories (for example, alarm theory or relational frame theory)

Experimental Regularities (for example, extinction, habituation, automatic cognitive processing)

10 Cognitive Behavior Therapy

Principles (exposure, contingency management, skill building)

Techniques (time-out, systematic desensitization)

The Structure of the Book

We asked each other to write a chapter with the following dimensions of each core principle:

1. Definition of the principle
2. The basic research foundations of the principle
3. A brief history of the principle in CBT
4. Contemporary evidence-based applications of the principle in CBT
5. Relationship to other principles: its use in elements of more complex protocols
6. Research issues and unresolved issues regarding the principle

We have identified 13 core principles:

1. Functional analysis and contingency management
2. Skills training
3. Exposure
4. Relaxation
5. Cognitive restructuring
6. Problem solving
7. Self-regulation
8. Behavioral activation
9. Social skills
10. Emotional regulation
11. Communication
12. Positive psychology
13. Acceptance

The choice of these principles might be somewhat controversial. Some might argue that certain principles are missing: Why not include mindfulness with all of its recent attention? Some might argue with the inclusion of others: Does positive psychology have sufficient evidence to warrant

inclusion? Others might suggest that they are category mistakes in this list: Communication skills ought to be nested under general skill-building or placed under social skills. However, our response to these points is twofold:

1. The intellectual structure of CBT is simply not that neat. We do not have anything along the lines of a periodic table of elements within which properties of the underlying entity—nuclear structure—are the taxonomic principles that organize the phenomena of interest. In the absence of these properties, which carve nature at its joints, some human judgment must be used to make distinctions. Once judgment is in play, there is always room for others to argue for other judgments.
2. We have used pragmatic criteria for our judgments about inclusion. Our choice for inclusion was based on the principle's use in techniques, on the principle's role in theory, the amount of empirical support for interventions using the principle as well as the support in the basic experimental literature, whether the principle is generally treated as distinct (for example, communication skills are treated as distinct from social skills in marital therapy), and the amount of their recent interest (for example, acceptance).

We hope that this list of core principles continually changes; this would be a sign of a vibrant progressive paradigm. We doubt some principles will ever be dropped, for example, contingency management or exposure—these have been, and we predict will always be, core principles of CBT. We look forward, however, to the creative energies of scholars in developing and demonstration regularities to produce new principles.

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Clinical Functional Analysis: Understanding the Contingencies of Reinforcement

2

Chapter

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Clinical functional analysis is a powerful method of empirically identifying the variables that maintain a problem behavior. Defined as “the identification of important, controllable, causal functional relationships applicable to a specified set of target behaviors for an individual client” (Haynes & O’Brien, 1990, p. 654), functional analysis fosters precise matching of a client’s problem with effective intervention (Drossel, Rummel, & Fisher, 2009). The idiographic functional approach to assessment that is the foundation of clinical functional analysis takes a step closer to answering Gordon Paul’s (1967) classic treatment question: “What treatment, by whom, is most effective for this individual with that specific problem, and under which set of circumstances?” (p. 111).

Often described as at odds with topographically focused diagnostic strategies, functional analyses can complement the current diagnostic system through application when a client doesn’t closely fit diagnostic criteria, a powerful empirically supported treatment package does not exist, or when a treatment has failed to create effective change (Follette, Naugle, & Linnerooth, 2000; Haynes & O’Brien, 2000). Functional analysis is an alternative to the “diagnose and treat paradigm,” in which clinicians respond to treatment failure by applying a new diagnosis and another generic treatment package (Hunter, Wilkiniss, Gardnes, & Silverstein, 2008).

In this chapter, we walk you through a brief history of functional analysis, its distinguishing features, and foundational behavioral

principles and provide guidelines for completing a functional analysis. Lastly, case examples involving a variety of presenting problems are used to illustrate the application of functional analysis in clinical practice.

History of Functional Analysis

The philosophical foundation of functional analysis has many historical antecedents, including functionalism (Nelson & Hayes, 1986). Functionalism is a school of thought that grew out of opposition to the ideas of structuralism in the late 19th century. Informed by the work of Wilhelm Wundt, structuralism focused on breaking down internal and unobservable (to others) mental processes into the smallest unit possible. The primary means of collecting data was introspection, which many scientists have decried as unscientific because of its reliance on mere verbal constructions rather than concrete events (see discussion in Sturmey, Ward-Horner, Marroquin, & Doran, 2007; for example, Watson, 1924).

Rather than examine the elements of the mind, functionalism, which was influenced by the work of early pragmatist William James and the evolutionary theory of Charles Darwin, sought to explain the *purpose* of psychological events and behavior. Functionalist approaches emphasized the study of observable behavior rather than invisible internal events, looking to the environment surrounding the organism to help understand behavior (Angell, 1907). As Nelson and Hayes (1986) explained, from a functionalist view, “‘Why’ questions are answered by specifying the contextual relationships into which behavior enters and showing how these in turn influence behavior” (p. 5). Within this framework, all behavior is assumed to be adaptive and in some way useful to the organism (Sturmey et al., 2007).

In the early 20th century, an increasing number of animal studies, including the work of John Watson and Ivan Pavlov, emphasized rigorous empiricism and objectivity in investigating the influence of environmental stimuli on the organism’s behavior. In his 1913 article, “Psychology as the Behaviorist Views It,” Watson outlined the tenets of a new philosophy of psychology, *behaviorism*, in which the primary goal was the prediction and control of behavior. Deviating from Watson’s focus on reflexes and classical conditioning, B. F. Skinner formalized the ideas of *radical* (or “root”) *behaviorism*, which stems primarily from the functionalist tradition (O’Donohue & Ferguson, 2001). Radical behaviorism emphasizes operant conditioning and the interaction between

an organism and the environmental consequences of its actions. From Watson's behaviorist perspective, private mental events are not suitable for scientific study (Watson, 1924); alternatively, Skinner proposed that events "within the skin" could be subjected to analysis (Skinner, 1974, p. 36). In this way, behavior does not necessarily mean only overt, observable behavior, but can entail more broadly psychological events, including both private and publicly observable psychological events.

Functional analysis has historically been applied predominantly to the treatment of observable problematic behaviors in developmentally disabled populations, with the first studies demonstrating a relationship between the environment and problematic behaviors, such as self-injury, published in the 1960s (Berkson & Mason, 1963; Lovaas, Freitag, Gold, & Kassorla, 1965). Functional analysis has been extraordinarily powerful in improving the lives of vulnerable populations through an emphasis on nonaversive methods of behavior change, the promotion of alternatives to maladaptive behaviors for accessing reinforcement, and the empirical demonstration of the influence of environmental stimuli on the occurrence of problem behaviors (see Austin & Carr, 2000).

Over the past four decades, functional analyses have been increasingly applied to problem behaviors in other populations. Functional analytic treatments have been developed for such complex problems as mood disorders, substance abuse, eating disorders, and psychotic disorders (see Fisher & O'Donohue, 2010; Sturmey, 2007). Based on Skinner's radical behavioral perspective, internal events such as emotions or thoughts are conceptualized as coming under the same control as overt behaviors. Thus, the functional analysis of private events such as emotions and thoughts involves identifying antecedents and consequences for these behaviors in a manner conceptually identical to the functional analysis of overt behavior. The investigator may use verbal reports from the client or other informants rather than direct behavioral observation alone, with the same goal of identifying relationships between behaviors and environmental stimuli.

Distinguishing Features of Functional Analysis

To understand the relevance of functional analysis, one must first understand the features that distinguish it from other forms of assessment. These distinctive features have been illustrated by Haynes and O'Brien (1990), Nelson and Hayes (1986), and Farmer and Nelson-Gray (2005) and are summarized next.

Focus on Function of Behavior Over Topography

As the label entails, a functional analysis focuses on the function or purpose of the behavior rather than the behavior's topography. Topography, as Farmer and Nelson-Gray (2005) wrote, "refers to the form or descriptive features of a behavior, independent of the consequences that follow a behavior" (p. 52). For example, *self-harm behavior*, *significant weight loss*, and *self-isolation* all describe the topography of behavior, but fail to explain why the behavior is occurring—that is, what environmental antecedents evoke it or environmental consequences maintain it. The *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR) (American Psychiatric Association, 2000) is a popular example of a topographical description, within which the number of symptoms and their occurrences are emphasized over the context in which they occur. A major criticism of the DSM-IV-TR is that diagnoses fail to identify the causal and manipulable physiological or environmental variables that help inform treatment (Anderson, 2007; Hayes & Follette, 1992). In this sense, the diagnostic process, as Ferster (1965) described it, is based on a static analysis instead of a dynamic functional analysis.

In contrast, determining the function of a given behavior through analysis of the relevant controlling variables, such as the behavior's antecedents and consequences, allows the clinician to hypothesize on how it can be changed. Using a clinical example to clarify, consider a client who is routinely late for sessions. Alone, the information is not very informative. The client may be late because she is avoiding disclosing emotionally painful information or because she does not want the preceding client to see her in the waiting room. While the behavior in both cases appears to be the same to the casual observer, the function is clearly different.

The Unit of Analysis

A core foundation of functional analysis is that behavior cannot be understood in isolation. Within this framework, the unit of analysis is the whole person interacting in and with his particular environment. When the analysis increases from the individual to the individual within his context, the function or the purpose of the behavior can be understood instead of its topographical features (Haynes & O'Brien, 2000). Consider the experience of two clients, Mrs. X and Mrs. Y, attending a grief support group. Both clients are observed to cry every time they are asked to share. Topographically, the crying behavior looks the same across

the two clients, but when the context is included in the analysis, it becomes clear that Mrs. X's crying behavior allows her to skip her turn sharing, while Mrs. Y's crying behavior elicits sympathy from the other group members. Alone, the description of the crying behavior was not particularly helpful, as ". . . examining behavior cut off from its context can lead to a completely useless analysis" (Hayes, Follette, & Follette, 1995, p. 142).

Idiographic Approach

Functional analyses recognize the complexity of human behavior and examine it on an individual basis. As Haynes and O'Brien (1990) explained, functional analyses address causal relationships for behavior problems of individual clients rather than addressing causal relationships for a behavior problem across clients. The latter refers to a nomothetic approach, which focuses on groups of individuals, such as the approach taken in the DSM-IV-TR (Nelson & Hayes, 1986; American Psychiatric Association, 2000). In contrast, the idiographic focus of the functional analysis process allows for the identification of target behaviors relevant for the specific client and the contexts in which they occur (Farmer & Nelson-Gray, 2005).

Enhanced Treatment Utility

A major benefit of the functional approach to assessment is in its increased treatment utility over more traditional forms of assessment (Follette et al., 2000; Anderson, 2007). The phrase *treatment utility of assessment* has been used in the literature to "refer to the degree to which assessment is shown to contribute to beneficial treatment outcome" (Hayes, Nelson, & Jarrett, 1987, p. 963). A way to evaluate for treatment utility is to ask yourself: "Does the assessment information I have gathered indicate a specific course of action which I would otherwise not know to take if I did not have this information?" (Hayes et al., 1995, p. 144). If the answer is no, then the assessment lacks treatment utility and will not help promote favorable treatment outcomes for the client.

A well-done functional analysis leads logically to interventions that manipulate the environmental variables identified in the assessment (Haynes & O'Brien, 1990). A functional approach allows you to target the primary problem and select the specific empirically supported intervention without having to waste time and resources by using a complete treatment package (Follette et al., 2000). For example, a functional analysis of a depressed client may indicate that the depressed mood

directly covaries with a lack of contact with pleasant interactions with family members. A logical treatment target stemming from the assessment would be to target interpersonal skills for close relationships. In this sense, functional analysis is inherently prescriptive.

Functional Analysis Is Dynamic and Iterative

Functional analyses are dynamic and ongoing processes wherein an initially prescribed intervention is adapted in response to new data about the individual's behavior and context (Hayes et al., 1995). The iterative and self-correcting nature of the functional assessment also increases its treatment utility, as assessment is built in to assure that the intervention is working. If the prescribed intervention does not result in the expected outcome, then the therapist and client can loop back to reconceptualize the functional relationships identified (Hayes et al., 1995). The process can continue on in this manner until the desired outcome is achieved.

Basic Behavioral Principles

Functional analysis methodology is conducted with the assumption that behavior emitted by the individual occurs within an environmental context, which exerts control over and reciprocally is influenced by the behavior of the individual. These processes are described as contingencies of behavior. To best conduct a functional analysis, one must be familiar with the principles underlying contingencies of behavior as well as the different types of contingencies.

The Three-Term Contingency: Antecedents, Behavior, and Consequences

A contingency consists of antecedents, behavior, and consequences (see Figure 2.1). While a superficial examination of the relationship between these three terms may lead to the conclusion of a mechanical, linear relationship, the contingency is rather a continuous and dynamic behavior-context unit (Drossel et al., 2009). In this sense, the terms are related in a probabilistic manner, rather than a mechanistic cause and effect manner. The relationships between the terms are discussed as antecedents increasing the probability that a behavior will be emitted and the emitted behavior increasing the probability that a consequence will be delivered.