
CHAPTER 1

Background

There is a principle which is a bar against all information, which is proof against all arguments and which cannot fail to keep a man in everlasting ignorance—that principle is contempt prior to investigation.

—HERBERT SPENCER

Since its initial development in 1987, Eye Movement Desensitization and Reprocessing (EMDR) therapy has been empirically supported by randomized controlled trials (RCTs) and is internationally recognized as an effective treatment for trauma and a wide range of experientially based disorders. The development of the therapy and its theoretical framework grew from an exploration of consistently achieved treatment effects, an exploration that refined the procedures and protocols into a comprehensive treatment approach. As we shall see, the standardized procedures and information-processing theory that guide clinical practice incorporate many aspects that should prove familiar to most clinicians, academicians, and researchers.

EMDR is best known and was initially named for the eye movements that are part of the procedures, and the positive effects of this component have now been confirmed by a meta-analysis of 26 randomized controlled studies (Lee & Cuijpers, 2013). However, it is vital that we view the therapy as a whole system. Eye movement is only one form of stimulation used and only one component of the complex approach. Furthermore, despite the term “desensitization” in its name, the goal of the therapy is not simply anxiety reduction. In fact, as noted in the Preface, if I had to do it over again, I would rename the approach “reprocessing therapy.” Therefore,

although the initials EMDR are still the designated name of the therapy, the following points will be emphasized throughout this volume:

1. Bilateral dual attention stimulation is merely one component integrated with procedural elements unique to the therapy, as well as aspects synthesized from all the major psychological orientations.
2. As a comprehensive approach, careful attention is given to images, beliefs, emotions, physical responses, increased awareness, internal stability, resiliency, and interpersonal systems in achieving the effects of EMDR therapy.
3. Clinicians must use different EMDR protocols, depending on the types of pathology, and follow therapeutic procedures customized to the need of the client.
4. The purpose of the eight-phase EMDR therapy is to help liberate the client from the past into a healthy and productive present.

Mastery of the EMDR therapy basic principles, procedures, and protocols directs the clinician in assisting the client to transmute negative experiences into adaptive learning experiences. For example, when treating a victim of a single rape, the clinician identifies the different aspects of the trauma that are disturbing the client. These may include intrusive images; negative thoughts or beliefs the client has about herself or her role in the rape; negative emotions such as fear, guilt, or shame and their associated body sensations; and, conversely, the precise way the client would prefer to think about herself instead. The rape victim may begin by feeling intense fear and shame. She may have constant images of the rape intruding on her present life and may experience negative thoughts such as “I am dirty” or “It was my fault.” After her clinician has effectively treated her using EMDR therapy procedures to focus on specific internal responses, the rape victim will be able to recall the rape without feelings of fear and shame. She may, in fact, feel empowered and be able to say, “I did very well. He was holding a knife at my throat, and I managed to stay alive.” In addition to this positive change in her thoughts and beliefs, she will no longer have intrusive images of the rape. If she later recalls the event, her associated emotions, thoughts, and body sensations may be neutral or positive rather than disturbing. As one rape victim who received EMDR treatment said of her attack, “It’s still an ugly picture, but not because I did anything wrong.” In fact, the belief she internalized about herself was “I’m a strong, resilient woman.”

As illustrated by this example, EMDR therapy catalyzes learning. When the target is a disturbing memory, the negative images, negative beliefs, and negative emotions become less vivid and less valid. The targeted memory appears to become linked with more appropriate information: The client learns what is necessary and useful from the disturbing past experience, and the event is restored into memory in an adaptive,

healthy, nondistressing form. But learning is a continuum. When the target is positive, such as an alternative desirable imagined future, the imagery, beliefs, and affects become more vivid, more enhanced, and more valid. Therefore, EMDR therapy is used to (1) help the client learn from the negative experiences of the past, (2) desensitize present triggers that are inappropriately distressing, and (3) incorporate templates for appropriate future action that allow the client to excel individually and within her interpersonal system.

Clearly, then, from this simple description of the standard three-pronged protocol, we see that EMDR therapy brings together aspects of many major psychological orientations: the attention to etiological events underscored by psychodynamic therapy, the conditioned responses highlighted by behavior therapy, the beliefs of cognitive therapy, the emotions of experiential therapies, the body sensations of somatic therapies, the imagery work of hypnotic therapies, and the contextual understanding of system's theory. We shall see this integration of salient orientations throughout the text.

As a comprehensive approach, all of EMDR's procedures and protocols are geared to contribute to positive treatment effects through an interaction of client containment and information processing (see also Shapiro, 1999, 2002a; Shapiro & Laliotis, 2011). Every treatment effect is an interaction of client, clinician, and method. Clinicians must understand how to prepare clients appropriately and stay attuned to their individual needs while keeping the information-processing system activated so learning can take place. Clinicians must take a comprehensive history to identify the appropriate targets for processing and the developmental deficits that may have to be addressed. EMDR therapy has proved highly successful in the treatment of major trauma (Bisson, Roberts, Andrew, Cooper, & Lewis, 2013; Watts et al., 2013; see Chapter 12), and observations of thousands of client sessions over the last 30 years show clearly that early disturbing experiences of all kinds can have similar negative and long-lasting effects.

For example, if we allow our minds to scan back into childhood and bring up a humiliating incident, many of us find that we still feel the flush of the emotion, or that the thought that was there at the time automatically arises. We feel our bodies flinch. According to the adaptive information processing model that guides EMDR therapy practice (see Chapter 2), we would say that this event has been insufficiently processed and that these automatically arising thoughts, emotions, and physical reactions may be inappropriately coloring our perceptions and actions in similar present circumstances. We may react negatively to authority, groups, new learning experiences, or whatever aspects are evident in that memory. These are not merely conditioned responses, they are responses inherent in the stored memory. When an event has been sufficiently processed, we remember it but do not experience the old emotions or sensations in the present. We are informed by our memories, not controlled by them.

As reviewed in detail in Chapter 2, the symptoms of posttraumatic stress disorder (PTSD) are clearly derived from dysfunctionally stored experiences of this type. The nightmares, flashbacks, intrusive thoughts, and high levels of arousal may be viewed as signs of this state-dependent storage. Victims clearly feel inappropriate levels of fear and powerlessness and behave accordingly. However, what EMDR therapy has shown us over the past years is that even ubiquitous events, such as childhood humiliations and disappointments, can leave comparable lasting negative effects. As I discuss in detail in the next chapter, research has supported these clinical observations. Although the adverse events may not breed the intrusive imagery of PTSD, the emotions, beliefs, and physical sensations arise in the body and mind, coloring present perceptions and leading to unhappiness and inappropriate behaviors in the present. In simple terms, the past is present. It therefore does not matter whether it is a “big T” traumatic event that precipitates PTSD or the more ubiquitous “small t” events that are rampant throughout childhood. There is a long-lasting negative effect on self and psyche. By dictionary definition it is a “trauma” and, in information-processing terms, it is posited to be dysfunctionally stored as an emotional/episodic memory, in a form that prevents it from subsequently evolving into a usable integrated/semantic memory. (For comprehensive discussions of memory systems see Alberini & LeDoux, 2013; Armony & LeDoux, 1997; Lane, Ryan, Nadel, & Greenberg, 2015; Schacter & Tulving, 1994; Squire, 2004; Stickgold, 2002; van der Kolk, 2014; van der Kolk, Hopper, & Osterman, 2001). The initial goal of EMDR therapy is to process these experiences and help liberate the client into the present.

For the practicing clinician, the important distinction between an adaptively processed and a dysfunctionally stored event is that in the former case, adequate learning has taken place and it is stored with appropriate emotions, able to guide the person in the future. The dysfunctionally stored memory still has within it some of the sensory perceptions and thoughts that were there at the time of the event. Essentially, the childhood perspective is locked in place and causes the person to perceive the present from a similar vantage point of defectiveness (e.g., “I’m unlovable/not good enough”), lack of safety, or lack of control. Clinicians observe this every day in their practices: Clients “know” they shouldn’t be feeling hopeless or powerless or unlovable, but they do. They may slip into the intonation of childhood when speaking of earlier experiences. There is a split between what they want to do and what they can do; between the possibilities available and their ability to perceive and act on them. The EMDR clinician must therefore identify the events that have been dysfunctionally stored and are stunting and coloring the client’s present perceptions (Shapiro, 2007, 2014a; Shapiro & Forrest, 1997/2016) and assist in processing them. Essentially, EMDR facilitates learning on multidimensional emotional, cognitive, and physiological levels.

Individuals suffering from traumatic events who participated in numerous controlled PTSD studies, and those who have experienced adverse life events contributing to other disorders, have attained rapid improvements through EMDR therapy, bringing them into the “normal” range on a wide variety of measures (see Chapter 12 for a research review). Indicators of self-efficacy and well-being have increased, while anxiety and depression have declined. The same indicators are apparent in general clinical practice and appear to support the theory that the processing of similarly dysfunctionally stored childhood experiences allows the client to become fully and comprehensively an adult; that is, it appears that most dysfunctional characteristics displayed across the full spectrum of psychological disorders may be viewed as being grounded in experiential contributors. Clearly, the interplay of genetic predisposition and the circumstances compromising resiliency, such as fatigue, substance abuse, and so on, all play a part in the full clinical picture. It is assumed that some disorders, such as certain forms of depression, may be caused purely by organic deficits and would not be appropriate candidates for EMDR treatment. But research and clinical experience indicate that most pathologies, including certain forms of depression, are forged by earlier experiences that contain affects of “helplessness,” “hopelessness,” or any of the full spectrum of emotions that constitute a sense of self-denigration and lack of personal efficacy. Although by no means a panacea, the specific role of EMDR therapy is to help metabolize the experiential contributors to present dysfunction, which may range from easily identified critical incidents such as rapes and assaults, through the more innocuous-seeming negative interactions with family, peers, teachers, strangers, and others that have left a lasting negative effect.

For many of our clients, it appears that simply processing these earlier experiences allows the appropriate cognitive and emotional connections to be made and adaptive behaviors to spontaneously emerge, along with insights and positive self-concepts. However, for clients who have been badly neglected and abused in childhood, it is also important to determine what developmental windows might have closed before important infrastructures were set in place. Did the traumatized child learn object constancy, or will it need to be taught during therapy? What will the clinician have to model for the client? What experiences will have to be engendered to allow healthy relationship patterns to emerge? Once such positive interactions are forged within the therapeutic relationship, they too become stored in memory and can be enhanced through the EMDR procedures.

As therapists, we must be careful to view our clients as complex beings functioning on all levels of sensing, thinking, feeling, acting, and believing. And we must not be satisfied with simply removing overt suffering. Our clients deserve more than that. They deserve the ability to love, to bond, to excel, and, if they choose, to find the desire to serve others. They deserve all the attributes that Maslow (1970) described as self-actualization. To that

end, we use a standard three-pronged EMDR therapy protocol to afford all clients a comprehensive treatment of past, present, and future. It is hoped that no one is considered expendable.

We have come a long way since the days when the mind was viewed merely as a “black box.” Developmental neuropsychologists have demonstrated that neglect and lack of attachment during early childhood may lead to a lack of the cortical organization needed for self-soothing and self-regulation (Schoore, 1997, 2001, 2015; Siegel, 2002, 2012, 2016). These and other findings have informed clinical practice and resulted in a stronger emphasis on the need for early stabilization of such clients and the use of EMDR protocols to enhance their access to positive affects and experiences (Korn, 2009; Shapiro & Laliotis, 2015; Wesselmann & Shapiro, 2013; see Chapter 11). Although the degree of remediation possible for the most severely abused clients has not yet been determined, it should be underscored that detrimental neurobiological findings are not necessarily permanent. With the advent of single-photon emission computed tomography (SPECT) scans, functional magnetic resonance imaging (fMRI), and a greater understanding of neurotransmitters, studies indicate that biological changes do take place subsequent to EMDR processing (e.g., Bossini, Fagiolini, & Castrogiovanni, 2007; Heber, Kellner, & Yehuda, 2002; Landin-Romero et al., 2013; Lansing, Amen, Hanks, & Rudy, 2005; Levin, Lazrove, & van der Kolk, 1999; see Chapter 12). The utility of EMDR therapy is found in its ability to afford relatively rapid change, so that interventions can be quickly assessed and therapeutic corrections made. However, the real strength of EMDR therapy is found in its integrated approach to treatment. The wisdom of all the psychology orientations is needed to make sure that no one is left behind. The goal of EMDR therapy is to achieve the most profound and comprehensive treatment effects possible in the shortest period of time, while maintaining client stability within a balanced system. However, these changes should optimally manifest on all levels of being and functioning. Our job as clinicians becomes more comprehensive and textured as we go beyond unilateral models and treat the whole person in the context of an interconnected social system.

Although many clinicians share the notion that they should foster the client’s drive toward personal enhancement, a primary emphasis of the field of psychology has been directed to developing a standardized classification system of overt symptoms and specific disorders. Research has largely been directed to identifying patient characteristics and response styles and, secondarily, to the testing of various treatments for the designated disorders. Controlled research has shown EMDR therapy to be effective in the treatment of PTSD, and there is a clear need to evaluate EMDR and all other forms of psychotherapy in myriad other applications. Less than 20 years ago, independent reviewers of the American Psychological Association Division 12 Task Force on Empirically Supported Treatments (Chambless et al., 1998) indicated that of all the hundreds of diagnoses and therapies,

approximately 12 techniques were considered “well established” by controlled research for isolated conditions, which included “headaches” and “coping with stressors.” In other words, at that time, almost every condition listed in the *Diagnostic and Statistical Manual of Mental Disorders* had no well-established, empirically supported treatment. To date, evaluations of treatments through randomized trials for a wide range of disorders are still in need of improvement (Beutler & Forrester, 2014; Huhn et al., 2014). Suggestions for such research are explored in Chapter 12 and Appendix C.

A CHANCE DISCOVERY

Although the role of eye movement had been well documented in connection with higher cognitive processes and cortical function (Amadeo & Shagass, 1963; Antrobus, 1973; Antrobus, Antrobus, & Singer, 1964; Gale & Johnson, 1984; Leigh & Zee, 1983; Monty, Fisher, & Senders, 1978; Monty & Senders, 1976; Ringo, Sobotka, Diltz, & Bruce, 1994), and indeed had previously been identified as correlated with a shift in cognitive content (Antrobus et al., 1964), its use in EMDR therapy is based on a chance observation I made in the spring of 1987. While walking one day, I noticed that some disturbing thoughts I was having suddenly disappeared. I also noticed that when I brought these thoughts back to mind, they were not as upsetting or as valid as before. Previous experience had taught me that disturbing thoughts generally have a certain “loop” to them; that is, they tend to play themselves over and over until one consciously does something to stop or change them. What caught my attention that day was that my disturbing thoughts were disappearing and changing without any conscious effort.

Fascinated, I started paying very close attention to what was going on. I noticed that when disturbing thoughts came into my mind, my eyes spontaneously started moving very rapidly back and forth in an upward diagonal. Again, the thoughts disappeared, and when I brought them back to mind, their negative charge was greatly reduced. At that point I started making the eye movements deliberately while concentrating on a variety of disturbing thoughts and memories, and I found that these thoughts also disappeared and lost their charge. My interest grew as I began to see the potential benefits of this effect.

A few days later, I started to try it out with other people: friends, colleagues, and participants in the psychology workshops I was attending. They had a wide range of nonpathological complaints and, like the rest of the population, had had varying amounts of psychotherapy. When I asked, “What do you want to work on?” people brought up disturbing memories, beliefs, and present situations, with complaints ranging from early childhood humiliations to present-day work frustrations. Then I showed them

how I had moved my eyes rapidly back and forth, and I asked them to duplicate those eye movements while simultaneously holding their problems in mind. The first thing I discovered was that most people do not have the muscle control to continue the eye movement for any length of time. Still determined to investigate, I asked them to follow my fingers with their eyes as I moved my hand back and forth, until their eye movements duplicated the speed and direction I had used that day in the park. This worked much better.

However, the next thing I discovered was that people would start feeling better but would then get stuck in the disturbing material. To overcome this difficulty, I tried different kinds of eye movements (faster, slower, in different directions) and asked people to concentrate on a variety of different things (e.g., different aspects of the memory or the way it made them feel). As we proceeded, I began to learn which strategies were most likely to get positive and complete results. In addition, I started to find standard ways of opening and closing the sessions that seemed to contribute to positive effects.

In short, by working with some 70 people over the course of about 6 months, I developed a standard procedure that consistently succeeded in alleviating their complaints. Because my primary focus was on reducing anxiety (as that had been my own experience with the eye movements) and my primary modality at that time was behavioral, I called the procedure “Eye Movement Desensitization” (EMD).

THE FIRST CONTROLLED STUDY

In the winter of 1987 I decided to see whether EMD would prove successful under controlled conditions. In my initial work I had used EMD most easily and most effectively with old memories. Therefore, I decided that for my first official study I wanted to find a homogeneous grouping of people who had difficulty with old memories. The people who first came to mind were rape victims, molestation victims, and Vietnam veterans who fit the diagnosis for PTSD as defined by the then-current third edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-III; American Psychiatric Association, 1980). Initially, this seemed an ideal population because of their old memories, but there was a catch: I did not know whether the procedures would prove effective in resolving traumatic memories, inasmuch as I had not yet tried them with any pathological conditions. What if the brain stored traumatic memories in a different way? What if they could not be accessed by the procedures in the way that disturbing but nontraumatic memories could?

To test whether EMD would work with people who had traumatic memories, I decided to find a volunteer who had suffered combat trauma. “Doug” was a counselor at a local Veterans Outreach program. Although

he was generally very well adjusted and successful, he had one recurring memory that continued to upset him tremendously. On a tour of duty in Vietnam in the 1960s, Doug had served as an infantryman. One day while he was unloading dead soldiers from a rescue helicopter, a buddy came up and gave him very upsetting news about one of the bodies he had just handled. I asked Doug to hold the memory of that moment in his mind while he followed my hand with his eyes. He did this, and after two or three sets of eye movements, he reported that the scene had changed: The auditory part of the memory had vanished. Instead, all he saw was his buddy's mouth moving; no sound came out. After several more sets of eye movements, Doug told me that the scene had been transformed in his mind's eye until it looked like "a paint chip under water" and that he now felt calm. "I can finally say the war is over and I can tell everyone to go home," he said. When I later asked him to think of Vietnam, the image that emerged was—instead of dead bodies—a memory of the first time he had flown over the country, when it had looked to him like "a garden paradise." This was the first time in 20 years that Doug had remembered that positive image of Vietnam. Our experience together was so successful that other veterans were referred to me for treatment at the Veterans Outreach Center. Over the next few months, I worked with a number of other veterans who had been suffering with PTSD symptoms for more than 10 years. Within a few sessions, they also achieved relief. Importantly, the effects lasted. For instance, 6 months later, when I checked back with Doug, he told me the positive effects had maintained. The disturbing image had not intruded since his treatment. Moreover, when he deliberately retrieved the memory, it looked like the "paint chip," and he felt no distress when he saw it.

My success with Doug and the other veterans at the center seemed to confirm that decades-old traumatic memories could be accessed and resolved by the method. With that encouragement, I began a controlled study with 22 victims of rape, molestation, or Vietnam combat who were suffering from traumatic memories. The subjects were randomly assigned to a treatment or control group.

I used EMD with the treatment group, and I gave the subjects in the control group a placebo by asking them to describe their traumatic memory in detail. I interrupted subjects in both groups approximately the same number of times for scoring the anxiety level and for feedback, using the same questions (e.g., "What do you get now?"). The purpose of having a control group was to allow for the possibility of positive effects resulting merely from the subjects' having the direct attention of a researcher and spending a similar amount of time exposed to the memory. This exposure, in which the subject holds the memory in focused consciousness for a prolonged time, might be regarded as a modified "flooding" condition, as it was known at the time, but I considered it a placebo condition, because positive treatment effects are not expected with direct therapeutic exposure (DTE) of a single session's duration (Keane & Kaloupek, 1982).

I asked individual subjects in both groups to tell me about the disturbing image of their traumatic memory, along with whatever negative thoughts and beliefs they had about the situation or their participation in it (e.g., “I’m dirty,” “I’m worthless,” or “I’m not in control”). I called this the “negative cognition.” Then I asked subjects to recall the memory and the negative cognition and to rate their anxiety level using an 11-point Subjective Units of Disturbance (SUD) scale, in which 0 represents “neutral intensity” and 10 equals the “highest possible anxiety” (Wolpe, 1991). I also asked subjects to verbalize a positive thought or belief they would like to have about themselves (e.g., “I’m worthwhile,” “I’m in control,” or “I did the best I could”). Finally, I asked them to rate how true they felt this positive belief was by means of a 7-point semantic differential scale—designated the Validity of Cognition (VOC) scale—in which 1 represents “completely false” and 7 means “completely true.” I cautioned subjects to use their gut feeling as the basis for their judgment rather than some intellectual analysis.

The treatment group showed two marked changes: Anxiety levels decreased, showing a pronounced desensitization effect, and there was a marked increase in the subjects’ perceptions of how true their positive beliefs were, showing a strong cognitive restructuring. The control group initially showed increased anxiety, which was consistent with the responses to initial phases of flooding procedures found by other researchers (Boudewyns & Shipley, 1983). In addition, as the control subjects’ anxiety increased, it was not unusual for their sense of self-efficacy to decrease. For ethical reasons, EMD was administered to the control group after they had participated in the placebo condition, and positive treatment effects were obtained with the delayed treatment condition. The positive treatment effects, maintained at 1- and 3-month follow-up, indicated that substantial desensitization, pronounced cognitive restructuring of perceptions regarding the traumatic event, and a decrease in primary symptoms had been achieved. For instance, complaints of sleep disturbances were greatly reduced. A subject who had a lifelong history of one or two violent, fearful dreams per week reported that he had a violent dream on the night following EMD treatment, but that on this occasion he had felt no fear and in the dream had “ritually bowed to [his] Samurai enemies.” They had then “joined forces,” and he had had no subsequent violent or fearful dreams. He stated that this was, as far as he could remember, the first period of his life in which he had no nightmares and felt consistently “good and confident, without breaks.” His wife corroborated that he no longer thrashed around in bed. A Vietnam veteran who had had flashbacks, intrusive thoughts, and nightmares for 21 years about a particular incident also reported only one subsequent nightmare, one that had “no power to it.” Moreover, he confided, “I realized that the person in the dream cutting my throat was me.” He had had no other frightening dreams. He acknowledged that he had occasional intrusive thoughts but claimed, “None have power anymore.” He also described himself as calmer on all related issues and memories.

Although the study was flawed by the lack of standardized measures and blind evaluations, only one other controlled study (with similar confounds) had been published with this population (Peniston, 1986). It had reported moderate effects after 45 sessions of biofeedback-assisted systematic desensitization. Therefore, along with two other studies on prolonged exposure therapy published the same year, which found a 30% symptom reduction, the EMDR pilot research became one of the first published controlled studies assessing PTSD symptomology (Shapiro, 1989a).

FURTHER CLINICAL AND EXPERIMENTAL OBSERVATIONS

During the 28 years since the initial pilot research (Shapiro, 1989a), more than 20 controlled randomized studies of EMDR have been published that substantiate its efficacy (see Bisson et al., 2013; Maxfield & Hyer, 2002; Rodenburg, Benjamin, de Roos, Meijer, & Stams, 2009; Watts et al., 2013; see also Appendix D). Consequently, the practice guidelines of the International Society for Traumatic Stress Studies designated EMDR therapy as an effective treatment for PTSD starting in 2000 (Shalev, Friedman, Foa, & Keane, 2000) and have continued to do so (Foa, Keane, Friedman, & Cohen, 2009), along with many other organizations, both domestic (e.g., Department of Veterans Affairs & Department of Defense, 2017) and international (e.g., World Health Organization, 2013). A review of the extant controlled research and suggestions for future investigations are covered in detail in Chapter 12, after the methodology is more fully explained.

In addition to the controlled research, successful clinical results achieved with EMDR indicate the wide range of its applicability (see also Appendix D). Since the initial efficacy study (Shapiro, 1989a), positive therapeutic results with EMDR have been reported with a wide range of populations, as documented in numerous case reports and studies (see also Chapter 12). These include the following:

1. Diverse PTSD populations suffering from war trauma, such as combat veterans from Desert Storm, the Vietnam War, the Korean War, and World War II, and terrorist victims and refugees.
2. Persons with phobias, panic disorder, and other anxiety disorders, who revealed a rapid reduction of fear and symptomatology.
3. Crime victims, police officers, and first responders who are no longer disturbed by the aftereffects of violent assaults.
4. People relieved of excessive grief due to the loss of a loved one or to line-of-duty deaths, such as engineers no longer devastated with guilt because their trains unavoidably killed pedestrians.
5. Children healed of the symptoms caused by the trauma of assault or natural disaster.

6. Sexual assault victims who are free of debilitating symptoms, enabling them to lead normal lives and have intimate relationships.
7. Accident, surgery, and burn victims who were once emotionally or physically debilitated and are now able to resume productive lives.
8. Victims of sexual dysfunction, who are now able to maintain healthy sexual relationships.
9. Clients at all stages of chemical dependency and other addictions, who now show stable recovery and a decreased tendency to relapse.
10. Clients with acute trauma and a wide variety of PTSD and trauma-based personality issues who experience substantial benefits.
11. People with performance anxiety and those seeking performance enhancement in business, performing arts, school, and sports activities who have benefited.
12. People suffering from somatic disorders or chronic pain, who have rapidly recovered.
13. Clients with diagnosed personality disorders or complex PTSD, who show increased stabilization and functioning.
14. Clients with depression and a wide variety of other diagnoses, who have experienced substantial benefit from EMDR.

SHIFT IN PARADIGM

As I noted in my earlier reports (Shapiro, 1989a, 1989b), numerous procedures that appeared to be responsible for the positive treatment effects I achieved in the initial study could not be included in the articles because of page constraints. The continued refinement of these procedures and the subsequent evaluation of hundreds of case reports from trained clinicians led to the full realization that the optimal procedures caused the simultaneous desensitization and cognitive restructuring of memories, the elicitation of spontaneous insights, and an increase in self-efficacy, all of which appeared to be by-products of the adaptive processing of disturbing memories. This realization led to my renaming the therapy Eye Movement Desensitization and Reprocessing (EMDR).

The change of name from EMD to EMDR in 1990 included a personal change in orientation from the initial behavioral formulation of simple desensitization of anxiety to a more integrative information-processing paradigm. This paradigm includes the application to clinical practice of the terminology and some of the concepts of information-processing and associative networks originally presented by Lang (1977) and Bower (1981). Although a number of other foundational information-processing theories have great merit (Barnard & Teasdale, 1991; Chemtob, Roitblat, Hamada, Carlson, & Twentyman, 1988; Foa & Kozak, 1986; Horowitz, 1979, 1998;

Litz & Keane, 1989; McClelland, 1995; Rachman, 1978, 1980; Teasdale, 1999), the EMDR-based information-processing model is generally both compatible with them and distinct in its elements and applications.

Although all the information-processing models are inherently speculative, they give rise, it is hoped, to a greater understanding of the underlying principles that govern perception and the integration of new information within extant conceptual and emotional frameworks. Their utility lies in their ability not only to explain but also to predict clinical outcomes. Yet although the individual model often dictates certain clinical applications, the success of the clinical applications does not “prove” the model to the exclusion of all others. Each model evokes a set of principles that may lead to positive treatment effects under predetermined conditions. The adventure lies in finding exceptions to the rule and formulating principles to explain and elicit clinical phenomena that lie outside predicted outcomes.

The behavioral desensitization formulation I initially used for EMD certainly resulted in positive effects, but I found that it could not explain a number of clinical phenomena sufficiently, nor could it account for the clinical success of a variety of procedural applications. This is not unusual. Overall, each model also predicts the types of clinical applications necessary for optimal effects, and a number of extant treatments have borne out their utility. For instance, the “mindfulness” applications elucidated by Teasdale (1999) have received empirical support in clinical application of mindfulness-based cognitive therapy (e.g., Piet & Hougaard, 2011; Kimbrough, Magyari, Langenberg, Chesney, & Berman, 2010), and the principles espoused by Rachman (1980) and Foa and Kozak (1986) have received empirical support through the application of prolonged exposure therapy, which has been empirically validated in numerous studies (see McLean, Asnaani, & Foa, 2015). However, although the principles and mindfulness practices espoused by Teasdale (1999) can be easily identified in EMDR practices (see Chapter 5), the other, also valuable theories, contraindicate practices that have proved successful in EMDR therapy.

For instance, Rachman (1978) lists silence, distractions, and brief presentations among those practices that would impede processing and vivid, long, and repeated presentations as promoting processing. These forms of clinical application are also proposed by Foa and Kozak (1986) and Foa and McNally (1996). However, as we shall see, EMDR uses silent, brief exposures to ever-changing and often diffuse internal stimuli, along with an external source of attention, which could be considered a “distraction.” In fact, according to some exposure researchers, “in strict exposure therapy the use of many of [‘a host of EMDR-essential treatment components’] is considered contrary to theory” (Boudewyns & Hyer, 1996, p. 192). Therefore, although in no way diminishing the importance of exposure therapies, the prevailing principles governing their use do not appear to predict or explain EMDR practices or the clinical phenomena that are generally observed (McCullough, 2002; Rogers & Silver, 2002; see Chapter 12 for

further discussion). The information-processing model that guides EMDR practice was based largely on these observed clinical phenomena, including the rapid amelioration of symptoms associated with previous resistant disorders such as body dysmorphic disorder (Brown, McGoldrick, & Buchanan, 1997), phantom limb pain (Shapiro & Forrest, 1997/2016), and PTSD (see Chapter 12).

The successful application of EMDR to cases of phantom limb pain may prove a useful point of context. Although it has been reported that as many as 85% of amputees suffer phantom limb pain (Hsu & Cohen, 2013; Melzack, 1992), few treatments have offered consistent or long-lasting results (Niraj & Niraj, 2014). The adaptive information processing model, however, predicted the possibility of positive treatment effects with the application of EMDR, which were later achieved clinically by independent practitioners (e.g., de Roos et al., 2010; Russell, 2008a; Schneider, Hofmann, Rost, & Shapiro, 2007; Wilensky, 2006). Basically, phantom limb pain can be viewed as a manifestation of the stored somatic memory. The fact that the pain is still perceived in an absent limb is a perfect example of dysfunctional memory storage. Once the etiological memory and the pain sensations are targeted with EMDR processing, the pain generally remits. This example of the need to catalyze the information processing of a stored memory can serve as an icon for general EMDR treatment. As long as the memory is dysfunctionally stored, the negative affect and physical sensations are maintained regardless of the cognitive awareness that there is no limb—or, in other pathologies, no need for fear and suffering.

Observation of many EMDR treatment sessions has identified certain patterns of information processing and memory association that have led to the formulation of certain principles, which in turn guided the continued development and refinement of the specific practice, protocols, and procedures of EMDR therapy. A principle that is crucial to EMDR practice (but not specified in other information-processing theories), and which is suggested by the consistent application of the procedures, is that there is a system inherent in all of us that is physiologically geared to process information to a state of mental health. By means of this system, negative emotions are relieved, and learning takes place, is appropriately integrated, and is available for future use. In other words, when the system is functioning properly, processing results in an adaptive resolution of the troubling or frightening memories. The system may become unbalanced because of a trauma or stress engendered during a developmental period, but once it is appropriately activated and maintained in a dynamic state by means of EMDR therapy, it can rapidly transmute information to a state of therapeutically appropriate resolution. Desensitization, spontaneous insights, cognitive restructuring, and association to positive affects and resources are viewed as by-products of the adaptive reprocessing taking place on a neurophysiological level.

The invocation of a neurophysiological level is a simple recognition that this is where all change ultimately occurs. It is not assumed to be specific to EMDR therapy; rather, any form of successful therapy is ultimately correlated with a neurophysiological shift. Such a neurophysiological shift is explicit in models informing prolonged exposure therapies (Foa & Kozak, 1986; Marks, Lovell, Noshirvani, Livanou, & Thrasher, 1998) and implicit in some psychodynamic models (Horowitz, 1979). The information-processing paradigm also subsumes my originally held behavioral orientation, which included a recognition of the interaction of learned material, conditioned responses, physiological concomitants, and the therapist's ability to intervene in a structured manner for behaviorally observable results. Indeed, many behaviorists may choose to interpret EMDR therapy solely in terms of conditioning and/or exposure (see Chapter 12 for a discussion of the exposure paradigm), and many tenets of conditioning and exposure are indeed compatible with EMDR therapy. However, research over the last decade has shed much light on the underlying mechanisms of EMDR therapy, and while there is more to be revealed, clinicians currently need the most useful clinical heuristic we can provide. The information-processing paradigm, which I have termed the "adaptive information processing model," provides a way both to explain EMDR therapy's treatment effects and successfully predict the appropriate application of the therapy to a variety of presenting problems. The parameters of that model are briefly described in the next section. A more extensive discussion is offered in Chapter 2.

ADAPTIVE INFORMATION PROCESSING

The adaptive information processing (AIP) model was developed to explain the rapidity with which clinical results are achieved with EMDR therapy and the consistency of the many patterns of response to it. On the basis of the observation of thousands of EMDR therapy processing sessions, the earlier desensitization paradigm was replaced by this model, which not only explains treatment outcomes more effectively but also accurately predicts more beneficial clinical effects when certain variations are used. Hence, the therapeutic application of principles, protocols, and procedures consistent with the AIP model results in greater treatment effects than those produced by the initially described EMD (Shapiro, 1989a, 1989b); that is, the principles that guide procedures often establish the parameters of the clinical applications.

Briefly stated, AIP regards most pathologies as derived from earlier life experiences that set in motion a continued pattern of affect, behavior, cognitions, and consequent identity structures. (I explore this in detail in Chapter 2.) The pathological structure is inherent within the static, insufficiently

processed information stored at the time of the disturbing event. Across the clinical spectrum, ranging from simple PTSD and phobias to more complex conditions such as panic disorders, some forms of depression, dissociation, and personality disorders, pathology is viewed as configured by the impact of earlier experiences that are held in the brain in state-specific form.

The continued influence of these early experiences is due in large part to the present-day stimuli eliciting the negative affect and beliefs embodied in these memories. Although a client's memory may be of an actual event and of behavior that may then have been appropriate for the disturbing situation, the lack of adequate assimilation means the client is still reacting emotionally and behaviorally in ways consistent with the earlier disturbing incident. For example, a child may understandably feel fear and lack of control when threatened by an adult, but an identical reaction by an adult to a similar situation is generally inappropriate. Likewise, an adult may feel fear and lack of control during a hurricane, but an identical reaction to a stiff breeze months later is pathological. The dysfunctional nature of traumatic memories, including the way in which they are stored, allows the negative affect and beliefs from the past to pervade the client in the present. EMDR therapy's processing of such memories spontaneously accesses physiological networks containing adaptive information (illustrated in Chapter 2) and allows the more positive and empowering present affect and cognitions to generalize to the associated memories throughout the neurophysiological network and leads spontaneously to more appropriate behaviors by the client.

Clinical pathologies are therefore viewed as amenable to change if the clinician appropriately targets the information that has been stored dysfunctionally in the brain. Even pronounced personality disorders are viewed as susceptible to change by virtue of reprocessing the memories that set in motion the dysfunctional characteristics; the memories targeted, for instance, may be those that cause a person with a paranoid personality to be suspicious of people or one with an avoidant personality to feel unsafe. In addition, of course, developmental and experiential deficits are addressed through appropriate processing and assimilation of positive information (see Chapter 8).

Adopting the AIP model can facilitate the ability of many EMDR-trained clinicians to achieve both substantial and comprehensive treatment effects. For some clinicians this may appear to be a natural integration of already held beliefs; for others it may demand a personal shift in clinical conceptualization. There are a number of critical elements of the proposed paradigm. I mention them here, but they are more thoroughly developed in Chapter 2.

1. *The possibility of direct, nonintrusive, physiological engagement with the stored pathological elements.* Observation of EMDR treatment effects suggests that pathologies are represented by dysfunctional

information that is physiologically stored and that can be accessed and transformed directly, without the use of medication. For instance, rather than addressing the client's *reaction* to the disturbing event—as biofeedback, exposure therapies, or relaxation training do—EMDR therapy focuses on the memory itself. The resulting transmutation of the information in the targeted memory appears to occur spontaneously, leading to a change in client reaction.

The observations of EMDR-produced shifts in the memory itself and the way it is stored are consistent with independent conjectures regarding the different manifestations of declarative (narrative) and nondeclarative memory (Lipke, 2000; Stickgold, 2002; van der Kolk, 2002, 2014). For instance, before EMDR treatment, the components of the traumatic target memory—picture, cognition, affect, physical sensations—often appear to be manifested in the state-specific and disturbing form in which they were acquired. Some researchers suggest that such traumatic memories are held in nondeclarative memory (e.g., van der Kolk, 1994, 2014; Stickgold, 2002). After effective EMDR treatment, however, the memories are stored with a less disturbing picture, a positive cognition, and an appropriate affect. In addition, there are no attendant disturbing physical sensations. Perhaps the processing of the information allows its appropriate storage in semantic memory, a development that also means freedom from pathological reactions.

2. An information-processing system that is intrinsic and adaptive.

It appears that an innate information-processing system exists, and that pathologies occur because this mechanism is blocked. Therefore, if the traumatic memory is accessed and the system is activated, with EMDR therapy the information is taken to an adaptive resolution. The observations of thousands of EMDR processing sessions appear to bear out this conjecture. Apparently, the system is configured to process the information and restore mental health in much the same way the rest of the body is geared physiologically to heal when injured. This belief is the basis for the primarily client-centered model of EMDR therapy, which assumes that during EMDR processing the client's shifting cognitions and affects will become more appropriate and adaptive, and move to optimal levels, with minimal clinician intrusion.

The suggestion that trauma itself in some way causes an imbalance that prevents adequate processing was presented by Janet (1889/1973) and Pavlov (1927), and has been made in studies on the effects of neurotransmitters (Frick et al., 2016; Sullivan et al., 2013; van der Kolk, 1994, 2014; Watson, Hoffman, & Wilson, 1988; Zager & Black, 1985). In addition, the hypothesis that the traumatic information itself will move to a positive plateau once the system is activated has grown from the consistent observations of EMDR processing sessions. For instance, there are no reports of rape victims who are at peace with the event and subsequently move

through EMDR processing to a level of self-loathing. However, rape victims entering treatment in a state of shame and guilt have evolved with completed treatment to positive states, such as self-acceptance and peace. Although EMDR clients may break through feelings of dissociation and denial, and temporarily feel more disturbed, this is merely a transitional stage toward healthy resolution.

On the one hand, this movement toward a positive state when the information-processing system is maintained in dynamic form through the use of EMDR therapy is certainly consistent with conjectures by Rogers (1951) and Maslow (1970). On the other hand, it is also consistent with the assumptions of the medical model, wherein medications and interventions are used to unblock or accelerate the body's natural healing properties. In the EMDR treatment of trauma, an analogous healing is assumed if the information-processing mechanism is unblocked.

3. *A change in identity constructs as the embedded information shifts.* As the disturbing information is transformed, there is a concomitant shift in cognitive structure, behavior, affect, sensation, and so forth. Clinical experience has shown that once specific memories are reprocessed, the client's sense of self-worth and self-efficacy automatically shifts. This leads spontaneously to new, more self-enhancing, behaviors. The AIP model holds that underlying dysfunctional memories are primarily responsible for pathological personality characteristics, and that they can be structurally altered. The theory accurately predicts and is consistent with findings of EMDR clinicians (e.g., Brown & Shapiro, 2006; Fensterheim, 1996; Mosquera, Leeds, & Gonzalez, 2014) that even severe personality disorders (with the obvious exception of chemically or organically based conditions) may be amenable to comparatively rapid change through the targeting and reprocessing of key memories and attention to the remediation of developmental deficits.

4. *A release from previously accepted temporal limitations.* EMDR therapy has the ability to facilitate profound therapeutic change in much less time than has been traditionally assumed to be necessary, regardless of the number of years since the traumatic event occurred. In EMDR the clinical emphasis is on facilitating therapeutic effects through the adaptive connection of associative neurophysiological networks in the information-processing system. The close proximity of these physiological networks logically dictates that treatment outcomes need not be rigidly time-bound. For example, some controlled studies have indicated that 84–100% of single-trauma PTSD has been eliminated within 4.5 hours of treatment (see Chapter 12).

Because all clinical modalities can be defined as ultimately working with information stored in the brain, the information-processing paradigm provides an integrative approach that can include and interpret key

aspects of different modalities such as psychodynamic, behavioral, cognitive, Gestalt, and body-oriented therapies (including psychopharmacology).

THEORETICAL CONVERGENCES

The use of EMDR therapy can be fully compatible with most of the known psychological orientations (Norcross & Shapiro, 2002; Shapiro, 2002b). The importance of early childhood memories clearly fits into the psychodynamic model (Freud, 1900/1953; Jung, 1916; Wachtel, 2002), and the importance of focused attention to current dysfunctional reactions and behaviors is completely consistent with the conditioning and generalization paradigms of classical behaviorism (Salter, 1961; Wolpe, 1991). In addition to being a client-centered approach (Rogers, 1951) with a strong affective and experiential basis (Bohart & Greenberg, 2002; Greenberg, 2010; Greenberg & Safran, 1987), EMDR therapy addresses the concept of positive and negative self-assessments, which has firm roots in the field of cognitive therapy (Beck, 1967; Ellis, 1962; Meichenbaum, 1977; Young, 1990; Young, Zangwill, & Behary, 2002), and the emphasis on the physical responses related to a client's presenting dysfunction (van der Kolk, 2002, 2014) is an important element in its full therapeutic utilization.

Posttraumatic Stress Disorder

EMDR began as a therapy specifically for the treatment of people with PTSD. As such, the fundamental approach and a number of the treatment components were based on research reports regarding this population. For instance, studies done with Vietnam combat veterans called attention to the traumatic event itself, indicating that the psychological reactions to stress are expected to persist as a direct function of the magnitude of the stressor (Figley, 1978; Kadushin, Boulanger, & Martin, 1981; Laufer, Yager, Frey-Wouters, & Donnellan, 1981; McDermott, 1981; Strayer & Ellenhorn, 1975; Wilson, 1978). As we shall see, observation of EMDR treatment sessions indicates that premorbid events can have a tremendous influence on the predisposition to PTSD. This observation has been borne out in independent research (Afifi, Mota, Dasiewicz, MacMillan, & Sareen, 2012; Bernat, Ronfeldt, Calhoun, & Arias, 1998; Blanchard & Hickling, 1997; Breslau, Chilcoat, Kessler, & Davis, 1999; Bromet, Sonnega, & Kessler, 1998; Felitti et al., 1998; Heim, Plotsky, & Nemeroff, 2004; King, King, Foy, & Gudanowski, 1996; Teicher et al., 2010; Varese et al., 2012).

There is a consensus in the therapeutic community working with trauma survivors that the amelioration of PTSD is accomplished when the victim comes to grips with the traumatic incident. When EMDR therapy was developed, a wide range of treatment techniques were employed but, unfortunately, there were comparatively few controlled studies in the

literature to corroborate the efficacy of many of them (cf. Foa, Keane, & Friedman, 2000). At this point, EMDR therapy and trauma-focused cognitive-behavioral therapy (CBT) are widely recognized as the only two effective empirically supported treatment approaches for the treatment of PTSD (Bisson et al., 2013; Watts et al., 2013; World Health Organization [WHO], 2013). Nonetheless, it is useful to review how EMDR therapy theory and practice compare not only to CBT but also other major orientations prevalent in clinical practice.

Psychodynamic Approaches

Although research has failed to support psychodynamic therapy in the treatment of PTSD, it continues to be widely used in general clinical practice. EMDR treatment is highly compatible with the the psychodynamic information-processing model (Horowitz, 1979), which proposes that one's natural "completion tendency" continues to rework the traumatic information in active memory until it can be reconciled with one's internal models of the world. Unless the trauma can be incorporated into existing schemata, the information will remain in active memory and break through in intrusive thoughts. This process alternates with numbing and avoidance until some integration results.

The psychodynamic approach attempts to reintegrate the traumatic experience using a variety of techniques geared to specific stages of the disorder (or the therapeutic process), as well as to the personality development of the client (for comprehensive reviews, see Kudler, Krupnick, Blank, Herman, & Horowitz, 2008; Summers & Barber, 2009). Therapeutic interventions include "covering" techniques (e.g., stress management) for stages involving intrusive memories and "uncovering" techniques (e.g., psychodrama) during denial stages (Horowitz, 1973, 1974). The "completion tendency" theory is clearly compatible with the blocked-processing paradigm of EMDR therapy, and the utilization of various strategies for effective relief is consistent with the multifaceted approach of EMDR therapy, which includes self-control techniques, the incorporation of stages of imagined reenactment, and the adoption of alternative behaviors. Furthermore, as noted by Wachtel (2002), EMDR therapy, which employs free associative processes similar to psychodynamic therapy, appears to enhance the "working through" of the memory through both insight and integration. Solomon and Neborsky (2002) have also reported that EMDR therapy is fully compatible with the newer brief psychodynamic models.

Cognitive-Behavioral Approaches

The behavioral approach to PTSD was elucidated by Keane, Zimering, and Caddell (1985) in relation to treatment of combat veterans, and follows Mowrer's (1960) two-factor learning theory, which incorporates both

classical and operant conditioning. It was argued that there is an analogous relationship between the development of the fear and avoidance behavior found in PTSD and that found in laboratory-conditioned animals.

The first factor in Mowrer's theory involves learning by association, or classical conditioning, as in Pavlov's early experiments in which a bell, termed a conditioned stimulus (CS), was paired with a shock, or unconditioned stimulus (UCS). This pairing leads to an aversive emotional state (such as fear) at the sound of the bell (Pavlov, 1927). The second factor is instrumental learning, or avoidance behavior, which entails consistent avoidance by the organism of both the CS (bell) and the UCS (shock). In this paradigm, the fear generated by gunfire in wartime or by rape is associated with other presenting cues. All such cues, such as loud noises or dark streets, are then avoided by the victim whenever possible. Diagnostic criteria for PTSD include intrusive thoughts regarding traumatic events, flashbacks, and nightmares that include specific details of the trauma. Therefore, behavioral techniques were adapted to increase exposure to the CS in order to cause extinction of the concomitant anxiety/fear behavior and physiological arousal. Because the existence of the traumatic incident is the basis of the psychological and behavioral maladaptation, behavioral approaches employed DTE (Boudewyns & Shipley, 1983) techniques, also known as "flooding" (Malleon, 1959) and "implosion" (Stampfl, cited in London, 1964), for the alleviation of PTSD.

In the DTE treatment of PTSD, traumatic memories are often revived over several sessions until the anxiety is reduced. The intention is to maintain the maximum amount of anxiety in the client for sustained periods. The treatment is based on the assumption that forced exposure that prohibits the usual avoidance response to an anxiety-producing stimulus (which is not reinforced by an unconditioned aversive stimulus) will cause the anxiety to be extinguished (Levis, 1980; Stampfl & Levis, 1967). Currently, the most widespread treatment utilizing exposure in the treatment of PTSD is prolonged exposure (PE; see Foa, Hembree, & Rothbaum, 2007) therapy, which is based on the emotional processing theory (Foa & Kozak, 1986), and posits that negative beliefs involving lack of safety result in avoidance behaviors that prevent the beliefs from being disconfirmed. Therefore, treatment consists of imaginal exposure to the event through repeated within-session descriptions of the trauma by the client, which are recorded. Between-session homework assignments involve listening to the recordings and daily *in vivo* exposure, in which the client is instructed to deliberately go to anxiety-provoking environments (e.g., a dark alley similar to the one where the woman was raped).

EMDR therapy offers an alternative treatment of traumatic memories that does not necessitate prolonged exposure to high-anxiety-producing stimuli or homework, yet desensitizes the traumatic event rapidly. Direct comparisons have reported more rapid declines of anxiety with EMDR processing (e.g., Rogers et al., 1999). Nine of 11 RCTs comparing forms of

exposure-based CBT have indicated that EMDR therapy is equivalent or superior on some measures, with five studies reporting positive effects in fewer sessions (see Chapter 12 for further discussion).

EMDR therapy may be considered an exposure method by some because the client is asked initially to maintain the traumatic event in consciousness for direct treatment effect. However, attention to the incident is not maintained, as in standard exposure therapies, and the amount of exposure needed in EMDR appears to be much less (e.g., 4.5 treatment hours; Ironson, Freund, Strauss, & Williams, 2002; Marcus, Marquis, Sakai, 1997, 2004; Rothbaum, 1997; Wilson, Becker, & Tinker, 1995, 1997) than the prolonged exposure required by DTE techniques for the extinction process to develop and for the client to show signs of decreased anxiety (see Rogers & Silver, 2002; Rogers et al., 1999). Additionally, research has indicated different underlying mechanisms of action in that the lengthy exposures used in trauma-focused CBT (TF-CBT) result in extinction, while short exposures such as those of EMDR therapy result in memory reconsolidation (Suzuki et al., 2004). As described by Craske, Herman, and Vansteenwegen (2006), “. . . recent work on extinction and reinstatement . . . suggests that extinction does not eliminate or replace previous associations, but rather results in new learning that competes with the old information” (p. 6). The differences between reconsolidation and extinction have important implications in regard to relapse potential and clinical applications (see Shapiro, 2014a) and are discussed in Chapter 12.

While PE utilizes extended imaginal and *in vivo* exposures to disconfirm the negative beliefs posited to underlie PTSD, other CBT treatments emphasize the use of a variety of techniques to directly restructure the beliefs. The most widespread of these cognitive therapies in the United States is cognitive processing therapy (Resick & Schnicke, 1992), which initially included an exposure-based written narrative of the account but has subsequently reported superior outcomes by dropping that element (Resick et al., 2008). The therapy includes discussions of the trauma and techniques such as the use of Socratic dialogue to directly address the negative beliefs. Other CBT therapies for PTSD such as cognitive therapy for PTSD (Ehlers & Clark, 2000), narrative exposure therapy (Schauer, Neuner, & Elbert, 2011), and brief eclectic psychotherapy (BEP) for PTSD (Gersons, Meewisse, & Nijdam, 2015) use a combination of cognitive therapy and exposure techniques. While the form of exposure may vary in type and duration, in all cases the event is discussed in detail and specific client–therapist interactions focus on changing the interpretation of the event.

As indicated previously, in the WHO (2013) practice guidelines, EMDR and trauma-focused CBT are the only two psychotherapies recommended for the treatment of PTSD across the lifespan. However, while similarities exist, distinct differences were described: “Unlike CBT with a trauma focus, EMDR does not involve (a) detailed descriptions of the

event, (b) direct challenging of beliefs, (c) extended exposure, or (d) homework” (p. 1). These procedural differences and the implications for clinical treatment are explored in detail in later chapters.

Integrative Approach

EMDR was initially developed as a therapy that would specifically help clients integrate new, desirable self-statements while allowing for rapidly desensitizing traumatic cues. In addition, a cognitive reassessment that includes redefining the event, finding meaning in it, and alleviating the inappropriate self-blame (Janoff-Bulman, 1985) was integrated as an important aspect of the EMDR treatment of trauma survivors. Furthermore, EMDR is structured to facilitate a rapid integration of the new information, coping skills, and behaviors offered by the clinician. Just as the cognitive-behavioral approach has come to include many diverse techniques, a number of them are inherent in EMDR’s integrative procedures (Lazarus & Lazarus, 2002; Smyth & Poole, 2002; Young et al., 2002). Likewise, EMDR therapy also encompasses aspects of experiential (Bohart & Greenberg, 2002), psychodynamic (Solomon & Neborsky, 2002; Wachtel, 2002), feminist (Brown, 2002), somatic (van der Kolk, 2014), and a number of other major psychological orientations (Norcross & Shapiro, 2002; Shapiro, 2002a; Zabukovec, Lazrove, & Shapiro, 2000). However, as a distinct form of psychotherapy, the standardized procedures and protocols of EMDR therapy are unique, including the specific use of bilateral dual attention stimuli such as eye movements, taps, or tones. Furthermore, EMDR is guided by the AIP model, which differentiates it from other forms of therapy. As noted previously, the cognitive-behavioral paradigm views dysfunctional cognitions and behaviors as the sources of pathology and uses procedures to directly challenge and change them. The procedures of EMDR therapy are guided by the AIP tenet that the dysfunctional cognitions and behaviors are merely symptoms of the physiologically stored memory, which is addressed directly through processing procedures that include the use of bilateral stimuli.

Leading neurobiological researchers have posited theories to explain the effects of the bilateral dual attention stimuli (Andrade, Kavanaugh, & Baddeley, 1997; Stickgold, 2002; van der Kolk, 2002). Empirical investigations have indicated a direct effect on the working memory (e.g., Smeets, Dijs, Pervan, Engelhard, & van den Hout, 2012) and brain connectivity (e.g., Nieuwenhuis et al., 2013). Research has also explored the implications of a proposed orienting response and potential connections with rapid eye movement sleep (e.g., Kuiken, Chudleigh, & Racher, 2010). Concurrent with the use of other procedural elements, the bilateral dual attention stimulus appears to titrate disturbance, facilitate associative processing, and enhance memory retrieval. The research is reviewed in Chapter 12, along with suggestions for future investigations.

SUMMARY AND CONCLUSIONS

The origin of EMDR therapy, initially called EMD, was my observation of the apparent desensitizing effect of spontaneous repeated eye movements on unpleasant thoughts. The use of directed eye movements with 70 volunteers with nonpathological complaints proved effective in reducing disturbance. During these trials, the procedure was elaborated to maximize its effects for use on a clinical population. A controlled study of 22 subjects suffering from PTSD symptomatology, published in the *Journal of Traumatic Stress* (Shapiro, 1989a), indicated that the procedure was highly beneficial for desensitization, cognitive restructuring, and elimination of pronounced intrusions stemming from the traumatic event.

The change of name from EMD to EMDR occurred when it became apparent that the procedure entailed an information-processing mechanism rather than a simple desensitization treatment effect. The integrative AIP model underscores a methodology that stimulates the presumed self-healing mode of an inherent information-processing system. Early memories are considered to be the primary basis for most psychological disorders, and effects of EMDR therapy are viewed as rapidly changing the impact of these memories in order to alter the current clinical picture. A three-pronged approach is used to target the etiological event, current triggers, and templates for appropriate future action.

As an integrative psychotherapy, a variety of EMDR therapy's components are compatible with psychodynamic, cognitive, experiential, behavioral, and somatic orientations. However, EMDR therapy is widely recognized in both domestic and international practice guidelines as an effective form of treatment distinct from the other major modalities. It should be noted for both clinical and research purposes that EMDR therapy is a complex approach, with a variety of procedures and protocols that are deemed necessary for full effectiveness. Chapter 2 provides a more detailed explication of the model for clinical use.