

EMDR, Adaptive Information Processing, and Case Conceptualization

Francine Shapiro
EMDR Institute, Inc.
Watsonville, CA

EMDR is an integrative, client-centered psychotherapy approach that emphasizes the brain's information processing system and memories of disturbing experiences as the bases of those pathologies not caused by organic deficit or insult. EMDR addresses the experiences that contribute to clinical conditions and those needed to bring the client to a robust state of psychological health. Overviews of the history, development, and research that have established EMDR as an empirically supported treatment are provided. Subsequent to an explanation of the adaptive information processing model, an extended case example is used to illustrate the recommended EMDR case conceptualization and eight phases of treatment. This approach is used to process the early memories that set the foundation for the pathology and the present situations that trigger the dysfunction, while providing templates for appropriate future action that incorporate the information and behaviors needed to overcome skill and/or developmental deficits. The benefits of integrating EMDR and family systems perspectives to provide the most comprehensive therapeutic effects are described.

Keywords: EMDR (eye movement desensitization and reprocessing); adaptive information processing model; memories; family systems therapy; integrative psychotherapy

Just as “Beauty is in the eye of the beholder,” so is clinical dysfunction. Although certain symptom patterns are consistently recognized as constituting diagnosable disorders, each psychological modality is grounded in a specific paradigm that guides the clinician into a different way of conceptualizing disorders. These theoretical paradigms provide explanations of pathology and recommend related interventions to eliminate symptoms and assist the client.

EMDR (eye movement desensitization and reprocessing) is no exception. In its 20-year history, it has evolved from a simple technique into an integrative psychotherapy approach with a theoretical model that emphasizes the brain's information processing system and memories of disturbing experiences as the basis of pathology. The eight-phase treatment comprehensively addresses the experiences that contribute to clinical conditions and those that are needed to bring the client to a robust state of psychological health.

History of EMDR

EMDR was introduced in 1989 with a published randomized controlled study (Shapiro, 1989) that evaluated one-session treatment effects with traumatized individuals. At that time it was called eye movement desensitization, or EMD, because it was informed by a behavioral orientation, and it was thought that eye movements were unique in causing an effective desensitization. From this vantage point, the treatment effects were viewed primarily as a reduction in the fear and anxiety resulting from the traumatization.

Over subsequent years, it was discovered that other forms of bilateral stimulation¹ (eye movement, taps, or tones) were also effective (Shapiro, 1991b, 1994a). Further, it was realized that changes in anxiety and fear, in fact the whole process of desensitization, were only by-products of a comprehensive reprocessing of the experience. During treatment, negative emotions were replaced with positive ones, insights surfaced,

body sensations changed, and new behaviors spontaneously emerged, along with a new sense of self. In short, the traumas were transformed into learning experiences that rapidly unfolded and strengthened the victim into survivor and then into “thrivers.” EMD then became EMDR, with the addition of the word *reprocessing* (Shapiro, 1991a, 1994b) to signify these changes. This concept of the transformation of the stored experience through a rapid learning process is the key to understanding the basis and application of EMDR and its guiding adaptive information processing model (Shapiro, 1995, 2001, 2002). The purpose of this chapter is to provide an overview of both theory and practice.

Controlled Research

As with any form of psychotherapy, the neurobiological underpinnings of EMDR’s treatment effects are currently unknown. Although the bilateral stimulation is only one procedural element of the treatment, because of its uniqueness it has attracted the most attention. The component analyses of the eye movements with clinical populations have shown only marginally significant effects (Davidson & Parker, 2001), but are flawed by the inclusion of inappropriate populations and limited amount of treatment (Chemtob, Tolin, van der Kolk, & Pitman, 2000; DVA/DOD, 2004; Perkins & Rouanzoin, 2002). However, laboratory studies have identified distinct effects of the eye movements in regard to memory retrieval, reduction of negative emotions, imagery vividness, and attentional flexibility (e.g., Andrade, Kavanagh, & Baddeley, 1997; Barrowcliff, Gray, Freeman, & MacCulloch, 2004; Christman Garvey, Propper, & Phaneuf, 2003; Kavanagh, Freese, Andrade, & May, 2001; Kuiken, Bears, Miall, & Smith, 2001–2002; Van den Hout, Muris, Salemink, & Kindt, 2001; see Appendix B).

The efficacy of EMDR’s application to trauma treatment has been demonstrated in approximately 20 controlled studies in which it was compared to pharmaceuticals (van der Kolk et al., 2007) and various forms of psychotherapy (e.g., Carlson, Chemtob, Rusnak, Hedlund, & Muraoka, 1998; Edmond, Rubin, & Wambach, 1999; Ironson, Freund, Strauss, & Williams, 2002; Jabberghaderi, Greenwald, Rubin, Dolatabadim, & Zand, 2004; Lee, Gavriel, Drummond, Richards, & Greenwald, 2002; Marcus, Marquis, & Sakai, 1997, 2004; Power et al., 2002; Rothbaum, Astin, & Marsteller, 2005; Scheck, Schaeffer, & Gillette, 1998; Taylor et al., 2003; Vaughan et al., 1994). Consequently, both the practice guidelines of the American Psychiatric Association (2004) and the Departments

of Veterans Affairs and of Defense (2004) have placed EMDR in the highest category of effectiveness and research support. This same status is also reflected in numerous international guidelines (e.g., Bleich, Kotler, Kutz, & Shalev, 2002; Dutch National Steering Committee, 2003; National Institute for Clinical Excellence, 2005; Sjöblom et al., 2003). A number of neurobiological studies also have demonstrated pre-to-post EMDR processing changes in conjunction with the remediation of trauma symptoms (Lamprecht et al., 2004; Lansing, Amen, Hanks, & Rudy, 2005; Levin, Lazrove, & van der Kolk, 1999). Evaluations of EMDR studies have found that degree of adherence to treatment procedures and protocols is positively correlated with the size of the treatment effects (Maxfield & Hyer, 2002; Shapiro, 1999).

The aforementioned practice guidelines and a number of published meta-analyses (e.g., Bradley, Greene, Russ, Dutra, & Westen, 2005; Van Etten & Taylor, 1998) have documented that EMDR is as effective and long-lasting as the most researched cognitive-behavioral therapy (CBT) methods. However, unlike the other forms of trauma therapy that include 30–100 hours of prescribed homework, EMDR’s effects are accomplished with only in-session treatment, and with less exposure to the trauma. This difference in exposure time and homework was noted by the investigators of a National Institutes of Mental Health (NIMH) funded controlled study comparing EMDR (Shapiro, 1991) and prolonged exposure (Foa & Rothbaum, 1998); they commented, “It will be important for future research to explore these issues” (Rothbaum, Astin, & Marsteller, 2005, p. 614).

The pattern of recovery in EMDR treatment sessions allows clinicians to view a rapid progression of intrapsychic connections as emotions, insights, sensations, and memories surface and change with each new set of bilateral stimulation. Process studies and qualitative analyses have identified distinct treatment effects (including a rapid reduction of subjective distress) that differentiate EMDR from other trauma therapies (Edmond, Sloan, & McCarty, 2004; Lee, Taylor, & Drummond, 2006; McCullough, 2002; Rogers et al., 1999; Rogers & Silver, 2002). In addition to the reduction of emotional disturbance and overt symptoms, EMDR clients experience a variety of responses indicating the emergence of comprehensive reorganization that may be reflected in changes in affect regulation and personality characteristics (Brown & Shapiro, 2006; Korn & Leeds, 2002; Zabukovec, Lazrove, & Shapiro, 2000), cessation of chronic pain and other dysfunctional somatic reactions (Gupta & Gupta, 2002; Grant & Threlfo, 2002; Ray &

Zbik, 2001; Schneider, Hofmann, Rost, & Shapiro, in press), and shifts in cognitive organization reflected in the number of positive memories that can be recalled posttreatment (Sprang, 2001). While EMDR may be used to eliminate overt symptoms attendant to various clinical conditions (see Shapiro, 2001), as a psychotherapy approach its primary goal is to address the entire clinical picture in order to bring about the most comprehensive treatment effects.

Adaptive Information Processing Model

EMDR's wide range of therapeutic applications is grounded in the adaptive information processing (AIP) model that guides its clinical practice. Basically, EMDR is used to address the experiential contributors of dysfunction and health. While initially used for the treatment of posttraumatic stress disorder (PTSD), it became apparent over time that the Criterion A events (APA, 2000; e.g., an immediate threat to one's life or loved one such as a car accident, or physical or sexual assault) officially required to diagnose the condition were too limiting a conceptualization. For instance, if the sudden death of a man's wife of 30 years resulted in intrusive thoughts, depression, and sleep disturbance that lasted over a period of years, the event could be recognized as a "trauma," and he could be diagnosed with PTSD. However, if the man had exactly the same symptoms subsequent to his wife running off with her dance instructor, the event is not given the same stature, and a diagnosis of PTSD is precluded because the precipitating event does not meet the designated criteria.

Clearly, people are haunted for years by a variety of experiences that do not rise to the level of Criterion A events. In the AIP model, these are designated as "small t" trauma, not because they are less traumatic or indelible, but because they are more ubiquitous. A recent study by Mol et al. (2005) supports this conceptualization. A survey of 832 people indicated that there were more PTSD symptoms related to life events than to Criterion A events. The conclusion of Mol et al. was, "Life events can generate at least as many PTSD symptoms as traumatic events" (p. 494). The recognition of this fact has extremely important implications for treatment.

The AIP model is used to explain clinical phenomena, predict successful treatment effects, and guide clinical practice. Consistent with neurobiological findings, it is posited that in order to make sense of incoming stimuli, new experiences are assimilated into already existing memory networks. For instance, when handed a cup, one needs previous "cup" experiences

in order to know what to do with it. Likewise, a failed love experience is assimilated into memory networks associated with relationships, and adds to the knowledge base regarding such things as expectations and potential warning signs.

In a healthy individual, as new experiences are processed, they are "metabolized" or "digested" and what is useful is learned, stored with appropriate emotions, and made available to guide the person in the future. For instance, a child may fall off a bicycle and cry, but with appropriate comforting and nurturing the fear passes, and she learns what is necessary for a more successful ride in the future. However, some children become anxious about bike riding and the distress does not abate. This persistent anxiety suggests that the information processing system has stored the experience without adequately processing it to an adaptive resolution. Instead of remembering the earlier enjoyable rides, or that the physical pain went away, when they think of bike riding all they remember is the fall. The event is essentially frozen in time in the moment of fear and pain. This lays the foundation for future inappropriate (dysfunctional) responses to similar events since it becomes a touchstone event for any associated experience.

Pathology According to the AIP Model

The AIP model posits that pathology results when unprocessed experiences are stored in their own neural network, unable to link up naturally with anything more adaptive. Therefore, a person may observe myriad counterexamples, or be in therapy for years, offered constant reframes, alternatives, and examples of success, without changing the emotions involving distressing personal failures. The new information, positive experiences, and affects are unable to link into the network where the unprocessed material is stored.

For example, a person with a borderline personality diagnosis may feel positively about a therapist (or lover) one moment and fly into a rage the next. The AIP model conceptualizes this dichotomy as follows: The positive experiences are stored in one memory network, but the disturbing experiences of early abandonment or abuse are in another, and can get triggered by anything reminiscent of those events. The same is true, to a greater or lesser degree, for most volatile couples. Whether the earlier events have incorrect information, or information that was once correct but is no longer valid in the adult (such as the powerlessness and lack of choices of a child), adaptive learning cannot take place because of the dysfunctional storage.

Childhood phobias are another example of a disorder that is considered to result from experiences that have not been adaptively processed. The stored memory experiences (whether a product of direct confrontation, parental modeling, or vicarious traumatization from a story or TV show) contain within them the emotions and physical sensations of the frightening events. When a current similar event occurs it automatically links into the memory network containing the earlier unprocessed experience, and the previously stored physical sensations and negative affects arise involuntarily. Regardless of how many positive examples may exist all around them, the earlier disturbing event remains unchanged.

According to the AIP model, the inherent disturbance also serves to block access to other positive events that may already exist in the memory networks. For instance, the death of a loved one may cause distressing images of unresolved pain and suffering to emerge and prevent pleasant memories from being accessed. Completing the processing of the events then allows positive recall to increase (Sprang, 2001). Failing to do so leaves the negative memories “hot” and liable to be triggered at any time. Consequently, regardless of the numbers of subsequent positive experiences that may exist in the person’s life, earlier unprocessed events can set the groundwork for an impoverished sense of identity and self-efficacy.

Neurobiological investigators believe these experiences are stored in implicit and episodic memory (Siegel, 2002; Stickgold, 2002; van der Kolk, 1996, 2002). The implicit system is the one that allows a person to ride a bicycle after a 10-year hiatus, because the physical sensations are stored in the memory. However, physical sensations are not useful when they retain the pain and fear from a rape, accident, or assault. These problems are not limited to exceptional trauma. Being bullied in school or demeaned by a teacher is a common childhood event. However, when people bring up that memory decades later, many still feel the heat of the emotions and sense their bodies cringe. This indicates that the memory has not been processed, and that it may be at the root of a variety of psychosocial issues the person has in the present. Basically, the emotions, sensations, and perspectives of these childhood events arise and color the person’s perception of the past. In short, the past is present.

The AIP model distinguishes EMDR from other forms of psychotherapy by viewing the present situation producing distress simply as a trigger for a past, unprocessed incident. It is thought that the current event stimulates the memory network, causing stored negative emotions, physical sensations, and perspectives

to emerge. As previously noted, a current situation that is similar in any way to an earlier event will automatically link into the memory network in which the earlier event is stored. These associational link-ups are necessary to make sense of the world and they typically occur without conscious control. So, whether or not the person is aware of the earlier unprocessed experience, and whether or not he can recognize the similarity to the present situation, the dysfunctionally stored emotions, physical sensations, and perspectives are the reflexive responses to current events and drive the person’s behaviors. Someone may be anxious when entering a room with many people and not know why. People may have trouble with authority and not be able to explain their fear response. In the AIP model, most clinical complaints are considered to be experientially based, but with a genesis below conscious awareness.

While these experiences may be below the level of consciousness, they are ultimately responsible for the behaviors that bring a person into therapy. Most clients do not come into therapy because “I had a bad childhood.” Rather, they are there because life has become unmanageable. They are propelled into doing things they do not want to do, or are prevented from doing the things they want to do. They are distraught, feeling out of control, unhappy at home, or work, or in social relationships. While certain problems may be purely situational, such as a dysfunctional work environment, most others emanate from the clients’ patterns of thinking and behavior with those of the people around them. However, the AIP model conceptualizes these patterns of dysfunctional emotions, physical sensations, and perspectives as symptoms, not causes. The cause is understood to be the unprocessed memories of earlier experiences that are pushing the client into inappropriate responses in the present. For example, the person who feels “not good enough” will act in ways that reflect this belief in the present—in ways that can cause others to view him in that way as well. He may interpret even innocent distraction on another’s part as dismissive and demeaning, which reinforces his own negative self-perspective. The belief that “I’m not good enough” is not the cause—it is the symptom. The cause is the unprocessed earlier life experience that contains that affect and perspective.

EMDR’s procedures have been developed to access the dysfunctionally stored experience and stimulate the innate processing system, allowing it to transmute the information to an adaptive resolution—shifting the information from implicit to episodic and then semantic memory (Siegel, 2002; Stickgold, 2002). When

fully processed, the necessary information is assimilated and the memory structures have accommodated to the new information. Although the event and what has been learned can be verbalized, the inappropriate negative affects and physical sensations have been discarded and can no longer be felt. This processing, or rapid learning, is at the heart of every EMDR treatment. The clinician works to ascertain which current situations are triggering the disturbance, which experiences have laid the groundwork for the dysfunction, and what positive experiences are needed to overcome any lack of knowledge or skills.

Eight-Phase Treatment Approach

EMDR is a psychotherapy approach that employs an eight-phase model of treatment to address the full range of clinical complaints caused or exacerbated by prior negative experiences. Therefore, if a problem is organically based, as in certain learning or processing disabilities subsequent to a car accident, EMDR would not be a frontline treatment. However, EMDR would be used to address the psychological ramifications of that type of event, in order to assist the person in coming to grips with new limitations, and address the potential struggle with a new sense of identity, and/or existential/spiritual issues that may arise. The eight phases of EMDR (see Table 1) provide a systematic way to explore and process the negative experiences that are contributing to dysfunction, and the positive experiences that are needed to bring a client to full health. To illustrate the methodology we will use the case of a 15-year-old female client presented by a clinician in consultation.

PHASE 1—CLIENT HISTORY

“Tara” is brought into therapy by her mother because of her excessive anxiety, panic attacks, and pronounced school phobia. The family is composed of Tara (15 years old) and her parents. She presents with very low self-esteem, social anxiety, extreme self-consciousness (even her body is hunched over in a constricted way), and suicidal thoughts. She sees herself as a “constant burden” to her parents even though they deny feeling this way.

Tara was born quite prematurely, weighing only two pounds. She was in a pediatric inpatient care unit for four months on a respirator. While hospitalized, she experienced daily traumas involving cardiac and respiratory distress. When she finally came home, she remained on oxygen for several weeks. Mother would spend eight hours a day watching over her, and Father would come home after work and spend hours there as well. As a result of this, Mother was very overprotective. At the time she brought

Tara for treatment, Mother was still very traumatized by the experience; when Mother attempted to complete a homework assignment to write down a narrative of the events, she sobbed all night.

When Tara was 5 years old the family moved. Tara reported that this was traumatic for her, as were memories of her parents fighting. Mother and Father used to fight a great deal but had gotten along fairly well in the past several years. Tara further disclosed that she had never felt comfortable in class and vomited before school. She was no longer vomiting, but she remained anxious and uncomfortable and had occasional panic attacks. She described having a couple of friends but she rarely engaged in social activities outside school. Tara appeared to have no internal sense of security.

This rudimentary case history opens a number of case management suggestions. The overall goal of EMDR is to achieve the most profound and comprehensive treatment effects possible while maintaining a stable client within a balanced social system. Therefore, it is important to assess the case systemically as well as individually in order to identify the appropriate targets for processing.

Conceptually, the individual is shaped by an interaction of genetics and experiences. Prenatal conditions, which include the hormonal flooding from the mother’s emotional states, can impact the developing fetus. Sometimes physical conditions may be called into play, including fatigue levels and physical development. Some information processing systems may be constitutionally predisposed to be weaker or stronger, just like cardiac or respiratory systems. This may explain why some events can impact some children more than others. However, other factors include the child’s earliest interactions, which forge the very sense of self through which the rest of the world is interpreted. These early experiences are stored in memory and become the basis of the networks into which other experiences link. The child raised in a family that engendered a sense of inadequacy will interact with friends and at school with a very different set of behaviors and emotions than one raised to believe he was worthwhile and valued. These early experiences set the groundwork for either further traumatization or resilience.

Given the case history so far, we see a 15-year old girl with severe anxiety and low self-esteem. Extensive neonatal distress had traumatized the mother into extreme overprotectiveness. Tara correctly felt that she was physically “substandard” and that her condition was distressing to Mother. From an AIP perspective, this resulted in an internalized inappropriate sense of defectiveness, undue responsibility for her mother’s

TABLE 1. Overview of EMDR Treatment

<i>Phase</i>	<i>Purpose</i>	<i>Procedures</i>
Client history	<ul style="list-style-type: none"> • Obtain background information • Identify suitability for EMDR treatment • Identify processing targets from positive and negative events in client's life 	<ul style="list-style-type: none"> • Standard history-taking questionnaires and diagnostic psychometrics • Review of criteria and resources • Questions regarding (a) past events that have laid the groundwork for the pathology, (b) current triggers, and (c) future needs
Preparation	<ul style="list-style-type: none"> • Prepare appropriate clients for EMDR processing of targets • Stabilize and increase access to positive affects 	<ul style="list-style-type: none"> • Education regarding the symptom picture • Metaphors and techniques that foster stabilization and a sense of personal self-mastery and control
Assessment	<ul style="list-style-type: none"> • Access the target for EMDR processing by stimulating primary aspects of the memory 	<ul style="list-style-type: none"> • Elicit the image, negative belief currently held, desired positive belief, current emotion, and physical sensation, and baseline measures
Desensitization	<ul style="list-style-type: none"> • Process experiences and triggers toward an adaptive resolution (0 SUD level) • Fully process all channels to allow a complete assimilation of memories • Incorporate templates for positive experiences 	<ul style="list-style-type: none"> • Process past, present, future • Standardized EMDR protocols that allow the spontaneous emergence of insights, emotions, physical sensations, and other memories • Cognitive Interweave to open blocked processing by elicitation of more adaptive information
Installation	<ul style="list-style-type: none"> • Increase connections to positive cognitive networks • Increase generalization effects within associated memories 	<ul style="list-style-type: none"> • Identify the best positive cognition (initial or emergent) • Enhance the validity of the desired positive belief to a 7 VOC
Body scan	<ul style="list-style-type: none"> • Complete processing of any residual disturbance associated with the target 	<ul style="list-style-type: none"> • Concentration on and processing of any residual physical sensations
Closure	<ul style="list-style-type: none"> • Ensure client stability at the completion of an EMDR session and between sessions 	<ul style="list-style-type: none"> • Use of guided imagery or self-control techniques if needed • Briefing regarding expectations and behavioral reports between sessions
Reassessment	<ul style="list-style-type: none"> • Evaluation of treatment effects • Ensure comprehensive processing over time 	<ul style="list-style-type: none"> • Explore what has emerged since last session • Reaccess memory from last session • Evaluation of integration within larger social system

Note. From *Eye movement desensitization and reprocessing (EMDR) training manual*, by F. Shapiro (2005). Watsonville, CA: EMDR Institute.

distress (including the perception of being a “constant burden”), and lack of physical safety. These feelings were reinforced by her parents’ reflexive fear/anxiety responses to a variety of Tara’s childhood circumstances. Parental fights during her childhood increased her sense of instability and potentially exacerbated the pivotal issues of inappropriate responsibility, lack of safety, and powerlessness (see Shapiro, 2001).

Tara’s consequent low self-esteem and heightened anxiety, with the physical manifestations such as her hunched posture, probably resulted in a paucity of appropriate socialization and interpersonal behaviors.

The anxiety undoubtedly was intensified in school through interaction with her peers, causing additional social problems, teasing, and humiliations. This in turn fostered and maintained her lack of self-worth. The resulting panic attacks further exacerbated Tara’s sense of defectiveness and powerlessness. Basically, she was locked into home and school environments that amplified the problems through arousing repetitive feelings of defectiveness, lack of safety, and absence of power or choices.

In information processing terms, children grow up in an environment of accumulated experiences that set

the foundation for a sense of self. Each experience is a discrete event, but the memory network is expanded with each new addition. When raised in an adaptive environment, one's sense of self is flexible as new experiences occur and new information is incorporated into the existing memory networks. A healthy individual is one who can take in both positive and negative experiences and learn from them. However, even loving parents (such as Tara's) can provide an upbringing that results in a self-defining core of dysfunctionally stored unprocessed memories. In this case, the many times Tara's overprotective mother reacted with fear and anxiety around her had a negative effect. The pervasiveness of her mother's responses to myriad behaviors, including Tara's attempts at differentiation and achieving some autonomy (which are intrinsic and hardwired), set the groundwork for her perception that "I am defective."

Once this type of core identity network has been forged, it may be reinforced by negative experiences, but is generally unable to link up naturally with other more adaptive information. Alternatives and positive experiences occur, but they are stored in separate networks. Therefore, Tara may have seen a friend bullied and felt protectiveness and anger on his behalf because she knew it was unfair, unjust, and inappropriate for others to be cruel. However, if Tara had been personally bullied, she may have been unable to defend herself because that experience would link into a central core of memories of being inadequate and not good enough. These feelings would rise automatically in her body and mind. It would be difficult for her to comfort or defend herself as she could a friend. Similar dynamics are seen with a combat veteran with unprocessed war memories who cannot forgive himself for things he can forgive in his comrades.

It is important to remember that, according to the AIP model, dysfunctional reactions in the present are based upon stored memories that are triggered by current life conditions. Reprocessing involves the accessing of dysfunctionally stored memories (which contain the negative emotions, physical sensations, and beliefs) and forging their subsequent connection to more adaptive networks. During the Client History Phase it is important to ascertain if there are adaptive networks. In other words, did Tara have undiluted success experiences in any area of her life? Did she have any memories of times where she felt safe, or times when she felt good about herself? If not, these types of incidents will have to be constructed therapeutically during the Preparation Phase.

During the Client History Phase the clinician uses a variety of techniques to identify the large and

"small t" traumas and the triggers that need to be processed. Adult clients are asked to describe the 10 most disturbing memories they have from childhood, or a timeline may be used that visually charts the most salient events from birth to the present. They may be asked to bring in photos of their family of origin and different significant figures, and to discuss them with the therapist. The therapist may also construct a genogram (Kitcher, 2005; McGoldrick, Gerson, & Shellenberger, 1999) in order to help identify the systemic issues and familial contributions. It is important to supplement this with questions regarding peers and other significant figures, since these types of interactions also have a major impact on the developing psyche. Specific targets are then selected, particularly when highlighted by indicators of abuse.

Present situations are evaluated for levels of distress, as well as the influences of previous experiences. The specific difficulties and symptoms that the client has in the present are listed, and he is asked to recall the first time that something similar occurred. If he is unable to do so, he is asked to remember the last time it happened, notice where he feels it in his body, and let his mind drift back to the earliest time he remembers feeling that way (Shapiro, 1995). This is sometimes called an "affect scan" (Shapiro, 2005), or "affect bridge" (Watkins & Watkins, 1997) but does not contain the hypnotic or "reliving" element associated with the latter technique. The goal at this point in EMDR therapy is simply to identify the salient memories contributing to the dysfunction that are in need of processing.

It is also useful to delineate the specific aspects of current situations that precede a negative response. The CBT technique of behavioral analysis can be used for that purpose (Smyth & Poole, 2002). Then, for EMDR, the experiences, affects, and thoughts are investigated to identify the earlier events that set their foundation. Another useful procedure is to give clients a list of negative beliefs and ask them to check off the ones that "feel" like theirs (see Table 2). It appears that most salient beliefs can be divided into those involving: responsibility ("I did, or am, something wrong"), safety, and choices (see Shapiro, 2001). As these negative beliefs are manifestations of the stored experiences and are verbalizations of the stored affects, clients are then asked to identify the earliest event they can remember where they "felt" that way. If they cannot remember an experience consciously, then they may be asked to perform a floatback (Browning, 1999) which uses the negative belief to perform a variation of the previously described affect scan (see Shapiro, 2001). While the negative belief (or negative cognition) is considered the symptom rather

than the cause of the dysfunction, it is extremely useful in verbalizing the problem and identifying the earlier etiological event (Shapiro, 1995, 1998).

TABLE 2. Examples of Negative Beliefs

Responsibility (I am defective)

- I don't deserve love
- I am a bad person
- I am terrible
- I am worthless (inadequate)
- I am shameful
- I am not lovable
- I am not good enough
- I deserve only bad things
- I am permanently damaged
- I am ugly (my body is hateful)
- I do not deserve . . .
- I am stupid (not smart enough)
- I am insignificant (unimportant)
- I am a disappointment
- I deserve to die
- I deserve to be miserable
- I am different (don't belong)

Responsibility (I did something wrong)

- I should have done something*
- I did something wrong*
- I should have known better*

Safety/vulnerability

- I cannot be trusted
- I cannot trust myself
- I cannot trust my judgment
- I cannot trust anyone
- I cannot protect myself
- I am in danger
- It's not OK to feel (show) my emotions
- I cannot stand up for myself
- I cannot let it out

Control/choices

- I am not in control
- I am powerless (helpless)
- I am weak
- I cannot get what I want
- I am a failure (will fail)
- I cannot succeed
- I have to be perfect (please everyone)
- I cannot stand it
- I cannot trust anyone
- I cannot do . . .*

*What does this say about you? (E.g., does it make you feel: I am shameful/I am stupid/I am a bad person/I am not good enough.)

Note. From *Eye movement desensitization and reprocessing: Basic principles, protocols and procedures* (2nd ed.) by F. Shapiro (2001). New York: Guilford Press.

For instance, in Tara's case, she could easily identify a number of experiences from childhood that made her feel inadequate and a burden to her parents. These included many instances when her father seemed to ignore her, and occasions when her mother rushed to pick her up or seemed stressed out over something she did. At various times during the therapy, when preparing to address a specific issue, various techniques were used. For example, an affect scan was used to identify a good target for addressing her bad posture. Remembered incidents and floatbacks elicited the memories salient to her panic attacks, including her feelings of "I'm not good enough" and "I can't defend myself" in school situations. The Client History Phase is also the first opportunity to begin to sketch out what Tara will need to be taught to overcome any developmental deficits resulting from her traumatization, and lack of adequate socialization.

Phase 2—Preparation

EMDR emphasizes a coparticipation between client and clinician. Therefore, especially when working with children, it is critical to educate both child and parents about the entire clinical picture. It is essential to a successful course of therapy that everyone understand where the problems came from (including the panic attacks), what is reinforcing them in the present, what the choices might be, what the therapy can achieve, and the importance of actively engaging in the treatment by identifying memories and triggers.

In order for therapy to proceed, Tara was taught self-control techniques that she could use to eliminate any fear of the processing, to terminate distress during sessions, and to cope between sessions. The ability to use self-control techniques outside of the therapist's office introduced an element of self-mastery that bolstered her self-esteem and reduced the impact of occasional ongoing social problems at school. Such state change techniques (see Shapiro, 2001, 2002) allow life to become more manageable while the processing work is done. The goal of EMDR therapy is trait change so that the negative emotions and sensations will no longer habitually arise. However, until the genesis events and current situations are processed, the self-control techniques are useful in order to decrease the current triggering. This helps to prevent new negative experiences from becoming stored in turn and enlarging the trauma memory network.

A wide variety of self-control techniques may be used (see Shapiro, 2001). A Safe Place technique, in which the client is able to bring back at will a feeling

of safety, calm, or courage, is generally sufficient to give her a feeling of self-control. However, when feelings of helplessness or hopelessness emerge from unprocessed memories the client may feel helpless at that moment, and incapable of using the techniques. The processing of the memories is needed to dissipate the power of the affects so it is not such a struggle to self-monitor and use the self-help tools, and so that present situations lose their power.

During information processing, the disturbing memory links up with more adaptive information so that learning can take place. If an individual does not have sufficient positive experiences and counterexamples stored in memory networks, EMDR processing cannot happen. The AIP model posits that in such situations it is important to establish adaptive networks of positive experiences through the therapeutic relationship, and resource work that includes the incorporation of mastery experiences before attempting comprehensive processing. The Safe Place, Resource Development and Installation (RDI; Korn & Leeds, 2002), and other imagery techniques supplemented Tara's positive experiences with her friends to enable successful processing to occur. Particularly when locked in a dysfunctional home environment, it is crucial to make sure that a sufficient number of positive experiences are available from other sources. In their absence, attempts to process will be premature and very likely to fail.

Client stabilization and empowerment, and the building of a solid therapeutic relationship, are the basic elements of the Preparation Phase. The importance for clients of the therapeutic relationship cannot be overemphasized (Dworkin, 2005; Norcross, 2002). In AIP terms, transference reactions are clearly the interaction of present situations and the client's unprocessed material, while countertransference occurs when the therapist's personal unprocessed memories are stimulated. The ability to be attuned and sensitive to the client's needs and nonverbal cues, offer unconditional regard, and model positive relational values is contingent upon the therapist's ability to be present, attentive, and optimally interactive. A variety of specific techniques and questionnaires have been devised to assist therapists in identifying their own problem areas and memories that may benefit from processing (Dworkin, 2005).

While dissociative and some personality-disordered clients may have an extended Preparation Phase, in most cases it is not useful to wait until clients are capable of controlling their environment through techniques. These techniques serve only to make life more tolerable while the processing completes the therapy.

If the client can use the techniques in the clinician's office to remove "fear of fear" and stop processing at will, it is usually safe to begin processing (Korn, van der Kolk, Weir, & Rozelle, 2004).

Phase 3—Assessment

During this phase the designated target is elicited in a controlled fashion, and the components are delineated and measured.

Tara's anxiety, fear, stooped posture, and other presenting symptoms were conceptualized as the result of the disturbing experiences dysfunctionally stored in her memory networks. These included the many parental and peer responses that did not support her psychic development. Accessing and processing these events should result in a transmutation of the stored information and a release of the negative attributes. Fortunately, although a large number of events contributed to Tara's dysfunction, it was not necessary to access each one. Rather, in such cases, similar events are grouped in clusters and one representative event is chosen for each type. Since all the events are connected through the associative memory networks, the positive treatment effects will generalize to the others in the cluster. When possible, targets should be accessed chronologically, with the earliest events processed first, since they set the foundation for the remaining ones. In all cases, EMDR treatment entails processing the past events that have set the groundwork for current dysfunction, the present situations that bring up the disturbance, and templates for appropriate future action.

For Tara, it was clear that her premature birth and her parent's reactions to that extreme situation set the groundwork for many of her problems. However, it was not necessary to specifically target precognitive memories because, since all experiences are aggregated in connected memory networks, they are linked somatically to the later events. Therefore, preverbal memories such as those in her infancy can be accessed through remembered targets, and will generally be processed in an associative channel. These precognitive experiences may manifest themselves during processing as primarily somatic shifts without verbalizations. *If* after all remembered targets, triggers, and templates have been addressed there is still somatic dysfunction and if there is a known neonatal trauma, it can be addressed by having Tara imagine the scenes as described by her parents (Lovett, 1999). However, undifferentiated somatic processing is not a first-line strategy.

Any remembered experience can be an entry point into the memory network for comprehensive

processing (Shapiro, 2001). Present situations can be used to help the accessing. Tara had many current situations that were upsetting, and each was explored for the genesis of the negative response. For instance, she reported being insulted by a classmate earlier in the week and being extremely upset by it. She was asked to bring the disturbing event from school to mind. Then she was asked to focus on whatever feelings were most prevalent, such as of humiliation, fear, anxiety, or lack of safety, and let her mind take her back to the earliest time she remembered feeling that way. In this way, in addition to the specific events identified during the History Taking, the present triggers were used to identify the precursor events that can be accessed for initial processing.

The event to be processed was carefully accessed in a structured manner to elicit the pertinent aspects of the stored information, contain the reactions, and guide the client to a full assessment. Tara was asked to identify (a) an image that represented the target experience (being humiliated at school); (b) the negative belief, termed the negative cognition (NC), that verbalized how they she felt about herself (e.g., “I’m worthless”); (c) the desired positive belief, termed the positive cognition (PC; “I’m worthwhile”); (d) how true that positive belief felt on the Validity of Cognition (VOC; Shapiro, 1989) scale (1 = completely false to 7 = completely true); (e) the emotion that arose when the memory and negative belief were combined; (f) how disturbing it felt as measured on the Subjective Units of Disturbance (SUD; Shapiro, 1989; Wolpe, 1958) scale (0 = no disturbance to 10 = the most disturbance possible); and (g) the location of the physical sensations that were experienced.

As another example, one of Tara’s problems was her anxiety about going to school. Therefore, tracing the anxiety back to her earliest memory revealed that primary target of throwing up, every morning, in the third grade.

The Assessment Phase included:

Image: Throwing up before going to school

Negative Cognition (irrational belief): I can’t do this

Generally, the clinician would search for a belief that underlies a statement such as this, which would indicate a feeling of defectiveness (see Table 2). However, given Tara’s level of distress, the statement was accepted.

Positive Cognition (desired belief): I can do this

Likewise, this simplified version was accepted, as it was 180 degrees opposite and encapsulated Tara’s feelings.

Validity of Cognition (VOC): 2

Since 1 equals completely false, and 7 equals completely true, the number 2 indicates a low level of believability that she would be able to go to school without anxiety. However, it was sufficient to begin processing.

Emotions: terror, helplessness

Subjective Units of Disturbance (SUD): 10

It is important to note that even though not a “big T” trauma, Tara rated the target event at 10 out of 10 in anxiety, even though the incidents of throwing up had occurred over seven years ago.

Physical sensations: stomach, head

These sensations were the somatic memories that were part of the stored event. Once processing has successfully occurred, they should no longer be present.

Phase 4—Desensitization

During this phase the reprocessing is conducted according to structured procedures that engage the associative processes of the brain and stimulate memory networks to ensure that all salient information has been addressed. Insights emerge, new memories may surface, negative emotions are replaced with positive ones, and the entire memory becomes adaptively assimilated within the larger memory networks.

In AIP terms, each personality trait is a constellation of habitual or consistent responses that arise under particular circumstances. Each set of responses emerges from memory networks that are stimulated by current circumstances. Each of these networks is composed of the earlier stored experiences. When a clinician diagnoses a personality disorder, or any other types of clinical syndrome, it is because there are certain responses that are maladaptive. These responses and personality characteristics are fed by unprocessed events that result in thoughts, emotions, and physical sensations that inappropriately color the person’s perceptions of the present and result in dysfunctional responses and behaviors. To liberate the client to move toward a state of improved mental health, it is vital to identify and process the earlier experiences that set the groundwork for these responses. Personality is not an immutable monolith, but rather an accumulation of memory-based reactions that can be processed.

The standard EMDR procedures used to process the disturbing experiences are geared to access the memories as they are currently stored, stimulate the information processing system, and monitor the transmutation of the information to an adaptive resolution. Each set of bilateral stimulation seems to allow new

connections to be made among the memory networks. The client is asked initially to concentrate on the target memory (image, negative belief, sensation) while simultaneously attending to the bilateral stimulation. At the end of each set of stimulation, which is customized to the client response (see Shapiro, 2001), the client reports any new associations that may have emerged. Depending upon the response, the clinician may direct the client to concentrate on the new information that has arisen, or return to the target. The various channels of association are addressed until the client can return to the targeted experience with no distress (0 SUD). Unlike exposure therapies that compel the client to maintain a concentration on the targeted event for extended periods of time (Foa & Rothbaum, 1998), EMDR incorporates an associative process that often leads to a far-ranging exploration of memories and topics (Rogers & Silver, 2002; for detailed client transcripts see Shapiro, 2001, 2002).

For example, in order to process Tara's memory of vomiting in school, she was asked to hold together the image, negative belief, and physical sensations in her mind while simultaneously following the clinician's fingers with her eyes. She was instructed to "Just let whatever happens, happen." At the end of each set she was told, "Let it go. Take a deep breath," and asked, "What do you get now?"

After the first set of eye movements Tara reported: "I'm different, everyone hates me." This revealed the feeling underlying "I can't," which was "There is something wrong with me." After being asked to concentrate on that statement and receiving a second set of eye movements, she stated: "I want to stay home and be taken care of." Concentrating on this, after the third set she declared: "My mother doesn't understand." We can see from this statement that the memory was becoming assimilated into the larger context. Even though she wanted to stay home, she did not receive what she needed there. After still another set, while concentrating on that statement, Tara said: "Once I'm at school, I'm okay; it's just that initial walking in." From this we see that the positive experiences she had stored were now becoming accessible. With further processing Tara was able to say: "I enjoy seeing my friends and most of the teachers." A return to the initial target found the SUD level reduced, and further processing produced the realization that there were people at school more attuned to her needs than her parents were. Going back again to the memory at the end of the desensitization phase, once processing was completed, Tara views it as in the past with an SUD of 0.

The transmutation of the stored memory experience into a more adaptive form occurs through a

rapid learning experience that brings together the relevant information stored in the client's own memory networks. While many forms of therapy depend on the clinician to suggest alternative perspectives, direct action, or reframing the interpretation of an inherent belief, EMDR uses procedures that allow the client's own history and knowledge to reshape the targeted experience. Additional memories that need to be addressed, or that offer counterexamples, generally emerge spontaneously during processing. For instance, in Tara's case, the memories of positive experiences with friends at school automatically arose into consciousness without clinician prompting. The observed changes in imagery, sensation, belief, and perspective are the result of the forging of new connections between the memory networks.

EMDR clinicians are trained to stay out of the way as much as possible, since the therapist does not know what the best unconscious connections are that need to be made. When change has not occurred after consecutive sets of dual attention stimulation, then the clinician may use a Cognitive Interweave and ask a question, or offer a statement for consideration, or suggest an action that is geared to elicit the next bit of information needed to continue the learning experience. For instance, if Tara's processing had stopped when she contemplated going to school (which would be indicated by the lack of cognitive, emotional, or sensory change after consecutive sets of eye movements), the clinician might have said: "I'm confused. Didn't you tell me that you had some friends there that you liked?" Then if Tara had replied in the affirmative, she would have been asked to think about that during another set. Likewise, if a rape victim were stuck in the sense of shame and blame, the clinician might ask: "Do you mean if your niece had been raped it would be her fault?" When the rape victim says no, she is asked to think about that during another set of stimulation. All that is needed is a tentative, even hesitant agreement or willingness to consider it. This serves to access the adaptive information stored in the brain in a separate memory network. If the information is relevant, it will become assimilated during the next set of eye movements. A short set of eye movements is used so the client can report whether or not the information "feels" right.

Conceptually, the Cognitive Interweave simulates spontaneous processing by accessing the needed memory network and then the clinician gets out of the way so that the appropriate neurological connections can take place (for detailed transcripts see Shapiro, 2001, 2002). The emphasis is on allowing processing to occur that will result in trait change—not simply

the elicitation of a temporary state change. A variety of ways to stimulate blocked processing may be used (for detailed parameters see Shapiro, 2001). However, the eliciting of positive information is only a starting point since a superficial intellectual understanding of lack of blame or potential resources is not the goal of EMDR therapy. It is important to return to the undistorted target to complete processing, so that all the relevant connections can be made.

Tara's initial treatment would include processing all the "big T" and "small t" remembered traumas, including the family interactions that contributed to her feeling defective and unsafe (e.g., her mother running to agitatedly question her when Tara tripped, or when she came home out of breath after playing; her brother making fun of her; her parents fighting), as well as the move which had disturbed her, and any demeaning peer responses (e.g., teasing, fights, snubs).

Phase 5—Installation

This phase strengthens positive cognitive connections. After processing a given target to a 0 SUD level, the clinician checks to see whether the desired positive belief identified at the beginning of the session is still appropriate, or if a better one has emerged. It is not unusual for a new Positive Cognition (PC) to be more applicable once processing has cleared away the confusion and brought more positive information to light. In Tara's case, "I can do it" was no longer applicable as she realized that she already had positive connections with people in school who made her comfortable. Her more appropriate PC was found to be "I'm a good person." Tara was then asked to hold together the thought of vomiting in third grade and the words "I'm a good person," and rate it on the VOC scale to assess the felt believability of the statement. Tara reported feeling it at a 5 (of 7) level. She was then asked to hold the image and statement in mind and follow the therapist's fingers. After each subsequent set she was asked to rate the VOC again, or report anything else that came up. Consecutive sets brought the VOC to a 6.5. When asked after a set with no change, "What prevents it from being a 7?" Tara responded, "I'll have to see how I feel tomorrow." This desire for a "test drive" of her newfound confidence was considered ecologically valid (i.e., realistic and practical, given the circumstances) and she was encouraged to report back the following week. If she had said, "I'm not okay outside this office," then more targeting and processing would have been indicated.

Phase 6—Body Scan

Once a 0 SUD and 7 VOC (or 1 and 6 respectively if ecologically valid) are achieved, the Body Scan Phase identifies any residual physical sensation. The client is asked to think of the target memory, along with the PC, and mentally scan the body from head to feet looking for sensation. Any sensation is then focused on and processed in consecutive sets until the sensation dissipates. At times a sensation may prove to be linked to further dysfunctional information and another memory may arise. If that is the case, it is targeted and processed. At times the client may identify a pleasurable sensation. These are generally linked to positive affects, and are enhanced by the bilateral stimulation. This phase is completed when the client has a "clean" body scan, devoid of any negative sensation.

Phase 7—Closure

This phase is used to ensure that the client is in an appropriate state of equilibrium at the end of the session, and is able to maintain this stability between sessions. If the processing is incomplete and the client is in any distress, one of the self-control or guided imagery techniques is used to eliminate it. For clients such as Tara, who has a pronounced lack of positive self-worth, it is useful to end each session with positive, reinforcing imagery that includes a reinforcement of her self-love, sense of safety, and sense of control.

In this phase of treatment clients are briefed on what to expect in between sessions and reminded to use their TICES Log. The TICES Log is a telescoped journal used to identify any positive or negative experiences in a form that allows the client to give an accurate report to the clinician. If Tara were disturbed by a teacher's remark in the following week she would indicate it in the following way:

Trigger	Image	Cognition	Emotion	Sensation/ SUD
Teacher said I wasn't paying attention	Her face	I'm stupid	Shame	Knot in stomach 7 SUD

Tara's experience with the teacher would trigger a high level of negative affect because it linked into previous experiences she had of feeling defective and not good enough. The log report would allow Tara and the clinician to observe patterns of response and the information needed to process the triggers and etiological events. After she wrote down what occurred,

she was supposed to use one of the self-control techniques to get rid of the negative emotions and physical sensations that might have surfaced. The ability to self-monitor and use an “aspirin” is important, as indicated by numerous studies on self-mastery (Bandura, 1977, 2000; Peterson, Maier, & Seligman, 1993; Seligman, 1972). However, the ultimate goal of EMDR is to liberate clients from these automatic responses and allow them to evolve to a state of freedom and well-being consistent with their chronological age.

Tara might come into the session with 10 things in her log list during the early weeks of therapy. However, over time, the processing of the etiological memories should cause the triggering situations to decline. Eventually, there should be few habitual negative responses because the earlier events that contain the dysfunctional emotions, sensations, and perspectives have been processed. While Tara is an adolescent, and therefore unable to fully individuate because of her age and position in the family power hierarchy, she can nevertheless achieve a level of self-worth that will allow her to acquire a realistic self-concept, sense of resilience, and the ability to socialize appropriately.

In addition to the earlier events, current conditions that still consistently trigger disturbance are processed, since they may be the result of second-order conditioning. That is, if one walks into a room 100 times and is anxious, that response can condition numerous stimuli in the room to elicit anxiety. Processing the past events that set the groundwork for the dysfunction, as well as current events that elicit disturbance, frees the individual from the forced negative responses. Once Tara is liberated from these experiences, the self-control techniques can be used occasionally, as anyone might, since life is messy, with occasional unpleasant surprises. Some things appropriately cause a certain amount of distress. However, even in these cases, self-mastery is important, and the self-control techniques can allow people to feel in control and make better decisions.

Phase 8—Reevaluation

This phase opens each session subsequent to initial processing. It is important to ensure that treatment effects have been maintained and to determine if any new issues need to be explored. If a memory has been successfully processed, it has been transformed in meaning and affect. However, perhaps a new perspective has emerged that needs to be addressed. For instance, Tara may have come to terms with her memories of vomiting in third grade, but now remembers

an unsupportive teacher who added to her difficulties. If so, that memory would be processed in turn. If processing was incomplete in the last session, the memory is elicited and completed. Other manifestations of the stored dysfunction are also addressed. Perhaps the client reports a troubling nightmare. This is likely to be a useful target, since dream states are periods during which unresolved experiences are processed and nightmares indicate a distressing memory in need of attention (see Shapiro, 2001). The nightmare image is identified along with the NC, the PC, and the rest of the aspects discussed during the Assessment Phase and processed to completion. Often the client derives considerable insight and understanding during processing as the symbolic veil is removed and the underlying issue revealed (Shapiro, 2001; Wachtel, 2002).

A purpose of the Reevaluation Phase is to determine how the client is now functioning within the relevant interpersonal systems. As the targeted experiences are processed, the client’s automatic reactions and behaviors also transmute. Therapists must be attuned to whether the client has processed the dysfunctional, increased the positive, and been offered sufficient education and support to overcome their previous deficits. Regardless of within-session observations, this can only be ascertained with progress reports after real-world experiences.

As Tara continued to process the etiological events, not only had her negative self-concept become replaced with a more affirmative one, but also many new behaviors and positive attitudes automatically emerged as her self-esteem increased. However, her extreme level of anxiety and agitation during her formative years had not allowed a variety of interpersonal skills to be learned. As she reported back to her therapist weekly, it became clear which social skills and interactional behaviors would need to be taught. The clinician could use modeling, role-play, group instruction, videotapes—basically any means necessary to give the instruction didactically. Then to aid in the process, Tara would be asked to imagine engaging in the new behaviors in the future while they are targeted with successive sets of eye movements. For instance, Tara’s first experience of going to a school dance was preceded by her receiving dance instruction, and participating in role plays of different interactions starting from entering the gymnasium, dancing with friends, and ways of responding if asked to dance by one of the boys. The entire evening would be reviewed imaginally with a variety of scenarios while simultaneously engaging in eye movements in order to infuse a Future Template of appropriate responses and behaviors. This procedure allowed her to incorporate

appropriate responses and to explore any hesitations, cognitive distortions, or concerns.

On a weekly basis, it was important to reinforce the self-control techniques and, after the etiological memories were completed, process the triggers revealed in Tara's log. In addition, processing was used to incorporate templates for appropriate future action based upon the situations revealed in her journal, as well as to inoculate and buffer her against potential failure ("It's OK to make a mistake"). For instance, after etiological events had been processed, a humiliating remark by a teacher was targeted. Since Tara was at a loss about how to respond if such a thing should happen again, processing was followed by role play on how to respond, and then a future template. If Tara was hesitant to join a school club, that would be targeted, including role play on how to proceed.

After templates are processed it is useful to suggest taking action with achievable social tasks for the following week. It is also important to assess the need for additional aids including assertiveness training, make-up, clothing, dance classes, or other ways to foster additional physical, recreational, and social interests. The goal is to have a happy, self-assured young woman able to bond and connect, and who is comfortable in her own body. These procedures would be the same whether treating an adolescent or an adult.

Given Tara's age, however, it is crucial to remember that she is embedded in familial and school social systems. A certain amount of her anxiety and avoidance was reality based, born both of her parents' reactivity and of humiliations at school. To cope with family and school systems that she cannot leave or control, she was taught self-control techniques to deal with parental and peer responses that were unfair. After processing potential triggers, the clinician suggested specific behaviors to deal with potentially difficult situations and helped Tara learn them by processing and incorporating future templates. The clinician/client relationship was extremely important as it offered Tara not only emotional support, but served as a model of a good and healthy relationship. It was important that she have caring and reinforcing interactions with the clinician about the previous week to debrief interactional issues, and to underscore her progress and potential.

Tara made personal progress with her EMDR therapy, losing both her social and school phobia. After a processing session directed toward her posture, she realized that she was shrinking in order to garner sympathy from others, but did not need to use that defense. Her appearance and demeanor improved to the point that teachers and school staff commented on it.

She went from having few social supports, to having many friends, who even gave her a surprise party for her birthday.

The importance of Family System Therapy (FST) is sadly underscored in this case as treatment was stopped prematurely. In working with children and adolescents, it is important to help the parents anticipate and support changes in the child's behavior. Usually the parents are stuck in maladaptive responses to the child's attitudes and actions. As would be expected, the traumas Tara's parents experienced over her initial fragility strongly impacted their feelings, actions, and attitude toward her. Optimally, in order to allow the most comprehensive treatment, her parents' traumatization would be processed, along with the attendant triggers, and their familial interactions with Tara would benefit from education and adjustment. For instance, her parents could be taught more supportive ways to communicate concerns to Tara, and self-control techniques to deal with their own anxiety, including increasing their ability to allow Tara to individuate.

Unfortunately, the father believed strongly in a patriarchal arrangement and remained detached from the parenting and therapy process. He was preoccupied with business affairs and rarely home. When he was present, his primary interactions with Tara were dismissive and derogatory. Tara's mother had given up trying to involve her husband more in the family life. In the face of her husband's absence she devoted herself completely to her children. She reported a history of anxiety and depression, but refused personal therapy. Not surprisingly, as Tara became more assertive, Mother appeared unable to allow her to differentiate. When Tara wanted to cut her hair, mother would not allow it, saying she "liked it that way." When Tara wanted to take on more responsibility as she approached college age, mother would not permit it and began sabotaging the treatment. Finally, despite Tara's objections, therapy was terminated. The poignancy of the unresolved issues, as well as the insight Tara gained during the course of therapy, were verbalized when she mused about her future and wondered aloud, "If I leave for college, who will hold the family together?"

Three-Pronged Protocol (Past, Present, Future)

Each form of psychotherapy is differentiated by specific sets of procedures, and the underlying paradigm that guides their applications. Although EMDR originated from a behavioral tradition (Shapiro, 1989), a

recent panel (Barlow, Shapiro, & White, 2005) emphasized how the intervening years have changed it to a very different treatment approach. Cognitive and behavioral therapies attempt to handle the current problems directly by trying to change the client's thinking or behavior in the here and now. In contrast, the AIP model that guides EMDR practice views the negative beliefs and emotions, such as fear and anxiety, not as the cause of the problem, but as the effect. The cause is viewed as specific memories of earlier events that have been inappropriately stored, and contain the perspective and affects that are manifested currently through verbalized beliefs, inappropriate emotions, and behaviors.² While most therapies view pathologies as having an experiential component, as previously discussed, in EMDR the experiences are viewed as information stored in the brain in memory networks that are stimulated by current situations. Except in cases of defined organic deficits, the lack of adequate processing of these earlier memories is the primary cause of the current dysfunctional responses.

The specific paradigm of various psychotherapies provides the heuristic for clinical practice. Therefore, in EMDR treatment, phobias (or panic attacks such as Tara's) are not dealt with by forcing the client to remain exposed to situations in the present that cause the distress as one would do in CBT (e.g., Emmelkamp, Bouman, & Scholing, 1992). Rather, in EMDR the earliest, worst, and most recent memories of the feared object or event are accessed and processed (De Jongh, Ten Broeke, & Renssen, 1999; Fernandez & Faretta, 2007; Shapiro, 1995, 1999). Once this is done, in order to handle any remnants of second order conditioning, the client imagines and processes the current situations that might have triggered the fear; for example a claustrophobic being stuck in traffic or in an elevator. When the client no longer feels fear while imagining the situation, a future template is processed so he can imagine engaging with the previously feared event calmly. As this is done, the imaginal scene is stored in memory and forms the neural configuration that will be tapped into when the client leaves the office and encounters a real-life situation. Only then, when the client is no longer afraid, is he asked to expose himself in real life to the event or object. At that point, the real-world interaction can then be used for feedback to identify anything else that might need to be processed.

This use of past targets (earliest, worst), present (most recent, triggers), and future (template) characterizes the generic protocol that underlies all the EMDR specialty protocols, such as those for pain and addiction (see Shapiro, 2001). It is also the framework used to assess the clinical picture in determining treatment

for any clinical complaint. Had Tara entered therapy when she was 30 years old instead of 15, her symptoms likely would include a social phobia, low self-esteem, and collapsed posture. The EMDR treatment would involve identifying the childhood memories that set the foundation for the pathology, the current situations that triggered the disturbance, and what was necessary to fill the deficits caused by her anxiety-ridden childhood, so that she would be able to excel in her current social systems. The same memories that caused her inability to interact appropriately at school would be responsible for her social problems as an adult. The memories causing her collapsed posture in school would be the same ones that contain the physical sensations causing her to slouch as an adult. These memories cause the past to be present.

Fortunately, no matter how long the memories have resided in the brain, they can still be processed. The older the client the more memories will need to be addressed, and the more potential comorbid conditions may exist to be treated. However, the function of the EMDR treatment is the same: to liberate the client from the dysfunctionally stored memories that contain the affects and perspectives driving the current pathology. It is much easier for clients to enhance their social skills if they do not have unprocessed earlier memories that are causing them to feel defective and unsafe. Consequently, EMDR treatment proceeds from the inside out and attends to the inner world before using the excellent CBT tool of modeling, or the experiential technique of role play, in order to incorporate the skill sets that would help define a healthy adult.

AIP and Family Dynamics

Although EMDR was originally developed as an individual therapy, the AIP model helps to inform family system therapists of the contribution of previous experiences to their clients' current pathologies. Whenever individuals join together to become a couple, their interactions are liable to trigger unprocessed information from each of their family of origin experiences or previous relationships. Dysfunctional patterns of interaction and defenses are not simply the product of current situations, but rather are rooted in previous experiences. Assessment is needed to identify whether the crisis that brings a couple into therapy is the latest example of a long-standing personal pattern or the result of new traumatization. For instance, in cases of infidelity or abandonment, the wounded partner may be unable to reconcile because she cannot erase the sadness, lack of trust, and the mental image of the betrayal. Regardless of what may be happening

in the present, even including her partner's great remorse and reassurances, previous experiences will not allow for a sense of safety or reengagement. In this case EMDR would be used to process the experience to liberate her from the distressing prior events. The EMDR clinician would also want to investigate and process the roots of the earlier betrayal by appropriate history taking from both partners. What previous experiences set the foundation for his actions? What dynamics were inherent within the relationship and/or his previous history to cause this to occur?

No couple relationship starts off completely new. Rather, it is always influenced by the experiences that forged each individual's sense of self and others. For instance, as noted by Siegel in the foreword to this book, different kinds of parenting produce children with secure, avoidant, ambivalent, or disorganized attachments. In turn, these children will form relationships that are influenced by these earlier attachment interactions, perhaps inappropriately attacking, dismissing, or withdrawing from their partners. Despite overt intention, the current situations automatically link into the memory networks where the earlier experiences are stored, and the dysfunctional affects and perspectives arise to color the perceptions of the present (see also Shapiro, 1998). A gesture meant as supportive by a partner may be interpreted as overcontrolling or demeaning. What is simple distractiveness may be seen as abandonment or disdain.

The AIP model sensitizes clinicians to take appropriate client histories to identify the earlier memories that have set the groundwork for the dysfunction, and then to use EMDR to process these experiential contributors. FST models are indeed salient, as clearly the interpersonal interactions within the family of origin or with other significant people may be the unprocessed distressing events that have been stored in memory. Current interpersonal interactions may trigger the memories, and family dynamics may maintain and exacerbate the symptoms. However, from an AIP perspective, the root cause is internal. For example, a husband's controlling behaviors are viewed as the consequence of earlier experiences that may be feeding current fears of abandonment or inadequacy. While his overt behaviors may be elicited by the perceptions of his wife's actions, and may be exacerbated by her reactions, the essential cause of chronic misperceptions and inappropriate behaviors is understood to be the unprocessed material. That is, even innocent behaviors by the wife, or those that would be deemed appropriate by others, can elicit affective responses in the husband and cause him to be distressed and controlling. While some relationships

may only need interventions focused on changing patterns of interaction and communication, within the AIP model, chronic and resistant interactional systems are viewed as based upon pathological responses within the individual.

In conjunction with appropriate systemic evaluation, the AIP model posits the utility of processing the individual's past experiences that are driving the current dysfunctional behavior. By this means, the family therapist can then be more successful in modeling and teaching the relationship and communication skills that are needed. For instance, many perpetrators of violent domestic acts appear to have witnessed these kinds of abusive behaviors between their parents, with stored affects of fear and anger. EMDR treatment would include processing these experiences along with teaching the necessary self-control and relationship skills. Anecdotal reports have indicated that processing the childhood memories of domestic violence perpetrators frees them from the automatic dysfunctional reactions, just as research involving the processing of sexual abuse perpetrators' childhood experiences has revealed a cessation of automatic reactivity and physiological arousal (see Ricci, 2006; Ricci, Clayton, & Shapiro 2006). Likewise, published reports indicate the utility of EMDR with people who have experienced marital and sexual dysfunction, who are now enabled to move toward much healthier relationships (Kaslow, Nurse, & Thompson, 2002; Keenan & Farrell, 2000; Levin, 1993; Protinsky, Sparks, & Flemke, 2001; Wernik, 1993).

A variety of dysfunctional relational behaviors may be rooted in childhood experiences that in some way initially gave the individual a sense of safety or control. As indicated by Siegel (2007), children with insecure attachments have an *appropriate* response to their parents' dysfunctional patterns; the pathology resides in the fact that, as an adult, these interactional patterns are no longer functional. The AIP model encourages the clinician to process the remembered interactions that set these patterns, and sensitizes them to recognize that the client's parents may be the victims of their own traumatization, which might go back many generations. The inappropriate responses to their children arise from the disturbing experiences that are stored in their own memory networks and that need to be processed. While evolution has hardwired automatic responses to maintain the survival of the species, trauma can override this programming (Madrid, Skolek, & Shapiro, 2006; Schore, 2003; Siegel, 1999). For instance, in contrast to healthy mothers who automatically respond to their children's cries with nurturing and support, the traumatized mother might instead become anxious and hyperaroused.

Consequently, the infant may be avoided or handled roughly when crying, starting a cycle of inappropriate responses by the mother to the baby's basic needs that can continue throughout the baby's childhood.

The AIP model alerts clinicians to the necessity of identifying and processing the parents' disturbing memories in order to change their habitual responses, as well as treating the children by processing their own traumatizing experiences (for a detailed case example see Shapiro & Forrest, 1997). FST can then be used to teach the appropriate parenting skills and help establish the healthy boundaries and interactions necessary to allow the family to thrive. (Possibly structural family therapy would be the treatment of choice.) If an individual therapist is working with an adult, family reconciliations are not as important since the client has reached an age at which individuation and a variety of choices are possible. For children who are embedded within the dynamics of a dysfunctional family, it is a principle of EMDR that it is important to work with the parents to help change these dynamics, while simultaneously incorporating positive experiences, affects, and resources for the child.

Conclusions

A child's sense of self is engendered by accumulated interactions with his parents and provides the core filter through which other life experiences are viewed. For instance, Tara's parents consistently treated her in ways that caused her to feel defective and, due to the affects arising from these unprocessed memories, other events were also experienced with the sense of "I'm worthless/inadequate." As noted previously, this would be the case regardless of whether she entered therapy at age 15 or age 50. Likewise, a client's lifelong depression may be caused by parental responses that instilled the affects and attendant beliefs of "I'm not good enough" and "I'm not in control" during formative years, or his fear and anxiety may be the result of parenting that resulted in an ambivalent attachment.

As an integrative psychotherapy approach, the goal of EMDR is to liberate the client of any age from the experiential contributors that set the foundation for the current pathology. A thorough assessment of the entire clinical picture is used to ascertain limitations of body, mind, emotion, and existential perspective. While the AIP model guiding EMDR practice posits that most pathology is influenced or caused by memories of previous experiences that have been inappropriately stored in the brain, a systemic evaluation is needed to explore that foundation, and to identify the present situations that are exacerbating any dysfunction.

Whether the client is a child or an adult, it is vital to remember that interpersonal interactions are the product of inner worlds converging. While some relationships can be corrected through education alone, many clients are in need of profound psychic readjustment to break lifelong patterns of dysfunctional emotional and cognitive responses. The problematic relationship is simply another symptom of a wounded inner world. This book offers clinical guidance to both individual and family therapists by demonstrating AIP informed EMDR processing in combination with various models of FST. EMDR highlights the inner world of the individual as a primary foundation for interactional behaviors. The myriad forms of FST contribute both ways to augment targeting selections, as well as procedures for heightening understanding and improving interactions among family members. Just as no person exists in isolation, so too the importance of an integrative practice cannot be overstated. It is hoped that this compendium of strategies across the spectrum of EMDR and FST clinical practice will aid in that process.

Notes

1. Also described as dual attention stimulation.
2. While it is possible to directly target current situations (which often results in earlier events surfacing in memory), it is generally more efficient and successful to first target the earlier precursor memories (for detailed explanation see Shapiro, 2001).

References

- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed.). Arlington, VA: Author.
- American Psychiatric Association. (2004). *Practice guideline for the treatment of patients with acute stress disorder and posttraumatic stress disorder*. Arlington, VA: Author.
- Andrade, J., Kavanagh, D., & Baddeley, A. (1997). Eye-movements and visual imagery: A working memory approach to the treatment of post-traumatic stress disorder. *British Journal of Clinical Psychology*, *36*, 209–223.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, *84*, 191–215.
- Bandura, A. (2000). Self-efficacy: The foundation of agency. In W. J. Perrig & A. Grob (Eds.), *Control of human behavior, mental processes, and consciousness: Essays in honor of the 60th birthday of August Flammer* (pp. 17–33). Mahwah, NJ: Erlbaum.
- Barlow, D. H., Shapiro, F., & White, M. (2005, December). *Supervision panel*. Presentation at Evolution of Psychotherapy Conference, Anaheim, CA.
- Barrowcliff, A. L., Gray, N. S., Freeman, T. C. A., & MacCulloch, M. J. (2004). Eye-movements reduce the vividness,

- emotional valence and electrodermal arousal associated with negative autobiographical memories. *Journal of Forensic Psychiatry and Psychology*, *15*, 325–345.
- Bleich, A., Kotler, M., Kutz, I., & Shalev, A. (2002). A position paper of the (Israeli) National Council for Mental Health: *Guidelines for the assessment and professional intervention with terror victims in the hospital and in the community*. Jerusalem, Israel: National Council for Mental Health.
- Bradley, R., Greene, J., Russ, E., Dutra, L., & Westen, D. (2005). A multidimensional meta-analysis of psychotherapy for PTSD. *American Journal of Psychiatry*, *162*, 214–227.
- Brown, S., & Shapiro, F. (2006). EMDR in the treatment of borderline personality disorder. *Clinical Case Studies*, *5*, 403–420.
- Browning, C. (1999, September). Floatback and float-forward: Techniques for linking past, present, and future. *EMDRIA Newsletter*, pp. 12–13.
- Carlson, J., Chemtob, C. M., Rusnak, K., Hedlund, N. L., & Muraoka, M. Y. (1998). Eye movement desensitization and reprocessing (EMDR): Treatment for combat-related post-traumatic stress disorder. *Journal of Traumatic Stress*, *11*, 3–24.
- Chemtob, C. M., Tolin, D. F., van der Kolk, B. A., & Pitman, R. K. (2000). Eye movement desensitization and reprocessing. In E. B. Foa, T. M. Keane, & M. J. Friedman (Eds.), *Effective treatments for PTSD: Practice guidelines from the International Society for Traumatic Stress Studies* (pp. 139–155, 333–335). New York: Guilford Press.
- Christman, S. D., Garvey, K. J., Propper, R. E., & Phaneuf, K. A. (2003). Bilateral eye movements enhance the retrieval of episodic memories. *Neuropsychology*, *17*, 221–229.
- Davidson, P. R., & Parker, K. C. H. (2001). Eye movement desensitization and reprocessing (EMDR): A meta-analysis. *Journal of Consulting and Clinical Psychology*, *69*, 305–316.
- De Jongh, A., Ten Broeke, E., & Renssen, M. R. (1999). Treatment of specific phobias with eye movement desensitization and reprocessing (EMDR): Protocol, empirical status, and conceptual issues. *Journal of Anxiety Disorders*, *13*, 69–85.
- Department of Veterans Affairs & Department of Defense. (2004). *VA/DoD clinical practice guideline for the management of post-traumatic stress*. Washington, DC: Author.
- Dutch National Steering Committee Guidelines Mental Health Care. (2003). *Multidisciplinary guideline anxiety disorders*. Utrecht, Netherlands: Quality Institute Health Care CBO/Trimbos Institute.
- Dworkin, M. (2005). *EMDR and the relational imperative*. New York: Brunner-Routledge.
- Edmond, T., Rubin, A., & Wambach, K. (1999). The effectiveness of EMDR with adult female survivors of childhood sexual abuse. *Social Work Research*, *23*, 103–116.
- Edmond, T., Sloan, L., & McCarty, D. (2004). Sexual abuse survivors' perceptions of the effectiveness of EMDR and eclectic therapy: A mixed-methods study. *Research on Social Work Practice*, *14*, 259–272.
- Emmelkamp, P. M. G., Bouman, T. K., & Scholing, A. (1989). *Anxiety disorders: A practitioner's guide*. Chichester: Wiley.
- Fernandez, I., & Faretta, E. (2007). EMDR in the treatment of panic disorder with agoraphobia. *Clinical Case Studies*, *6*, 44.
- Foa, E. B., & Rothbaum, B. O. (1998). *Treating the trauma of rape: Cognitive-behavioral therapy for PTSD*. New York: Guilford Press.
- Grant, M., & Threlfo, C. (2002). EMDR in the treatment of chronic pain. *Journal of Clinical Psychology*, *58*, 1505–1520.
- Gupta, M., & Gupta, A. (2002). Use of eye movement desensitization and reprocessing (EMDR) in the treatment of dermatologic disorders. *Journal of Cutaneous Medicine and Surgery*, *6*, 415–421.
- Ironson, G. I., Freund, B., Strauss, J. L., & Williams, J. (2002). Comparison of two treatments for traumatic stress: A community-based study of EMDR and prolonged exposure. *Journal of Clinical Psychology*, *58*, 113–128.
- Jaberghaderi, N., Greenwald, R., Rubin, A., Dolatabadim S., & Zand, S. O. (2004). A comparison of CBT and EMDR for sexually abused Iranian girls. *Clinical Psychology and Psychotherapy*, *11*, 358–368.
- Kaslow, F. W., Nurse, A. R., & Thompson, P. (2002). Utilization of EMDR in conjunction with family systems therapy. In F. Shapiro (Ed.), *EMDR and the paradigm prism: Experts of diverse orientations explore an integrated treatment*. Washington, DC: American Psychological Association Press.
- Kavanagh, D. J., Freese, S., Andrade, J., & May, J. (2001). Effects of visuospatial tasks on desensitization to emotive memories. *British Journal of Clinical Psychology*, *40*, 267–280.
- Keenan, P., & Farrell, D. (2000). Treating morbid jealousy with eye movement desensitization and reprocessing utilizing cognitive inter-weave: A case report. *Counseling Psychology Quarterly*, *13*, 175–189.
- Korn, D. L., & Leeds, A. M. (2002). Preliminary evidence of efficacy for EMDR resource development and installation in the stabilization phase of treatment of complex posttraumatic stress disorder. *Journal of Clinical Psychology*, *58*(12), 1465–1487.
- Korn, D. L., van der Kolk, B. A., Weir, J., & Rozelle, D. (2004, Sept.). *Looking beyond the data: Clinical lessons learned from an EMDR treatment outcome study*. Paper presented at the Annual Conference of the EMDR International Association, Montreal, Canada.
- Kuiken, D., Bears, M., Miall, D., & Smith, L. (2001–2002). Eye movement desensitization reprocessing facilitates attentional orienting. *Imagination, Cognition and Personality*, *21*(1), 3–20.
- Lamprecht, F., Kohnke, C., Lempa, W., Sack, M., Matzke, M., & Munte, T. (2004). Event-related potentials and EMDR treatment of post-traumatic stress disorder. *Neuroscience Research*, *49*, 267–272.
- Lansing, K., Amen, D. G., Hanks, C., & Rudy, L. (2005). High resolution brain SPECT imaging and EMDR in police officers with PTSD. *Journal of Neuropsychiatry and Clinical Neurosciences*, *17*, 526–532.

- Lee, C., Gavriel, H., Drummond, P., Richards, J., & Greenwald, R. (2002). Treatment of post-traumatic stress disorder: A comparison of stress inoculation training with prolonged exposure and eye movement desensitization and reprocessing. *Journal of Clinical Psychology, 58*, 1071–1089.
- Lee, C., Taylor, G., & Drummond, P. D. (2006). The active ingredient in EMDR: Is it traditional exposure or dual focus of attention? *Clinical Psychology and Psychotherapy, 13*, 97–107.
- Levin, C. (July/August 1993). The enigma of EMDR. *Family Therapy Networker, 75*–83.
- Levin, P., Lazrove, S., & van der Kolk, B. A. (1999). What psychological testing and neuroimaging tell us about the treatment of posttraumatic stress disorder (PTSD) by eye movement desensitization and reprocessing (EMDR). *Journal of Anxiety Disorders, 13*, 159–172.
- Lovett, J. (1999). *Small wonders: Healing childhood trauma with EMDR*. New York: Free Press/Simon & Schuster.
- Madrid, A., Skolek, S., & Shapiro, F. (2006). Repairing failures in bonding through EMDR. *Clinical Case Studies, 5*, 271–286.
- Marcus, S., Marquis, P., & Sakai, C. (1997). Controlled study of treatment of PTSD using EMDR in an HMO setting. *Psychotherapy, 34*, 307–315.
- Marcus, S., Marquis, P., & Sakai, C. (2004). Three- and 6-month follow-up of EMDR treatment of PTSD in an HMO setting. *International Journal of Stress Management, 11*, 195–208.
- Maxfield, L., & Hyer, L. A. (2002). The relationship between efficacy and methodology in studies investigating EMDR treatment of PTSD. *Journal of Clinical Psychology, 58*, 23–41.
- McCullough, L. (2002). Exploring change mechanisms in EMDR applied to “small t trauma” in short term dynamic psychotherapy: Research questions and speculations. *Journal of Clinical Psychology, 58*, 1465–1487.
- McGoldrick, M., Gerson, R., & Shellenberger, S. (1999). *Genograms: Assessment and intervention*. New York: Norton.
- Mol, S. S. L., Arntz, A., Metsmakers, J. F. M., Dinant, G., Vilters-Van Montfort, P. A. P., & Knottnerus, A. (2005). Symptoms of post-traumatic stress disorder after non-traumatic events: Evidence from an open population study. *British Journal of Psychiatry, 186*, 494–499.
- National Institute for Clinical Excellence. (2005). *Post traumatic stress disorder (PTSD): The management of adults and children in primary and secondary care*. London: NICE Guidelines.
- Norcross, J. C. (Ed.). (2002). *Psychotherapy relationships that work: Therapist contributions and responsiveness to patient needs*. New York: Oxford University Press.
- Perkins, B. R., & Rouanzoin, C. C. (2002). A critical evaluation of current views regarding eye movement desensitization and reprocessing (EMDR): Clarifying points of confusion. *Journal of Clinical Psychology, 58*, 77–97.
- Peterson, C. Maier, S. F., & Seligman, M. E. P. (1993). *Learned helplessness: A theory for the age of personal control*. New York: Oxford University Press.
- Power, K. G., McGoldrick, T., Brown, K., et al. (2002). A controlled comparison of eye movement desensitization and reprocessing versus exposure plus cognitive restructuring, versus waiting list in the treatment of post-traumatic stress disorder. *Journal of Clinical Psychology and Psychotherapy, 9*, 299–318.
- Protinsky, H., Sparks, J., & Flemke, K. (2001). Using eye movement desensitization and reprocessing to enhance treatment of couples. *Journal of Marital & Family Therapy, 27*, 157–164.
- Ray, A. L., & Zbik, A. (2001). Cognitive behavioral therapies and beyond. In C. D. Tollison, J. R. Satterhwaite, & J. W. Tollison (Eds.), *Practical pain management* (3rd ed., pp. 189–208). Philadelphia: Lippincott.
- Ricci, R. J. (2006). Trauma resolution using eye movement desensitization and reprocessing with an incestuous sex offender: An instrumental case study. *Clinical Case Studies, 5*, 248–265.
- Ricci, R. J., Clayton, C. A., & Shapiro, F. (2006). The therapeutic effects of EMDR on deviant sexual arousal in child molesters. *Journal of Forensic Psychiatry and Psychology, 17*, 538–562.
- Rogers, S., & Silver, S. M. (2002). Is EMDR an exposure therapy? A review of trauma protocols. *Journal of Clinical Psychology, 58*, 43–59.
- Rogers, S., Silver, S., Goss, J., Obenchain, J., Willis, A., & Whitney, R. (1999). A single session, controlled group study of flooding and eye movement desensitization and reprocessing in treating posttraumatic stress disorder among Vietnam war veterans: Preliminary data. *Journal of Anxiety Disorders, 13*, 119–130.
- Rothbaum, B. O., Astin, M. C., & Marsteller, F. (2005). Prolonged exposure versus eye movement desensitization (EMDR) for PTSD rape victims. *Journal of Traumatic Stress, 18*, 607–616.
- Scheck, M., Schaeffer, J. A., & Gillette, C. (1998). Brief psychological intervention with traumatized young women: The efficacy of eye movement desensitization and reprocessing. *Journal of Traumatic Stress, 11*, 25–44.
- Schneider, J., Hofmann, A., Rost, C., & Shapiro, F. (in press). EMDR in the treatment of chronic phantom limb pain. *Pain Medicine*.
- Schore, A. N. (2003). *Affect dysregulation and the disorders of the self*. New York: Norton.
- Seligman, M. E. (1972). Learned helplessness. *Annual Review of Medicine, 23*, 407–412.
- Servan-Schreiber, D., Schooler, J., Dew, M. A., Carter, C., & Bartone, P. (2006). EMDR for PTSD: A pilot blinded, randomized study of stimulation type. *Psychotherapy and Psychosomatics*.
- Shapiro, F. (1989). Efficacy of the eye movement desensitization procedure in the treatment of traumatic memories. *Journal of Traumatic Stress Studies, 2*, 199–223.
- Shapiro, F. (1991a). Eye movement desensitization & reprocessing procedure: From EMD to EMD/R—a new treatment model for anxiety and related traumata. *Behavior Therapist, 14*, 133–135.

- Shapiro, F. (1991b). Stray thoughts. *EMDR Network Newsletter*, 1, 1–3
- Shapiro, F. (1994a). Alternative stimuli in the use of EMDR. *Journal of Behavior Therapy and Experimental Psychiatry*, 25, 89.
- Shapiro, F. (1994b). EMDR: In the eye of a paradigm shift. *Behavior Therapist*, 17, 153–158.
- Shapiro, F. (1995). *Eye movement desensitization and reprocessing: Basic principles, protocols and procedures*. New York: Guilford Press.
- Shapiro, F. (1998). Eye movement desensitization and reprocessing (EMDR): Accelerated information processing and affect-driven constructions. *Crisis Intervention and Time-Limited Treatment*, 4, 145–157.
- Shapiro, F. (1999). Eye movement desensitization and reprocessing (EMDR): Clinical and research implications of an integrated psychotherapy treatment. *Journal of Anxiety Disorders*, 13, 35–67.
- Shapiro, F. (2001). *Eye movement desensitization and reprocessing: Basic principles, protocols and procedures* (2nd ed.). New York: Guilford Press.
- Shapiro, F. (2002). Paradigms, processing, and personality development. In F. Shapiro (Ed.), *EMDR as an integrative psychotherapy approach: Experts of diverse orientations explore the paradigm prism* (pp. 3–26). Washington, DC: American Psychological Association Books.
- Shapiro, F. (2005). *Eye movement desensitization and reprocessing (EMDR) training manual*. Watsonville, CA: EMDR Institute.
- Shapiro, F., & Forrest, M. S. (1997). *EMDR*. New York: Basic Books.
- Siegel, D. J. (1999). *The developing mind: Toward a neurobiology of interpersonal experience*. New York: Guilford.
- Siegel, D. J. (2002). The developing mind and the resolution of trauma: Some ideas about information processing and an interpersonal neurobiology of psychotherapy. In F. Shapiro (Ed.), *EMDR as an integrative psychotherapy approach: Experts of diverse orientations explore the paradigm prism* (pp. 85–122). Washington, DC: American Psychological Association Press.
- Siegel, D. (2007). Foreword. In F. Shapiro, F. Kaslow, & L. Maxfield (Eds.), *Handbook of EMDR and family therapy processes*. New York: Wiley.
- Sjöblom, P. O., Andréewitch, S., Bejerot, S., Mörtberg, E., Brinck, U., Ruck, C., et al. (2003). *Regional treatment recommendation for anxiety disorders*. Stockholm: Medical Program Committee/Stockholm City Council, Sweden.
- Smyth, N. J., & Poole, D. (2002). EMDR and cognitive behavior therapy: Exploring convergence and divergence. In F. Shapiro (Ed.), *EMDR and the paradigm prism* (pp. 151–180). Washington, DC: American Psychological Association Press.
- Sprang, G. (2001). The use of eye movement desensitization and reprocessing (EMDR) in the treatment of traumatic stress and complicated mourning: Psychological and behavioral outcomes. *Research on Social Work Practice*, 11, 300–320.
- Stickgold, R. (2002). EMDR: A putative neurobiological mechanism of action. *Journal of Clinical Psychology*, 58, 61–75.
- Taylor, S., Thordarson, D. S., Maxfield, L., Fedoroff, I. C., Lorell, K., & Orgodniczuk, J. (2003). Comparative efficacy, speed, and adverse effects of three PTSD treatments: Exposure therapy, EMDR, and relaxation training. *Journal of Consulting and Clinical Psychology*, 71, 330–338.
- Van den Hout, M., Muris, P., Salemink, E., & Kindt, M. (2001). Autobiographical memories become less vivid and emotional after eye movements. *British Journal of Clinical Psychology*, 40, 121–130.
- van der Kolk, B. A. (1996). Trauma and memory. In B. A. van der Kolk, A. C. McFarlane, & L. Weisaeth (Eds.), *Traumatic stress: The effects of overwhelming experience on mind, body, and society* (pp. 279–302). New York: Guilford Press.
- van der Kolk, B. A. (2002). Beyond the talking cure: Somatic experience and subcortical imprints in the treatment of trauma. In F. Shapiro (Ed.), *EMDR as an integrative psychotherapy approach: Experts of diverse orientations explore the paradigm prism* (pp. 57–84). Washington, DC: American Psychological Association Press.
- Van der Kolk, B., Spinazzola, J., Blaustein, M., Hopper, E., Korn, D., & Simpson, W. (2007). A randomized clinical trial of EMDR, fluoxetine and pill placebo in the treatment of PTSD: Treatment effects and long-term maintenance. *Journal of Clinical Psychiatry*, 68, 37–46.
- Van Etten, M., & Taylor, S. (1998). Comparative efficacy of treatments for post-traumatic stress disorder: A meta-analysis. *Clinical Psychology and Psychotherapy*, 5, 126–144.
- Vaughan, K., Armstrong, M. F., Gold, R., O'Connor, N., Jenneke, W., & Tarrier, N. (1994). A trial of eye movement desensitization compared to image habituation training and applied muscle relaxation in post-traumatic stress disorder. *Journal of Behavior Therapy & Experimental Psychiatry*, 25, 283–291.
- Wachtel, P. L. (2002). EMDR and psychoanalysis. In F. Shapiro (Ed.), *EMDR and the paradigm prism* (pp. 123–150). Washington, DC: American Psychological Association Press.
- Watkins, J., & Watkins, H. (1997). *Ego states, theory and therapy*. New York: Norton.
- Wernik, U. (1993). The role of the traumatic component in the etiology of sexual dysfunctions and its treatment with eye movement desensitization procedure. *Journal of Sex Education and Therapy*, 19, 212–222.
- Wolpe, J. (1958). *Psychotherapy by reciprocal inhibition*. Stanford, CA: Stanford University Press.
- Zabukovec, J., Lazrove, S., & Shapiro, F. (2000). Self-healing aspects of EMDR: The therapeutic change process and perspectives of integrated psychotherapies. *Journal of Psychotherapy Integration*, 10, 189–206.

Correspondence regarding this article should be directed to Francine Shapiro, PO 750, Watsonville, CA 95077.