

# EMDR and Information Processing

By Francine Shapiro, Ph.D.

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The abilities to obtain or construct meaning from experiences and be able to interpret these experiences in a flexible manner are two of the hallmarks of mentally healthy individuals, whereas the absence of these capacities—the hampered ability “to choose one’s attitude”—typifies those with posttraumatic stress disorder (PTSD), the first group of clients treated with EMDR. Clinical experience has clearly shown that when an individual is locked into a particular interpretation of reality, the source of the problem is the interaction of the present situation with disturbing memories. For example, combat veterans may react with violent rage in the present because a coworker’s incompetence triggers memories of comrades who died in Vietnam because of negligence. For them, albeit on a preconscious level, *incompetence* means impending disaster. Such preconstructed, rigid schema and reaction patterns appear to be manifestations of unprocessed information in which negative affect dominates (Shapiro, 1995, 2001; Shapiro & Forrest, 1997). In essence, the individual reacts dysfunctionally to current situations because of automatic responses that were first elicited by past events and have become physiologically encoded. Current research has emphasized the biological underpinnings of trauma response (e.g., van der Kolk, 1996), and the physiological concomitants of the disorder may account for the relative imperviousness of PTSD to conventional clinical methods (Hyer, 1994; Seligman, 1995; Shalev, Bonne, & Eth, 1996; Solomon, Gerrity, & Muff, 1992).

If the clinical use of EMDR has shown clinicians anything during the past decade, it is that PTSD is an excellent benchmark for the problems that underlie most pathologies. That is,

dysfunctional physiological encoding of perceptions is not limited to the obvious trauma victims but is actually a contributor to most problems that bring clients into therapy. What makes a person believe “I’m not lovable, or worthwhile”? What leads a client to declare, “I can’t succeed” or “I’ll be abandoned”? Unless we believe that it comes from an alien virus, clinicians, regardless of orientation, generally agree that the basis of the problems comes at least in part from earlier life experiences.

A behaviorist may ignore the earlier event and concentrate on the present symptoms. A cognitive therapist may concentrate on the beliefs presently displayed. A psychodynamic therapist may explore the interpretations of the earlier experiences. An experiential therapist may orchestrate a reenactment of the event, and so forth. Regardless of whether the event is placed in foreground or background, all the therapists would agree that some previous events have contributed to the present problem. As an approach, EMDR places the attention squarely on these etiological events, which become the central focus of both theory and practice.

As a distinct orientation, EMDR therapy is guided conceptually and practically by an adaptive information-processing model (Shapiro, 1991, 1995, 2001). It is posited that the physiological systems of the brain that attend to the assimilation of experience are no different from other body systems. That is, if the body is cut, it has a tendency to close and heal. This movement toward health and balance is sustained unless there is a block or repeated traumatization. Once the recurrent assault is stopped or the block removed, the body again moves toward healing. This movement toward a positive state can also be seen in the physical system that governs the integration of perception and the psychological (cognitive and affective) concomitants of “mind.”

Specifically, it is proposed that inherent in all of us is a physiological information-processing system that integrates the perceptions of sensory input and the cognitive components of experience into an associated internal memory network to allow for ecological, healthful, balanced functioning. Optimally, individuals are allowed to choose their current attitudes and actions because the immediate responses are appropriate to current life conditions. All the contributors to a happy and fruitful existence are available when one is able to trust one’s own

perceptions, bond, experience joy and intimacy, and achieve a sense of greater purpose, service, and connection, however those may be defined. This experience is possible because a physiological mechanism is in place to take any perceptual experience, including disturbance, to a higher level of mental health.

For instance, George may have a disagreement with a colleague at work and initially react with anger, negative self-talk, and physical tension. However, he goes home and thinks about it, talks about it, and dreams about it, and after a while it does not bother him any longer. One can say that it has achieved an *adaptive resolution*. That is, what is useful has been learned—stored in the brain with appropriate affect so that it is capable of guiding him in the future. What is useless—the cognitive discord, negative emotions, physical arousal, and tightness—are discarded. When George next sees the colleague, he will respond in a balanced manner that is informed by his insights and internal connections. However, when a trauma occurs, this internal information-processing system may become imbalanced. Without the appropriate internal connections being made, little learning and resolution takes place. The initial perceptions are stored as they were at the time of the original experience, along with all the distortions engendered by the high arousal. A central tenet of EMDR treatment is that if these memories remain unprocessed, they become the basis of current dysfunctional reactions.

The obvious example of unprocessed events contributing directly to current dysfunction can be found in clients suffering from an obvious trauma such as rape or combat—the “Criterion A” events needed to diagnosis posttraumatic stress disorder. The intrusions necessary for the diagnosis of PTSD in those who have experienced a rape may include intrusive images of the rapist, generally along with the smell and touch of the rapist’s body. In addition, the person has feelings of terror, possibly alternating with feelings of shame and numbness. Unhealed, those who have been raped are trapped in the event of the past, truly unable to choose their present attitude. Even if a beloved and trusted partner unexpectedly touches them in the same way the rapist did, they may startle, cringe, and be flooded with the feelings associated with the rape. For the EMDR therapist, the present dysfunction is caused by a lack of processing of the event. It is not that they “learned” to feel helpless. In the present moment they are helpless because the perceptions (the

stored experience) of the earlier event override them emotionally and physically and trap them into being reactive rather than appropriately responsive to their partner's touch.

The EMDR processing of a rape takes a client emotionally, cognitively, and physiologically through a rapid learning curve that may start with a summation of the self ranging from "I'm worthless. I should have done something" to "I did well . . . He had a knife at my throat and I got out alive . . . The shame is his, not mine"—and from a shame-based feeling of "I'm damaged goods" to a sense of "I'm a resilient and strong woman." The movement is one of psychic growth to a new sense of identity, not merely a simple symptom reduction. The obvious indicators of symptom remission, such as fear and anxiety desensitization, and subsequent lack of intrusions are all natural by-products of the reprocessing of the event.

### **Personality Development and Reorganization**

The assimilation of the event into the associative memory network and accommodation of the client's previous identity to encompass it can be considered the basis of personality development. A clinician using EMDR as a distinct approach is taught to consider personality not as an immovable mountain but rather as an accumulation of characteristic internal patterns and responses. Each of these characteristics is believed to be an interaction between genetic predisposition and experiences. If the responses are appropriate, they are considered to be engendered by adequately processed childhood experiences that have laid the groundwork for adaptive behaviors. If the responses are dysfunctional, they are considered to be engendered by inadequately processed experiences that are activated by current conditions.

These dysfunctional pivotal, or touchstone, memories contain the perceptions that were encoded at the time of the event—images, thoughts and sounds, emotions, physical sensations, and the metaperceptions or self-beliefs. Changes may occur because of sequential reexperiencing. However, just as an unhealed person may have memories of a rape that have been largely unaltered since the day the rape occurred (Lee, Vaillant, Torrey, & Elder, 1995; van der Kolk, Greenberg, Boyd, & Krystal, 1985; van der Kolk, Hopper, & Osterman, in press), these pivotal early experiences may be encoded with fundamentally unaltered childhood perceptions, regardless of the current age of the client. These earlier perceptions may be accurate depictions of

reality, or they may be intrinsically distorted because of the engendered affect, or an interaction of the experience and previously encoded dysfunction. Regardless, inappropriate fears of abandonment, lack of love, fear of failure, and all the ubiquitous psychic pains that mar a person's present existence can generally be traced to early childhood experiences physically stored in the brain. Those individuals who have PTSD are comparatively the lucky ones. They have the intrusive images that allow them to be aware of the genesis of their fears. Other clients have only the thoughts, emotions, or associated physical sensations released into consciousness; they are gripped by the past without knowing how or why.

Astute clinicians know these facts intuitively because they have noted that their clients lapse into the demeanor or tones of childhood when speaking of certain problems and concerns. The condition of childhood is one of powerlessness in a world of giants. An internal locus of control is a thing of fantasy—not ecology. That these childhood affects are literally stored in the brain becomes obvious when one deliberately accesses an unprocessed childhood event. For instance, in every workshop I have given in the past 5 years, I have asked, “Who in the audience remembers having been humiliated some time in grade school?” Easily 95% of the participants raise their hands, regardless of the country or venue in which the workshop is being conducted. I then say, “Close your eyes, and notice how your body feels. Now, bring up the humiliation from grade school, and notice what happens in your body. Notice the thoughts that come up about it.” During the debriefing, many people note that their body cringed or they felt the rising heat of some of the emotions they experienced at the time of the original event. Others had the same thoughts they remember having at that time.

In all of these instances, we would say that the early memory has not been processed. When the audience members considered the characteristics of the event, they may have found that the tendrils of the past had wrapped around their present. Perhaps the event contributes to current problems with authority, a fear of being scrutinized in public, or difficulties walking into a room or meeting a group of people. The stored emotion and physical sensations of the early event arise and are reexperienced in the present when a similar event occurs.

Simply put, the present is perceived through the lenses of the past. Anything that happens to us in the present has to physiologically link up in the memory network with past events to be understood or recognized. The perceptions of observing a cup in the present link up with our previous “cup” experiences in order to know what do with it. If the appearance is too dissimilar, its function will not be realized. Furthermore, if a person’s childhood included experiences of being hit on the head with a cup, then the past childhood fear may be presently associated with the current perception of the cup. The fear may arise in the mind and body without the person knowing why, but it would be real and palpable in the present. Rather than (or, in certain instances, in addition to) simple conditioning, the information-processing paradigm posits that it is the early perceptions of the events that are stored and triggered.

Not only is fear engendered from certain childhood experiences, but all the complexity of the stored childhood perception may be experienced in the present. A man may feel frightened and intensely humiliated when confronted with an angry authority figure because his stored early memories include being beaten by his father. A woman may feel helpless or incessantly angry in a current relationship because of a domineering sibling. The level of intelligence, education, or spiritual development is unimportant in this equation. Essentially, discrete development of a particular characteristic response has been arrested at the level of the childhood event. The responses are due simply to the emergence of the dysfunctional stored material which makes the past, present. These habitual patterns of response and perception become identified as personal characteristics. As pervasive responses, they are identified as personality traits. Nevertheless, each is the sum of its parts and as such, every etiological event and those that have accreted around it can be directly targeted and treated.

Clients who have experienced a single-event trauma or a single class of events are relatively easy to treat with EMDR. Controlled research has found that approximately 85% to 100% of those with this class of civilian PTSD can be effectively treated in the equivalent of three 90-minute sessions (e.g., Ironson, Freund, Strauss, & Williams, 2002; Marcus, Marquis, & Sakai, 1997; Rothbaum, 1997; Wilson, Becker, & Tinker, 1997). Concentrating on a single event or one that represents a distinctly similar cluster of experiences can allow the positive treatment effects to generalize and integrate within the rest of the adaptive networks. However, if a child was

pervasively humiliated, abused, and violated throughout childhood, the entire personality may be configured in this arrested form. The emotions and physical sensations of myriad childhood events can be triggered by a wide variety of circumstances. Consequently, nonadaptive responses and behaviors emerge consistently without volition or conscious awareness of their genesis.

Although an adult, the client may be characteristically responding as a child, whether the person is avoiding social contact, unable to distinguish boundaries, dissociating to escape perceived danger, or reacting with ongoing fears of abandonment or helplessness. However, one of the tenets of the information-processing model is that personality constructs change as pivotal memories are sufficiently processed. With adequate preparation, as processing occurs, the adult perspective emerges as a concomitant of the learning that takes place. Unprocessed, or undigested, events are metabolized; what is useful is assimilated, and what is useless is discarded. Although this learning process is not three-session therapy, the experience of clinicians who specialize in personality disorders is that the treatment time is much shorter (Manfield, 1998).

Where complex dysfunctional configurations underlie personality disorders, EMDR is used, in addition to processing dysfunctionally stored memories, to incorporate positive affects and experiences in order to fill the gaps and deficits caused by developmental windows that may have closed before needed aspects of personal growth and socialization had taken place. Specifically, traumatized children may have been unable to learn to trust their perceptions, identify appropriate boundaries, develop object constancy and the other multiple characteristics needed to bond, and experience a healthful and joyous life. For these clients, processing dysfunctional memories is insufficient and often initially contraindicated because they do not have enough positive and adaptive networks to allow an adequate assimilation of the event.

Processing itself is the appropriate association of experience and its assimilation into functional comprehensive networks. For clients with extensive abuse and neglect histories, this learning and adaptive resolution cannot take place because they have insufficient internal resources and positive experiences to transform the initial dysfunction. As a consequence of clinical observation, it was fortunately discovered that focused information processing allows negative affects, imagery, beliefs, and sensations to become weaker and less valid, while positive

affects, imagery, beliefs, and sensations strengthen and become more robust (Shapiro, 1989a, 1991, 1995). Consequently, EMDR has been used to strengthen positive resources (Korn & Leeds, in press; Leeds, 1998; Leeds & Shapiro, 2000; Phillips, 2001; Shapiro, 1991, 1995, 2001) in preparation for processing dysfunctional material and to incorporate positive templates for current and future functioning (Shapiro, 1999, 2001).

EMDR's ability to enhance affects and imagery and build resiliency for processing requires greater investigation to determine the way it can best aid the development of the psychic infrastructure needed to overcome years of childhood neglect and abuse. Once again, this goal underscores the need for a greater integration of orientations. The wisdom of the psychodynamic and child development communities is needed to identify the experiences pivotal to producing a healthy, joyous, and loving adult. These experiences need to be engendered and enhanced within the therapeutic process. Whereas neurobiological deficits have been identified in those who have experienced profound deprivation and abuse (Perry, 1997; Perry, Pollard, Blakley, Baker, & Vigilante, 1995; Schore, 1994, 1997, 2001; Siegel, 1999), the degree to which EMDR can be used to remediate these problems should be explored (Schore, Siegel, Shapiro, & van der Kolk, 1998; Shapiro, 2001, 2002). The degree to which not only the suffering of victims, but also subsequent potential perpetrator activity can be reduced has major implications on local and global levels (see Appendix C).

Incorporated into an overview of the EMDR treatment is the notion that relatively few clients are permanently damaged, since the information-processing system is intrinsic and adaptive. Once the appropriate memories are accessed and the information-processing system is stimulated and maintained in a dynamic form, the stored perceptions generally transform into an adaptive resolution. This underscores the notion that no client is expendable and, the hope that with enough conjoint effort to pool the collective wisdom of the field, no client has to be left behind.

### **Nature and Nurture**

Determining which events may cause lasting, negative effects deserves intensive investigation. For example, recall the example of people who remember being humiliated in

childhood. Certainly, all the participants did not have negative reactions. Some found that they smiled at their own antics or had spontaneous thoughts, such as “That person shouldn’t have been teaching” or other appropriate adult responses to a historically past event of little importance. We would say that these people have sufficiently processed the events. Rather than having encapsulated within them the childhood affect, physical responses, and perspectives, these events have already been successfully integrated within an adaptive network. The nature of the experience might have been the same, but the result of the interaction was different.

Many factors may explain the range of impact. Perhaps similar negative events have different effects on various individuals because of genetic predispositions, the number and type of preceding events that may have engendered a greater resiliency, or a corrective emotional experience that may have occurred within a window of opportunity immediately following the event. For instance, perhaps a person who was teased in school had a friend immediately provide comforting words, whereas another may have merely been ostracized. Perhaps some people have a predisposition to higher reactivity just as some have weaknesses in cardiac or respiratory systems. Perhaps some people had previous experiences that have sufficiently bolstered their self-esteem, whereas others had experiences that supported the notion they were not good enough. Perhaps the environment played an important role in a particular event. For example, a child may have been awakened unexpectedly early the day of the event and was therefore particularly tired and so was more profoundly affected. As the eloquent Vince Lombardi is reported to have said, “Fatigue makes cowards of us all.”

Whatever the reason, it is not only clear that individuals respond differently to similar events but also that there can be no clear definition of “*trauma*” other than “any event that has a lasting negative effect on the self or psyche.” Therefore, part of the EMDR work is to process any negatively contributing experience. Substantially, any event can be a trauma. We may designate the Criterion A events that define a PTSD diagnosis as “Big T” traumas because they are easily recognizable. However, any of the ubiquitous experiences of childhood can qualify as a “Small t” trauma (Shapiro, 1995, 2001; Shapiro & Forrest, 1997). What may seem to an adult to be of negligible importance may have been extremely important for a developing child. In fact, if a person remembers the scene of a childhood humiliation, it is clear that to the child it was not an

insignificant event. In fact, to extend even further into the realm of speculation, it is possible that the reason so many of these childhood experiences have a lasting effect is that the information-processing system became overwhelmed by survival fear. This concept is certainly recognizable as the precursor of diagnosed PTSD. However, as an underlying cause of so many adult-related complaints, it may simply mean that being humiliated in childhood is the evolutionary equivalent of being “cut out of the herd,” which stimulates arousal corresponding to fears of survival.

The same may be true of the events that can be categorized as catalyzing fears of abandonment, lack of love, or inability to succeed. Underneath all of these fears may lurk a simple survival instinct. Given the evolutionary imperative of parental care and nurturing during childhood and perhaps an intrinsic need for group assimilation and identification, any event that threatens coherence can cause these experiences to be stored with a fight-or-flight arousal that signifies danger. As previously noted, this encapsulation of the childhood perspective remains substantially intact until the event is subsequently processed to an adaptive resolution. Therefore, even though what was potentially dangerous for a child is no longer dangerous for the adult, it is the stored perceptions that dominate. There seems to be little physiological differentiation between the triggered fear inherent in the stored past event and a reality-based fear evoked in the present.

The lack of differentiation between the somatic response of past and present is pivotal to the nonadaptive feedback loop enveloping the client. For instance, a woman may have been verbally abused and hit by her mother all through childhood. If these experiences were not processed, the physical sensations of danger that were previously appropriate are physiologically stored. As an adult, just the sight of the mother or anyone resembling the mother could bring up the same physiological feelings of danger and not only color the present perception of reality but also reinforce the previous experience. Locked into the same configuration that was stored in childhood, the same feelings of abuse could be experienced, and she would not be able to assert herself, walk away, set boundaries, or evoke any of the positive reactions of a healthy adult. The past becomes repeated in the present and reinforces itself by second-order conditioning of any associated stimuli in addition to an elicitation of current autonomic responses related to danger; indeed, because of the dysfunctional responses, the client cannot defend herself. Although the

woman may attempt to gain cognitive control, she has no ability to choose the autonomic responses in the present. They are biochemically dictated by the stored past events.

Although EMDR is not a treatment of choice for disorders that are purely organic (such as systemic deficits related to learning disabilities and certain forms of depression), what may seem to be the result of neurological imbalances requiring medication is often merely experientially stored traumata. For example, one woman in her 60s experienced chronic depression her whole life (Shapiro & Forrest, 1997). The depression lifted after the processing of a memory in which her mother pointedly favored her brother and left her feeling as though “the stars and the sun had dropped out the sky.” Because she lived in a country where women were generally regarded as second-class citizens, she had ample opportunities for this previous memory to be triggered and reinforced, which resulted in lifelong depression and feeling of repression—even after she had grown, had married, had moved to another country, and was no longer subject to the previous restraints.

It is posited in EMDR’s information-processing theory that in situations such as those of the woman just described, depression can deepen and become less manageable over time because more and more experiences are being stored in the same dysfunctional network. Regardless of whether new “objectively” traumatizing events occur, the previous experiences of helplessness and hopelessness are stored and triggered in the present. The feelings of despair and depression that arise color the perceptions of the present and are themselves sequentially stored. As new experiences emerge and trigger the associated memories, the load gets greater and greater as each new experience of helplessness is stored with its own set of dysfunctional affects. Consequently, the negative self-perceptions of one who is helpless and hopeless become reinforced and stored in turn, which exacerbates the affect state termed *depression*. This intermixture of past and present is a feedback loop based on stored somatic responses, which causes the person to be more traumatized each time the responses are experienced. Thus, a childhood event that might be considered unimportant by adult standards can give rise to increasing symptomology because of this sequence.

The ubiquitous nature of “Small t” experiences and their contribution to various diagnostic categories has become clear during the past decade with EMDR. For example, body dysmorphic disorder is characterized by a severely distorted view of personal appearance. The client may believe that a limb or facial feature is obviously and intensely repulsive, but nothing appears problematic to an objective observer. The dysfunctional perspective is responsible for many unnecessary “corrective” surgeries and suicides borne of despair. It is traditionally considered a relatively difficult disorder to treat, and proposed treatment regimens are long and have varying success rates (Neziroglu, McKay, Todaro, & Yaryura-Tobias, 1996; Veale et al., 1996; Wilhelm, Otto, Lohr, & Deckersbach, 1999). Nevertheless, when EMDR was used for seven consecutive people with the disorder, five of the seven clients had a complete remission of symptoms within one to three sessions (Brown, McGoldrick, & Buchanan, 1997). The standard EMDR protocol was used to target the first time the clients remembered experiencing their belief that something was wrong with them.

For example, a woman had a 24-year history of believing that she was covered with unsightly hair (Brown et al., 1997). Her social life and general functioning had deteriorated over time, and she spent hours each day looking in the mirror and plucking out every visible hair before she was willing to appear in public. The belief, emotion, and physical reactivity to her appearance changed after three EMDR sessions and were maintained at a 1-year follow-up. The identified target was the etiological event: Her aunt had made a disparaging remark about her underarm hair.

What biochemical interaction of nature, nurture, and environmental pressure was necessary to cause this remark to overwhelm the client’s information-processing system? The factors that allow these types of experiences to be encoded in a way that alters a client’s perceptions for the succeeding decades are worthy of future investigation. Nevertheless, only the internal reorganization attendant to the rapid processing of the event was necessary to allow a complete remission and return to adaptive functioning. Essentially, this case typifies the EMDR approach to pathology. It is assumed that an etiological event is dysfunctionally encoded in the memory system. During processing, the relevant connections and associations generally reveal

themselves to the client, and the person experiences a rapid transmutation from dysfunctional perception, affect, and physical arousal to healthy perceptual and emotional states.

### **Associative Nature of Memory**

The rapid processing that EMDR affords generally reveals to the client's consciousness the interconnectedness of memories. As previously noted, recognition, understanding, and learning all require that experiences in the present link up in associated memory networks with experiences of the past. The associative nature of consciousness has been well documented in science and in literature. The novels of Henry James and his hallmark delineation of processive consciousness can sensitize readers to their own memory processes. An increased awareness of the associative nature of memory can also be accomplished by simply attempting to meditate. Try as they might, beginning meditators find that merely concentrating on "nothing" or their own breathing is futile. The mind wanders off into its own direction. One thought leads to another and another until the meditator finally remembers the purpose of sitting quietly is to meditate. These associative memory channels are the heart of EMDR because the instigation of processing allows clients to rapidly associate along the pathway needed to clear the dysfunction (Shapiro, 1989a, 1989b, 1999, 2001). The following transcript of a client with PTSD (Popky & Levin, 1994) illustrates the process.

### **Case Study**

"Lynne" is in her mid 30s and is seeking therapy to get rid of the fears she developed from an earthquake she experienced 2 years ago. Psychological testing has indicated a diagnosis of PTSD and a clinically significant *Impact of Event* scale score of 41. She remembers being troubled by previous earthquakes, but she became extremely afraid and had intrusive thoughts only after the last one. One of her earthquake experiences took place when she was in college. Her professor had just put her under hypnosis when the earthquake struck.

The therapist has assisted Lynne with identifying a disturbing image (hiding in a doorway) and a negative belief, which is, "I'm helpless—out of control." The positive belief she would prefer to have is, "I can handle what comes up." On a scale of 1 to 7, in which 1 is completely false and 7 is completely true, Lynne currently considers the positive statement to be a 2, or

almost completely false. She also states that she is feeling a high level of anxiety (an 8 on a scale of 0 to 10 subjective units of disturbance [SUD], in which 0 represents no disturbance and 10 represents the worst disturbance she can imagine; Wolpe, 1958). With the therapist's guidance, Lynne concentrates on the image, negative belief, and physical sensations she is feeling, and then the therapist guides her in sets of eye movements. After each set, the therapist gives her brief instructions and asks her to talk about what comes to mind. The transcript that follows describes the first reprocessing session. The sets of eye movements and instructions are designated by \*\*\*\*\*. Statements in [brackets] are additional clinical aspects that may be particularly interesting for the reader.

\*\*\*\*\*

*Therapist:* Blank it out and take a deep breath. What are you noticing now?

[After each set of eye movements, Lynne is given this sequence of instructions before she is asked to talk about her experience.]

*Lynne:* Ah. Sort of a softness in my body. I'm . . . more aware . . . my legs feel really heavy. Sort of a sinking kind of feeling in my legs—they just feel kind of woozy.

[A hallmark of EMDR therapy is that sensations that were part of associated events might arise in the client's body. Because one of the associated memories of earthquakes included being placed under hypnosis, the feeling Lynne identifies in her legs may be related to the hypnosis or a childhood event that she later describes.]

*Therapist:* Concentrate on that.

*Lynne:* Okay.

\*\*\*\*\*

*Therapist:* What are you getting now?

*Lynne:* Umm. The first thing that occurred to me was just a tape that I listened to about the people who work on trains and have to watch people get smashed by trains. That's the first thing that occurred to me. Ah, ah . . . then I just started being more aware of my body again. Not having another thought.

[Other associations related to lack of control begin to arise.]

*Therapist:* Okay. Concentrate on that.

*Lynne:* Okay. Mmm.

\*\*\*\*\*

*Therapist:* What are you noticing now?

*Lynne:* Um. More tiredness in my upper body. Um . . . softness. Sadness . . . kind . . . sadness . . . sad, kind of sad, melancholy feeling.

[It is important to note that the anxiety Lynne originally identified as accompanying the memory is often a catch-all phrase for various emotions that are under the surface.]

*Therapist:* Concentrate on that.

*Lynne:* Okay.

\*\*\*\*\*

*Therapist:* What . . . now?

*Lynne:* Um. I just flashed on the earthquake happening. The one that happened in '89 where I was in the class and I was under and the earthquake happened. I thought about it.

[Although the FIRST earthquake SHE EXPERIENCED is the one being directly targeted, the SECOND associated earthquake also emerges into consciousness.]

*Therapist:* Think about that.

\*\*\*\*\*

*Lynne:* Just feeling really tired. My body feeling, noticing my body, really tired.

*Therapist:* Okay. Concentrate on that.

\*\*\*\*\*

*Lynne:* (laughing) I was thinking about running around my house when I was 6. My brother and I were running around the house, and I wanted to be a boy, and he told me if I ran around the house enough times, I would be a boy. And I was disappointed because it didn't happen.

*Therapist:* Okay. Think about that.

*Lynne:* (laughing) Okay.

\*\*\*\*\*

*Lynne:* Yeah, I was thinking about my sense of betrayal with my brother that he molested me and how I really admired him. (crying)

[Although on the surface, the first memory of her brother that emerged seems to be humorous, the deeper issue of betrayal becomes revealed. Indeed, even in the first instance, she trusted him, and he lied to her.]

*Therapist:* Concentrate on that. Just let whatever happens happen. Just notice.

*Lynne:* Okay. (deep breath)

\*\*\*\*\*

*Lynne:* Yeah. (crying) I was just thinking about . . . Something occurred to me like “duh”:  
How much—that it shook my sense of reality.

[The exquisite internal memory connections are revealed: An earthquake, in which the ground is literally shaken, was associated with the internal sense of chaos created in her childhood when those she trusted betrayed her. In both instances, what should have been a firm foundation was shaken.]

*Therapist:* Notice that.

*Lynne:* Okay.

\*\*\*\*\*

*Lynne:* I was thinking about playing cards with my dad across the table from one another.

*Therapist:* Okay. Concentrate on that.

\*\*\*\*\*

*Lynne:* I was thinking about my dad taking me to buy a coat and buttoning the button of my coat . . . and pinching my nipple when I was like, 11, and how absolutely stunned I was with that.

[Once again, although the first memory of her father seemed to be innocuous, an additional association of betrayal is revealed. Every client is briefed regarding the fallibility of memory. A person cannot know whether a memory is historically accurate without present corroboration. However, in EMDR therapy, it is assumed that whatever emerges is meaningful for the client, whether it is the result of actual assaults, vicarious traumatization, dream images, or fantasy. Therefore, without any judgment on the part of the clinician, the reprocessing simply continues.]

*Therapist:* Okay. Let’s go with that.

\*\*\*\*\*

*Lynne:* Ah. I was having more of a thought. Not an image or anything. Just a thought of . . .  
. . . oh. Now, something came up just now . . . which one do I go with?

*Therapist:* Whatever one you want.

[This is a fine example of the client-centered, nonleading aspects of EMDR.]

*Lynne:* Yeah. What comes really clear—is getting sick when I was around the same age. Getting really sick with a pain in my side and nobody being able to figure out what it was and being rushed to the hospital. I really couldn't lower my leg, and no one could decide what was wrong with me. I had a really bad pain in my side, and then they just decided that I had some kind of mental problem. I guess that was the only way that I could express it. (crying)

[Note the associations of this memory to the concepts of lack of control and shaken reality. She knew she had a bad pain, but no one believed her. Their conclusion was that she could not trust her own perceptions. Again, she was betrayed and had no firm ground on which to stand. In addition, note that the childhood problem with her leg might be associated with the sensations in her leg that emerged during the first sets of eye movement. Often the source of the physical sensations that come to a client's consciousness are not revealed until the later stages of processing.]

*Therapist:* Concentrate on that.

\*\*\*\*\*

*Lynne:* Ah. Gosh, I was just thinking what a chaotic place it was to live in and what an unsafe place it was to be.

[Her memories of her childhood home resonate with a sense of chaos and lack of safety.]

*Therapist:* Think about that.

\*\*\*\*\*

*Lynne:* I was thinking of my mom and dad fighting and throwing things at one another while we were supposed to be in bed asleep. Hiding under the bed and trying to go to sleep and being afraid.

[The image of the frightened child hiding under the bed resonates with the initial image of hiding in the doorway surrounded by the chaos of falling objects during the earthquake.]

*Therapist:* Focus on that.

\*\*\*\*\*

*Lynne:* I was thinking about how I wanted to protect my dad from my mother. 'Cause it just seemed really crazy.

*Therapist:* Think about that.

\*\*\*\*\*

*Lynne:* It kind of came back up to the earthquake in '87 and jumping out of the shower and running in and grabbing my son Tim out of the crib and running with him downstairs and trying to protect him.

[This is an interesting parallel—protecting both her son and her father.]

*Therapist:* Good. Think about that.

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*Lynne:* I was thinking about needing to protect Tim when he's with his dad. His dad is bipolar. He's diagnosed now and on lithium. How I used to really worry about letting him be with his dad and protecting him from his dad at the same time.

[This brings up numerous intriguing questions regarding the association of family of origin and subsequent relationships. Lynne comes from a family in chaos whose stability was consistently being shaken, and she has married a husband with bipolar disorder, which in its own way mimics the reality of her family—the shifting emotions and sense of lack of safety. In addition, she has once again been placed in the role of protector.]

*Therapist:* Okay. Concentrate on that.

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*Lynne:* I was thinking about a birthday party that I had for Tim when he was 2 and just watching him walk around kind of really blank.

[After approximately 4 additional associations, the therapist brings Lynne back to the initial target.]

*Therapist:* Okay. Let's get back to that original incident. How disturbing is it to you now, on a scale of 0 to 10, with 10 as the most disturbing?

*Lynne:* Right now, right now, I can't really feel it in my body. Let me try to go back into and think of it. Right now, you know, it sounds weird, but it really feels pretty flat right now.

[Once the earlier events are processed, the physical sensations and emotions are no longer problematic. Subsequent responses during memory retrieval underscore its resolution.]

*Therapist:* Does it?

*Lynne:* It's like, you know, I can see it. Truly I can see it, but it doesn't really have a feeling component right this second.

*Therapist:* Okay. That's like a 0?

*Lynne:* Yeah, it's like there's just nothing there right now.

[After further processing and strengthening of the positive belief, the therapist again asks Lynne to think of the earthquake. The goal is to determine what spontaneously comes to her mind. This reveals how the information of the event is currently physiologically stored in the brain.]

*Therapist:* Okay, so when you think of that original incident . . .

*Lynne:* Uh-hum.

*Therapist:* Standing in the doorway with Tim . . .

*Lynne:* Yeah.

*Therapist:* How's that for you?

*Lynne:* Well, what occurs to me is, yeah, that was an earthquake. (laughing) Yeah, that was an earthquake all right.

As a result of the processing, the SUD decreased from 8 to 0, and *Impact of Event* score decreased from 41 to 0. Both scores remained the same at 1-month, 3-month, and 1-year follow-ups. Although impossible with this research participant, a full course of EMDR treatment would have included attention to all of the memories that emerged during this session. Nevertheless, the extent to which the processing of individual targets can result in a generalization of positive treatment effects is something that needs to be extensively researched. In addition, as demonstrated by this transcript, the ways in which events and beliefs are associated in physiologically stored memory networks can provide decades of extensive investigation on the levels of neurobiology and process evaluation (see Shapiro, 2001, for a more extensive review).

Of course, clinicians reading this transcript who have a psychodynamic perspective should have no trouble identifying the genesis of Lynne's fears in her early childhood memories and her apparent free association and cathartic response. Although beginning with a present disturbance, the past associations came to mind with no urging or predetermination by the therapist. From a different vantage point, a behaviorist would identify the association of stimulus/response conditioning patterns. A cognitivist would identify a defining thread in her beliefs: "I'm not in

control, and I'm not safe in my world." An experiential therapist would identify the client-centered aspects of the therapy, a systems therapist would recognize the interactional ramifications, and a body-oriented therapist would note the interconnection of physical sensations and perceptual reality. However, what is not clear from the transcript is that all of these paradigms are specifically integrated in the EMDR procedures that are guided by the information-processing model. The procedures are more fully explored in the next chapter.

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