15. LETTING GO OF THE PAST: EMDR

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CHAPTER 15
LETTING GO OF THE PAST: EMDR
Was it a vision, or a waking dream?
Fled is that music;—Do I wake or sleep?
—John Keats

avid, a middle-aged contractor, came to see me because his violent rage attacks were making his home a living hell. During our first session he told me a story about something that had happened to him the summer he was twenty-three. He was working as a lifeguard, and one afternoon a group of kids were roughhousing in the pool and drinking beer. David told them alcohol was not allowed. In response the boys attacked him, and one of them took out his left eye with a broken beer bottle. Thirty years later he still had nightmares and flashbacks about the stabbing.

He was merciless in his criticisms of his own teenage son and often yelled at him for the slightest infraction, and he simply could not bring himself to show any affection toward his wife. On some level he felt that the tragic loss of his eye gave him permission to abuse other people, but he also hated the angry, vengeful person he had become. He had noticed that his efforts to manage his rage made him chronically tense, and he wondered if his fear of losing control had made love and friendship impossible.

During his second visit I introduced a procedure called eye movement desensitization and reprocessing (EMDR). I asked David to go back to the details of his assault and bring to mind his images of the attack, the sounds he had heard, and the thoughts that had gone through his mind. "Just let those moments come back," I told him.

I then asked him to follow my index finger as I moved it slowly back and forth about twelve inches from his right eye. Within seconds a cascade of rage and terror came to the surface, accompanied by vivid sensations of pain, blood running down his cheek, and the realization that he couldn't see. As he reported these sensations, I made an occasional encouraging sound and kept moving my finger back and forth. Every few minutes I stopped and asked him to take a deep breath. Then I asked him to pay attention to what was now on his mind, which was a fight he had had in school. I told him to notice that and to stay with that memory. Other memories emerged, seemingly at random: looking for his assailants everywhere, wanting to hurt them, getting into barroom brawls. Each time he reported a new memory or sensation, I urged him to notice what was coming to mind and resumed the finger movements.

At the end of that visit he looked calmer and visibly relieved. He told me that the memory of the stabbing had lost its intensity—it was now

something unpleasant that had happened a long time ago. “It really sucked,” he said thoughtfully, “and it kept me off-kilter for years, but I’m surprised what a good life I eventually was able to carve out for myself.”

Our third session, the following week, dealt with the aftermath of the trauma: how he had used drugs and alcohol for years to cope with his rage. As we repeated the EMDR sequences, still more memories arose. David remembered talking with a prison guard he knew about having his incarcerated assailant killed and then changing his mind. Recalling this decision was profoundly liberating: He had come to see himself as a monster who was barely in control, but realizing that he’d turned away from revenge put him back in touch with a mindful, generous side of himself. Next he spontaneously realized he was treating his son the way he had felt toward his teenaged attackers. As our session ended, he asked if I could meet with him and his family so he could tell his son what had happened and ask for his forgiveness. At our fifth and final session he reported that he was sleeping better and said that for the first time in his life he felt a sense of inner peace. A year later he called to report not only that his he and wife had grown closer and had started to practice yoga together but also that he laughed more and took real pleasure in his gardening and woodworking.

LEARNING ABOUT EMDR

My experience with David is one of many I have had over the past two decades in which EMDR helped to make painful re-creations of the trauma a thing of the past. My introduction to this method came through Maggie, a spunky young psychologist who ran a halfway house for sexually abused girls. Maggie got into one confrontation after another, clashing with nearly everybody—except the thirteen- and fourteen-year-old girls she cared for. She did drugs, had dangerous and often violent boyfriends, had frequent altercations with her bosses, and moved from place to place because she could not tolerate her roommates (nor they her). I never understood how she had mobilized enough stability and concentration to earn a PhD in psychology from a reputable graduate school.

Maggie had been referred to a therapy group I was running for women with similar problems. During her second meeting she told us that her father had raped her twice, once when she was five years old and once when she was seven. She was convinced it had been her fault. She loved her daddy, she explained, and she must have been so seductive that he could not control himself. Listening to her I thought, “She might not blame her father, but she sure is blaming just about everybody else”—including her previous therapists for not helping her get better. Like many trauma survivors, she told one story with words and another in her actions, in which she kept replaying various aspects of her trauma.

Then one day Maggie came to the group eager to discuss a remarkable experience she’d had the previous weekend at an EMDR training for professionals. At that time I’d heard only that EMDR was a new fad in which therapists wiggled their fingers in front of patients’ eyes. To me and my academic colleagues, it sounded like yet another of the crazes that have always plagued psychiatry, and I was convinced that this would turn out to be another of Maggie’s misadventures.

Maggie told us that during her EMDR session she had vividly remembered her father’s rape when she was seven—remembered it from inside her child’s body. She could feel physically how small she was; she could feel her father’s huge body on top of her and could smell the alcohol on his breath. And yet, she told us, even as she relived the incident she was

able to observe it from the point of view of her twenty-nine-year-old self. She burst into tears: “I was such a little girl. How could a huge man do this to a little girl?” She cried for a while and then said: “It’s over now. I now know what happened. It wasn’t my fault. I was a little girl and there was nothing I could do to keep him from molesting me.”

I was astounded. I had been looking for a long time for a way to help people revisit their traumatic past without becoming retraumatized. It seemed that Maggie had had an experience as lifelike as a flashback and yet had not been hijacked by it. Could EMDR make it safe for people to access the imprints of trauma? Could it then transform them into memories of events that had happened far in the past?

Maggie had a few more EMDR sessions and remained in our group long enough for us to see how she changed. She was much less angry, but she kept that sardonic sense of humor that I enjoyed so much. A few months later she got involved with a very different kind of man than she’d ever been attracted to before. She left the group, announcing that she’d resolved her trauma, and I decided it was time for me to get trained in EMDR.

EMDR: FIRST EXPOSURES

Like many scientific advances, EMDR originated with a chance observation. One day in 1987 psychologist Francine Shapiro was walking through a park, preoccupied with some painful memories, when she noticed that rapid eye movements produced a dramatic relief from her distress. How could a major treatment modality grow from such a brief experience? How is it possible that such a simple process had not been noted before? Initially skeptical about her observation she subjected her method to years of experimentation and research, gradually building it into a standardized procedure that could be taught and tested in controlled studies.1

I arrived for my first EMDR training in need of some trauma processing myself. A few weeks earlier the Jesuit priest who was chair of my department at Massachusetts General Hospital had suddenly shut down the Trauma Clinic, leaving us scrambling for a new site and new funds to treat our patients, train our students, and conduct our research. At around the same time, my friend Frank Putnam, who was doing the long-term study of sexually abused girls that I discussed in chapter 10, was fired from the National Institutes of Health and Rick Kluft, the country’s foremost expert on dissociation, lost his unit at the Institute of the Pennsylvania Hospital. It might have all been a coincidence, but it felt as if my whole world was under attack.

My distress about the Trauma Clinic seemed like a good test for my EMDR trial. While I was following my partner’s fingers with my eyes, a rapid succession of fuzzy childhood scenes came to mind: intense family dinner-table conversations, confrontations with schoolmates during recess, throwing pebbles at a shed window with my older brother—all of them the sort of vivid, floating, “hypnopompic” images we experience when we slumber late on a Sunday morning, then forget the moment we fully awaken.

After about half an hour my fellow trainee and I revisited the scene in which my boss told me that he was closing my clinic. Now I felt resigned: “Okay, it happened, and now it’s time to move on.” I never looked back; the clinic later reconstituted itself and has thrived ever since. Was EMDR the sole reason I was able to let go of my anger and distress? Of course I’ll never know for certain, but my mental journey—through unrelated

childhood scenes to putting the episode to rest—was unlike anything I had experienced in talk therapy.

What happened next, when it was my turn to administer EMDR, was even more intriguing. We rotated to a different group, and my new fellow student, whom I'd never met before, told me he wanted to address some painful childhood incidents involving his father, but he did not want to discuss them. I had never worked on anybody's trauma without knowing "the story," and I was annoyed and flustered by his refusal to share any details. While I was moving my fingers in front of his eyes, he looked intensely distressed—he began sobbing, and his breathing became rapid and shallow. But each time I asked him the questions that the protocol called for, he refused to tell me what came to his mind.

At the end of our forty-five-minute session, the first thing my colleague said was that he'd found dealing with me so unpleasant that he would never refer a patient to me. Otherwise, he remarked, the EMDR session had resolved the matter of his father's abuse. While I was skeptical and suspected that his rudeness toward me was a carryover from unresolved feelings toward his father, there was no question that he appeared much more relaxed.

I turned to my EMDR trainer, Gerald Puk, and told him how flummoxed I was. This man clearly did not like me, and had looked profoundly distressed during the EMDR session, but now he was telling me that his long-standing misery was gone. How could I possibly know what he had or had not resolved if he was unwilling to tell me what had happened during the session?

Gerry smiled and asked if by chance I had become a mental health professional in order to solve some of my own personal issues. I confirmed that most people who knew me thought that might be the case. Then he asked if I found it meaningful when people told me their trauma stories. Again, I had to agree with him. Then he said: "You know, Bessel, maybe you need to learn to put your voyeuristic tendencies on hold. If it's important for you to hear trauma stories, why don't you go to a bar, put a couple of dollars on the table, and say to your neighbor, 'I'll buy you a drink if you tell me your trauma story.' But you really need to know the difference between your desire to hear stories and your patient's internal process of healing." I took Gerry's admonition to heart and ever since have enjoyed repeating it to my students.

I left my EMDR training preoccupied with three issues that fascinate me to this day:

EMDR loosens up something in the mind/brain that gives people rapid access to loosely associated memories and images from their past. This seems to help them put the traumatic experience into a larger context or perspective.

People may be able to heal from trauma without talking about it. EMDR enables them to observe their experiences in a new way, without verbal give-and-take with another person.

EMDR can help even if the patient and the therapist do not have a trusting relationship. This was particularly intriguing because trauma, understandably, rarely leaves people with an open, trusting heart.

In the years since, I have done EMDR with patients who spoke Swahili, Mandarin, and Breton, all languages in which I can say only, "Notice that," the key EMDR instruction. (I always had a translator available, but

primarily to explain the steps of the process.) Because EMDR doesn't require patients to speak about the intolerable or explain to a therapist why they feel so upset, it allows them to stay fully focused on their internal experience, with sometimes extraordinary results.

STUDYING EMDR

The Trauma Clinic was saved by a manager at the Massachusetts Department of Mental Health who had followed our work with children and now asked us to take on the task of organizing the community trauma response team for the Boston area. That was enough to cover our basic operations, and the rest was supplied by an energetic staff who loved what we were doing—including the newly discovered power of EMDR to cure some of the patients whom we'd been unable to help before.

My colleagues and I began to show one another videotapes of our EMDR sessions with PTSD patients, which enabled us to observe dramatic week-by-week improvements. We then started to formally measure their progress on a standard PTSD rating scale. We also arranged with Elizabeth Matthew, a young neuroimaging specialist at the New England Deaconess Hospital, to have twelve patients' brains scanned before and after their treatment. After only three EMDR sessions eight of the twelve had shown a significant decrease in their PTSD scores. On their scans we could see a sharp increase in prefrontal lobe activation after treatment, as well as much more activity in the anterior cingulate and the basal ganglia. This shift could account for the difference in how they now experienced their trauma.

One man reported: "I remember it as though it was a real memory, but it was more distant. Typically, I drowned in it, but this time I was floating on top. I had the feeling that I was in control." A woman told us: "Before, I felt each and every step of it. Now it is like a whole, instead of fragments, so it is more manageable." The trauma had lost its immediacy and become a story about something that happened a long time ago.

We subsequently secured funding from the National Institutes of Mental Health to compare the effects of EMDR with standard doses of Prozac or a placebo.2 Of our eighty-eight subjects thirty received EMDR, twenty-eight Prozac, and the rest the sugar pill. As often happens, the people on placebo did well. After eight weeks their 42 percent improvement was greater than that for many other treatments that are promoted as "evidence based."

The group on Prozac did slightly better than the placebo group, but barely so. This is typical of most studies of drugs for PTSD: Simply showing up brings about a 30 percent to 42 percent improvement; when drugs work, they add an additional 5 percent to 15 percent. However, the patients on EMDR did substantially better than those on either Prozac or the placebo: After eight EMDR sessions one in four were completely cured (their PTSD scores had dropped to negligible levels), compared with one in ten of the Prozac group. But the real difference occurred over time: When we interviewed our subjects eight months later, 60 percent of those who had received EMDR scored as being completely cured. As the great psychiatrist Milton Erickson said, once you kick the log, the river will start flowing. Once people started to integrate their traumatic memories, they spontaneously continued to improve. In contrast, all those who had taken Prozac relapsed when they went off the drug.

This study was significant because it demonstrated that a focused, trauma-specific therapy for PTSD like EMDR could be much more effective than medication. Other studies have confirmed that if patients take

Prozac or related drugs like Celexa, Paxil, and Zoloft, their PTSD symptoms often improve, but only as long as they keep taking them. This makes drug treatment much more expensive in the long run. (Interestingly, despite Prozac's status as a major antidepressant, in our study EMDR also produced a greater reduction in depression scores than taking the antidepressant.)

Another key finding of our study: Adults with histories of childhood trauma responded very differently to EMDR from those who were traumatized as adults. At the end of eight weeks, almost half of the adult-onset group that received EMDR scored as completely cured, while only 9 percent of the child-abuse group showed such pronounced improvement. Eight months later the cure rate was 73 percent for the adult-onset group, compared with 25 percent for those with histories of child abuse. The child-abuse group had small but consistently positive responses to Prozac.

These results reinforce the findings that I reported in chapter 9: Chronic childhood abuse causes very different mental and biological adaptations than discrete traumatic events in adulthood. EMDR is a powerful treatment for stuck traumatic memories, but it doesn't necessarily resolve the effects of the betrayal and abandonment that accompany physical or sexual abuse in childhood. Eight weeks of therapy of any kind is rarely sufficient to resolve the legacy of long-standing trauma.

As of 2014 our EMDR study had the most positive outcome of any published study of people who developed their PTSD in reaction to a traumatic event as an adult. But despite these results, and those of dozens of other studies, many of my colleagues continue to be skeptical about EMDR—perhaps because it seems too good to be true, too simple to be so powerful. I surely can understand that sort of skepticism—EMDR is an unusual procedure. Interestingly, in the first solid scientific study using EMDR in combat veterans with PTSD, EMDR was expected to do so poorly that it was included as the control condition for comparison with biofeedback-assisted relaxation therapy. To the researchers' surprise, twelve sessions of EMDR turned out to be the more effective treatment.3 EMDR has since become one of the treatments for PTSD sanctioned by the Department of Veterans Affairs.

IS EMDR A FORM OF EXPOSURE THERAPY?

Some psychologists have hypothesized that EMDR actually desensitizes people to the traumatic material and thus is related to exposure therapy. A more accurate description would be that it integrates the traumatic material. As our research showed, after EMDR people thought of the trauma as a coherent event in the past, instead of experiencing sensations and images divorced from any context.

Memories evolve and change. Immediately after a memory is laid down, it undergoes a lengthy process of integration and reinterpretation—a process that automatically happens in the mind/brain without any input from the conscious self. When the process is complete, the experience is integrated with other life events and stops having a life of its own.4 As we have seen, in PTSD this process fails and the memory remains stuck—undigested and raw.

Unfortunately, few psychologists are taught during their training how the memory-processing system in the brain works. This omission can lead to misguided approaches to treatment. In contrast to phobias (such as a spider phobia, which is based on a specific irrational fear), posttraumatic stress is the result of a fundamental reorganization of the central nervous

system based on having experienced an actual threat of annihilation, (or seeing someone else being annihilated), which reorganizes self experience (as helpless) and the interpretation of reality (the entire world is a dangerous place).

During exposure patients initially become extremely upset. As they revisit the traumatic experience, they show sharp increases in their heart rate, blood pressure, and stress hormones. But if they manage to stay with the treatment and keep reliving their trauma, they slowly become less reactive and less prone to disintegrate when they recall the event. As a result, they get lower scores on their PTSD ratings. However, as far as we know, simply exposing someone to the old trauma does not integrate the memory into the overall context of their lives, and it rarely restores them to the level of joyful engagement with people and pursuits they had prior to the trauma.

In contrast, EMDR, as well as the treatments discussed in subsequent chapters—internal family systems, yoga, neurofeedback, psychomotor therapy, and theater—focus not only on regulating the intense memories activated by trauma but also on restoring a sense of agency, engagement, and commitment through ownership of body and mind.

PROCESSING TRAUMA WITH EMDR

Kathy was a twenty-one-year-old student at a local university. When I first met her, she looked terrified. She had been in psychotherapy for three years with a therapist whom she trusted and felt understood by but with whom she was not making any progress. After her third suicide attempt her university health service referred her to me, hoping that the new technique I'd told them about could help her.

Like several of my other traumatized patients, Kathy was able to become completely absorbed in her studies: When she read a book or wrote a research paper, she could block out everything else about her life. This enabled her to be a competent student, even when she had no idea how to establish a loving relationship with herself, let alone with an intimate partner.

Kathy told me that her father had used her for many years for child prostitution, which would normally have made me think of using EMDR only as an adjunctive therapy. However, she turned out to be an EMDR virtuoso and recovered completely after eight sessions, the shortest time thus far in my experience for someone with a history of severe childhood abuse. Those sessions took place fifteen years ago, and I recently met with her to discuss the pros and cons of her adopting a third child. She was a delight: smart, funny, and joyfully engaged with her family and her work as an assistant professor of child development.

I'd like to share my notes on Kathy's fourth EMDR treatment, not only to demonstrate what typically happens in such a session but also to reveal the human mind in action as it integrates a traumatic experience. No brain scan, blood test, or rating scale can measure this, and even a video recording can convey only a shadow of how EMDR can unleash the imaginative powers of the mind.

Kathy sat with her chair at a forty-five-degree angle to mine, so that we were about four feet apart. I asked her to bring a particularly painful memory to mind and encouraged her to recall what she had heard, saw, thought, and felt in her body as it took place. (My records do not show whether she told me what the particular memory was; my guess is probably not, since I did not write it down.)

I asked her whether she was now “in the memory,” and when she said yes, I asked her how real it felt on a scale of one to ten. About a nine, she said. Then I asked her to follow my moving finger with her eyes. From time to time, after completing a set of about twenty-five eye movements, I might say: “Take a deep breath,” followed by: “What do you get now?” or “What comes to mind now?” Kathy would then tell me what she was thinking. Whenever her tone of voice, facial expression, body movements, or breathing patterns indicated that this was an emotionally significant theme, I would say, “Notice that,” and start another set of eye movements, during which she did not speak. Other than uttering those few words, I remained silent for the next forty-five minutes.

Here is the association Kathy reported after the first eye-movement sequence: “I realize that I have scars—from when he tied my hands behind my back. The other scar is when he marked me to claim me as his, and there [she points] are bite marks.” She looked stunned but surprisingly calm as she recalled, “I remember being doused in gasoline—he took Polaroid pictures of me—and then I was submerged in water. I was gang raped by my father and two of his friends; I was tied to a table; I remember them raping me with Budweiser bottles.”

My stomach was clenching, but I didn’t comment beyond asking Kathy to keep those memories in mind. After about thirty more back-and-forth movements I stopped when I saw that she was smiling. When I asked what she was thinking, she said, “I was in a karate class; it was great! I really kicked butt! I saw them backing off. I yelled, ‘Don’t you see you are hurting me? I am not your girlfriend.’” I said, “Stay there,” and began the next sequence. When it ended, Kathy said: “I have an image of two me’s—this smart, pretty little girl . . . and that little slut. All these women who could not take care of themselves or me or their men—leaving it up to me to service all these men.” She started to sob during the next sequence, and when we stopped, she said: “I saw how little I was—the brutalization of the little girl. It was not my fault.” I nodded and said, “That’s right—stay there.” The next round ended with Kathy reporting: “I’m picturing my life now—my big me holding my little me—saying, ‘You are safe now.’” I nodded encouragingly and continued.

The images kept coming: “I have pictures of a bulldozer flattening the house I grew up in. It’s over!” Then Kathy started on a different track: “I am thinking about how much I like Jeffrey [a boy in one of her classes]. Thinking that he might not want to hang out with me. Thinking I can’t handle it. I have never been someone’s girlfriend before and I don’t know how.” I asked her what she thought she needed to know and began the next sequence. “Now, there is a person who just wants to be with me—it is too simple. I don’t know how to just be myself around men. I am petrified.”

As she tracked my finger, Kathy started to sob. When I stopped, she told me: “I had an image of Jeffrey and me sitting in the coffeehouse. My father comes in the door. He starts screaming at the top of his lungs and he is wielding an ax; he says, ‘I told you that you belong to me.’ He puts me on top of the table—then he rapes me, and then he rapes Jeffrey.” She was crying hard now. “How can you be open with somebody when you have visions of your dad raping you and then raping us both?” I wanted to comfort her, but I knew it was more important to keep her associations moving. I asked her to focus on what she felt in her body: “I feel it in my forearms, in my shoulders, and my right chest. I just want to be held.” We continued the EMDR and when we stopped, Kathy looked relaxed. “I heard

Jeffrey say it's okay, that he was sent here to take care of me. And that it was not anything that I did and that he just wants to be with me for my sake." Again I asked what she felt in her body. "I feel really peaceful. A little bit shaky—like when you're using new muscles. Some relief. Jeffrey knows all this already. I feel like I'm alive and that it is all over. But I am afraid that my father has another little girl, and that makes me very, very sad. I want to save her."

But as we continued the trauma returned, together with other thoughts and images: "I need to throw up. . . . I have intrusions of lots of smells—bad cologne, alcohol, vomit." A few minutes later Kathy was crying profusely: "I really feel my mom here now. It feels like she wants me to forgive her. I have the sense that the same thing happened to her—she is apologizing to me over and over. She's telling me that this happened to her—that it was my grandfather. She's also telling me that my grandmother is really sorry for not being there to protect me." I kept asking her to take deep breaths and stay with whatever was coming up.

At the end of the next sequence Kathy said: "I feel like it's over. I felt my grandmother holding me at my current age—telling me that she is so sorry she married my grandfather. That she and my mom are making sure that it stops here." After one final EMDR sequence Kathy was smiling: "I have an image of pushing my father out of the coffeehouse and Jeffrey locking the door behind him. He stands outside. You can see him through the glass—everybody's making fun of him."

With the help of EMDR Kathy was able to integrate the memories of her trauma and call on her imagination to help her lay them to rest, arriving at a sense of completion and control. She did so with minimal input from me and without any discussion of the particulars of her experiences. (I never felt a reason to question their accuracy; her experiences were real to her, and my job was to help her deal with them in the present.) The process freed something in her mind/brain to activate new images, feelings, and thoughts; it was as if her life force emerged to create new possibilities for her future.5

As we've seen, traumatic memories persist as split-off, unmodified images, sensations, and feelings. To my mind the most remarkable feature of EMDR is its apparent capacity to activate a series of unsought and seemingly unrelated sensations, emotions, images, and thoughts in conjunction with the original memory. This way of reassembling old information into new packages may be just the way we integrate ordinary, nontraumatic day-to-day experiences.

EXPLORING THE SLEEP CONNECTION

Shortly after learning about EMDR I was asked to speak about my work at the sleep laboratory headed by Allan Hobson at the Massachusetts Mental Health Center. Hobson (together with his teacher, Michel Jouvet)6 was famous for discovering where dreams are generated in the brain, and one of his research assistants, Robert Stickgold, was just then beginning to explore the function of dreams. I showed the group a videotape of a patient who had suffered from severe PTSD for thirteen years after a terrible car accident and who, in only two sessions of EMDR, had transformed from a helpless panicked victim into a confident, assertive woman. Bob was fascinated.

A few weeks later a friend of Stickgold's family became so depressed after the death of her cat that she had to be hospitalized. The attending psychiatrist concluded that the cat's death had triggered unresolved memories of the death of the woman's mother when she was twelve, and he

connected her with Roger Solomon, a well-known EMDR trainer, who treated her successfully. Afterward she called Stickgold and said, “Bob, you have to study this. It’s really strange—it has to do with your brain, not your mind.”

Soon afterward an article appeared in the journal Dreaming suggesting that EMDR was related to rapid eye movement (REM) sleep—the phase of sleep in which dreaming occurs.7 Research had already shown that sleep, and dream sleep in particular, plays a major role in mood regulation. As the article in Dreaming pointed out, the eyes move rapidly back and forth in REM sleep, just as they do in EMDR. Increasing our time in REM sleep reduces depression, while the less REM sleep we get, the more likely we are to become depressed.8

Of course, PTSD is notoriously associated with disturbed sleep, and self-medication with alcohol or drugs further disrupts REM sleep. During my time at the VA my colleagues and I had found that the veterans with PTSD frequently woke themselves up soon after going into REM sleep9—probably because they had activated a trauma fragment during a dream.10 Other researchers have also noticed this phenomenon, but thought that it was irrelevant to understanding PTSD.11

Today we know that both deep sleep and REM sleep play important roles in how memories change over time. The sleeping brain reshapes memory by increasing the imprint of emotionally relevant information while helping irrelevant material fade away.12 In a series of elegant studies Stickgold and his colleagues showed that the sleeping brain can even make sense out of information whose relevance is unclear while we are awake and integrate it into the larger memory system.13

Dreams keep replaying, recombining, and reintegrating pieces of old memories for months and even years.14 They constantly update the subterranean realities that determine what our waking minds pay attention to. And perhaps most relevant to EMDR, in REM sleep we activate more distant associations than in either non-REM sleep or the normal waking state. For example, when subjects are wakened from non-REM sleep and given a word-association test, they give standard responses: hot/cold, hard/soft, etc. Wakened from REM sleep, they make less conventional connections, such as thief/wrong.15 They also solve simple anagrams more easily after REM sleep. This shift toward activation of distant associations could explain why dreams are so bizarre.16

Stickgold, Hobson, and their colleagues thus discovered that dreams help to forge new relationships between apparently unrelated memories.17 Seeing novel connections is the cardinal feature of creativity; as we’ve seen, it’s also essential to healing. The inability to recombine experiences is also one of the striking features of PTSD. While Noam in chapter 4 could imagine a trampoline to save future victims of terrorism, traumatized people are trapped in frozen associations: Anybody who wears a turban will try to kill me; any man who finds me attractive wants to rape me.

Finally, Stickgold suggests a clear link between EMDR and memory processing in dreams: “If the bilateral stimulation of EMDR can alter brain states in a manner similar to that seen during REM sleep then there is now good evidence that EMDR should be able to take advantage of sleep-dependent processes, which may be blocked or ineffective in PTSD sufferers, to allow effective memory processing and trauma resolution.”18

The basic EMDR instruction, “Hold that image in your mind and just watch my fingers moving back and forth,” may very well reproduce what happens

in the dreaming brain. As this book is going to press Ruth Lanius and I are studying how the brain reacts, both while remembering a traumatic event and an ordinary experience, to saccadic eye movements as subjects lie in an fMRI scanner. Stay tuned.

ASSOCIATION AND INTEGRATION

Unlike conventional exposure treatment, EMDR spends very little time revisiting the original trauma. The trauma itself is certainly the starting point, but the focus is on stimulating and opening up the associative process. As our Prozac/EMDR study showed, drugs can blunt the images and sensations of terror, but they remain embedded in the mind and body. In contrast with the subjects who improved on Prozac—whose memories were merely blunted, not integrated as an event that happened in the past, and still caused considerable anxiety—those who received EMDR no longer experienced the distinct imprints of the trauma: It had become a story of a terrible event that had happened a long time ago. As one of my patients said, making a dismissive hand gesture: “It’s over.”

While we don’t yet know precisely how EMDR works, the same is true of Prozac. Prozac has an effect on serotonin, but whether its levels go up or down, and in which brain cells, and why that makes people feel less afraid,