

Memory Reconsolidation Through EMDR in an Integrative Psychotherapy: A Case Example

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Abstract

This article describes memory reconsolidation and how the author uses the concept to explain the success of a psychotherapy session using eye movement desensitization and reprocessing (EMDR). A transcript of the session is provided to demonstrate how the author works in a relational way and to give a personal example of how memory reconsolidation occurs in everyday life.

Keywords: memory reconsolidation, integrative psychotherapy, relational therapy, emotional change, EMDR, traumatic memory, implicit emotional learning

Bruce Ecker's book *Unlocking the Emotional Brain: Eliminating Symptoms at Their Roots Using Memory Reconsolidation* (Ecker et al., 2012, 2015) provides a neurobiological explanation for how permanent emotional change occurs. The change is called *memory reconsolidation*, a process first discovered in neurobiological experiments on rats in the early 2000s (Pedreira et al., 2004). It has been proposed that this process is the same mechanism by which humans are able to delete or erase the emotional component or meaning associated with traumatic emotional experiences. It is a type of neuroplasticity or synaptic change that can erase emotional learning and is based on "the brain's adaptive process for updating existing learnings with new ones" (Ecker et al., 2012, p. 26). Numerous studies since the earlier work on animals have provided evidence that this process occurs in humans (Forcato et al., 2007; Hupbach, 2011; Hupbach et al., 2007; Hupbach et al., 2009).

The impact of childhood emotional trauma has been discussed extensively in the psychotherapy literature. For example, as Erskine (2015, 2021) wrote, our client's traumas are present in adult life as childhood emotional reactions or cathexis of the Child ego state, unconscious relational patterns, script beliefs, and fixated behavior patterns. Ecker's theory using memory reconsolidation provides an explanation of how these early childhood emotional traumas locked in memory can be changed or permanently altered in the process of psychotherapy. This article describes an example of this process, one that

occurred essentially in one session of eye movement desensitization and reprocessing (EMDR) (Shapiro, 2001).

Ecker et al. (2012) demonstrated how this process of memory reconsolidation can be facilitated through a variety of therapeutic techniques, including EMDR (Shapiro, 2001), two-chair or empty-chair dialogue (Perls, 1969), and the developmental methods of deconfusion (Erskine & Moursund, 2011). However, for permanent change or memory reconsolidation to occur, two conditions must be met simultaneously.

First, the client must be fully aware and reexperiencing—cognitively, affectively, and physically, all at the same time—a full experience of the early emotional trauma (Erskine & Mauriz-Etxabe, 2016). In my work with clients, I determine this by watching their body gestures and listening to their descriptions of the memory and their internal experience, both emotionally and somatically. It has been demonstrated experimentally that the neural circuits that encode the experience of the memory are open for up to 5 hours following fully connecting with the memory (Pedreira et al., 2002), and during that time they are available to be replaced by new emotional learning. To reach this point may take weeks, months, or even years as a client builds trust or a sense of secure attachment to the therapist. The process of fully connecting with an early memory can also occur spontaneously through the use of regression techniques, attuned inquiry, or in preparation for targeting a memory during EMDR.

The second condition for permanent emotional change is for the client to be presented with some new information that disconfirms the early emotional learning or conclusion during this time window. The new emotional learning can occur in a number of ways, all of which involve new knowledge or experiences that contradict or disconfirm the long-held emotional beliefs such as “I’m not good enough,” “I’m not lovable,” and/or “I’m stupid.” The new knowledge must have either “salient novelty,” which means a completely new perspective, or it must be a complete contradiction. The personal example and case presented later in this article will illustrate this.

At this point, it is important to address the distinction between new cognitive/emotional learnings, which can help a person cope better in interactions with others and/or bring about a calmer internal life, and those that fundamentally erase early emotional learning. The former can be called *additive learning*, which brings new perspectives and leads to new behaviors, thus counteracting old learning. Much of what we do as therapists is to provide additional emotional learning for clients, for example, teaching someone how to react to a partner in a calmer way. Ecker et al. (2012, p. 16) referred to these as counteractive measures. However, that learning does not address the underlying unconscious reasons behind clients resorting under stress to old, dysfunctional patterns. As therapists, we see this again and again.

The material for transformative, new emotional learning in a psychotherapy setting can be elicited in a number of ways. One is that it can be drawn from life experiences that the client has revealed to the therapist over time, an experience that because of cognitive

dissonance the client has never been aware of as emotionally significant. For example, a client with an “I’m worthless” script might have revealed to the therapist an accomplishment of which they are proud. Another way is that the new learning can come from fantasy or visualization, a two-chair dialogue, or by bringing to awareness some aspects of the therapist/client relationship. To bring about permanent change, the disconfirming evidence must be accessed during the time the brain is open for memory reconsolidation. Otherwise, new learning that the therapist tries to provide—such as “You weren’t responsible for being sexually abused”—will not be integrated and will remain as just a thought without a corresponding emotional component. Helping a client find the key new learning necessary to erase the old belief can be a hit-and-miss process and might require a number of attempts over time until the key new or disconfirming information is discovered.

Before describing the process of memory reconsolidation in psychotherapy, I offer an example of how it can happen serendipitously through ordinary life experiences. The brain has the innate ability to heal from destabilizing or traumatic experiences if the right conditions are present. For example, I began losing my hair in my early twenties, an ongoing experience that was hugely upsetting for me. It affected my sense of attractiveness and induced feelings of embarrassment or shame, especially when someone remarked on my hair loss. “You are going bald” was a shame-inducing experience for me. At the time, I had developed a good relationship with a hair stylist to whom I had been going for several years. He was a little older than me, and I looked up to him. I had concluded that the only way for me to solve my hair loss problem was to get a hair piece, but it was very anxiety provoking to think of broaching the subject with my hair stylist. Just thinking about putting the problem into words filled me with shame. Finally, one day, in spite of my anxiety, I asked him about the possibility of getting a hair piece. I was fully in contact with my shame physiologically, emotionally, and cognitively, which are the three factors that constitute the first condition necessary for memory reconsolidation. When I posed my suggestion, the hair stylist’s immediate response was, “Why would you want to do that? You look fine the way you are.” His answer was so unexpected, coming from someone I respected and looked up to, that it provided the second condition for memory reconsolidation. This *salient novelty* was new information or learning that completely contradicted what I believed to be true. My previous emotional learning was that I looked unattractive as a balding man and would never attract a desirable partner. My hair stylist’s response was a powerful, transformative experience for me that immediately and permanently changed my emotional reaction to baldness. Would I still have preferred to have hair? Yes. Did I still have the same sense of wanting to hide the problem after this experience? No. I felt a new level of acceptance. In thinking about being bald after that, the new memory of my hair stylist’s response had replaced the shame attached to being bald.

Ecker developed a framework for organizing the therapeutic approach to facilitating change that will be familiar to therapists informed by integrative psychotherapy. However,

Ecker's framework offers new clarity. In summary, when a child experiences emotional trauma in relation to others or in the absence of necessary emotional experiences provided by caregivers, the child attempts to find a solution to that emotional problem. Such solutions may be known as script decisions or coping strategies. In a slightly different formulation from that of an integrative psychotherapist—who might be seeing the client through a developmental or ego state lens, for example—Ecker theoretical conception involves viewing the client's current symptoms as the attempted solution to an early emotional problem. When we understand what the emotional problem is, then we can develop a clearer treatment plan, in this case using EDMR.

The case study presented here is from an eye movement desensitization and reprocessing (EMDR) session that combined an empty-chair dialogue and fantasy/visualization to succinctly demonstrate the process of memory reconsolidation.

At age 15, my client Peter decided that he was responsible for the death of the family dog and her puppies (after his father had killed them) and concluded that he was a bad person. His father was a refugee who escaped to Canada in the 1950s from a Soviet-controlled Eastern Block country. He was a traumatized, angry man who constantly criticized Peter. In reaction to his father, Peter's script beliefs of "I'm a bad person" and "I'm responsible for the death of the dogs" ruled his life. What he called his "internal critic" (the term also used by his previous therapist) watched everything he did and was unrelenting in its criticism. Peter lived in shame and was angry with himself because in 2 years of therapy with his previous therapist, he had made little progress in quieting his internal critic.

In our first session, Peter and I explored why being so self-critical might be necessary. He got in touch with the unconscious motivation behind his internal criticism and how it reflected his traumatic relationship with his father. This can be seen as an *implicit emotional learning*. The internal critic was necessary to make sure he never did anything bad again or made any mistakes. In our work, he was able, for the first time, to make sense of his internal experience, which relieved him of some of his shame and engendered a degree of self-compassion.

Peter was highly critical of himself because in spite of his previous therapist's skill, his internal critic still made his life miserable. The former therapist, who did not practice EMDR, had referred Peter to me because she felt EMDR would be helpful. In his first session with me, Peter said that cognitive-behavioral therapy (CBT) had not made a difference with his internal critic nor had the many affirmations he repeated daily. To further his process of deshaming, I explained there was a reason he had not been able to erase those old beliefs or conclusions. Peter said he felt they were hardwired, and I agreed that no amount of CBT was going to rewire the old learning in his brain. I explained the process of memory reconsolidation and how EMDR can provide the necessary conditions for

permanent emotional change. He said then that for the first time, he had hope he could change. He left the session feeling excited about trying EMDR.

EMDR is a therapy technique based on the adaptive information processing theory of Francine Shapiro (2001). It facilitates new emotional learning by stimulating both hemispheres of the brain. Bilateral stimulation was originally done having clients move their eyes from one side to the other, hence the “eye movement” part of the name. However, over time it was discovered that bilateral audio stimulation (alternating tones in the ears) was effective as well as bilateral tapping on the body. The technique I have come to prefer for producing bilateral stimulation is tapping on the back of the client’s hands while the person holds them on their knees. Based on my experience and results, I believe that sitting closely together provides a sense of being held, and I tap lightly at a pace similar to a regular hear beat. This provides a calming influence, especially when the client is highly emotionally and sensorily activated. Clients experience this as intensely contactful both internally and externally. What the client reports being aware of involves metaprocessing of the memory, an essential part of the change process. In this regard, EMDR is similar to mindful meditation, which is developing awareness of internal experience in an accepting manner.

In the second session, I had Peter retell his traumatic memory in as much detail as possible. This is my summary of what he said:

It’s winter and cold; he’s 5 years old. He goes into the dog’s room and sees his father, then noticed the mother dog and six puppies all lying still on the floor. He sees some red and doesn’t understand what’s happened. The mother dog, whom he loves and can ride because she is so big, is staring with open eyes. He starts to cry and asks why they are like this. His father says he had to kill them because there is not enough food. Apparently, there has not been any food for the family either for 2 days because they are so poor. Peter confesses that when he was hungry he ate some of the dog’s dried food. “I stole their food.” His father blames him, hits him, and tells him to leave. Peter has retained a sense of guilt and a conviction that “I’m a bad person” his entire life.

This is clearly a pivotal memory in Peter’s early life and the first time he recalls thinking he was bad. To fully reexperience this memory (which is called the *target memory* in EMDR), I had Peter come up with the image that captured the worst or most distressing part of the memory: “It is the mother dog’s open eyes.” In reexperiencing the memory, he feels pain in his chest and rates the level of the feeling on a scale from 1 to 10 at 11.

The next step in EMDR is to have the client get in touch with the *negative cognition*. To elicit this, I say to a client, “With these traumatic memories, there is always an irrational negative thought about ourselves, something we may know isn’t true but feels very true.” The one Peter came up with was “It’s my fault.” As we were about to start processing the memory with EMDR using bilateral tapping, it was clear he was in full contact with the

memory cognitively, affectively, and physiologically. The evidence was in his voice, his words. and the tears in his eyes.

The following is a transcript of what we each said. After a set of tapping I stop, giving the choice to the client of opening or keeping their eyes closed as they give a short summary of what they were aware of during the tapping. Peter kept his eyes closed (as most clients choose to do). Each set of tapping was between 30 and 40 seconds long and is marked by the asterisks in the following text. This EMDR session was about 40 minutes long. (T = therapist, P = Peter)

T: Staying with that memory, just notice what you are feeling in your body, emotions, and thoughts as I tap.

P: My father is yelling at me.

P: I can't bring them back.

P: I want to scream at him.

T: You can scream at him if it feels right.

P: My body is tight.

T: Because you screamed at him or had to hold back?

P: I didn't scream at him.

(Here a choice would be to encourage the client to scream at him, but I don't do that because Peter is clearly not ready, and if he can't do that after my encouragement, he might feel shame. He is processing well, and I feel no need to intervene at that point.)

P: "Why did you do it?" (to his father in a calm voice)

P: I see sorrow in his eyes; he had no choice.

(Although this might be considered using intellectualization as a defense, I think he is adding something that he has not been conscious of before.)

P: We are talking (in his current imagination, which is part of the new learning occurring).

P: My tightness is going down.

(A good sign that I do not need to intervene in his process.)

P: We're still talking.

P: What I did was inconsequential.

(He has come to this on his own. In all probability, his previous therapist would have told him this when he recounted the memory, but new learning could not happen at that time if he was not in full contact with the neural circuits encoding the memory according to the process of memory reconsolidation. At this point in the processing, when he says this, it feels like an emotional shift. He has added some new information or awareness, which is a sign that significant new emotional learning is happening.)

P: I'm sorry for my father having to deal with it on his own.

T: See if he can tell you it wasn't your fault.

(Here I chose to intervene as a way to gauge how much of an emotional shift is happening and to possibly deepen the work.)

P: He's reluctant to tell me.

T: But you know that eating the dog food was inconsequential.

(I reiterate what he already knows. However, I knew there was a possibility he would go back to his shame in the next set of tapping.)

P: He's screaming it's his fault.

(The report that his father is screaming this surprises me. This must be a powerful cathartic emotional experience for Peter.)

P: He's accepting responsibility.

P: I'm cautiously hoping he acknowledges it and owns it.

(It sounds like he's not sure if his father really accepts responsibly or whether he can let go of his guilt.)

P: It feels like a chain unwinding.

(This is highly significant, and I have a resonating sense of something unwinding.)

T: Feel that unwinding in your body.

P: I'm getting clarity on cause and effect.

P: I don't own it.

P: I'm thinking of all the reasons I wasn't responsible.

(In a regular verbal session, I would ask him to list them all. However, with EMDR, an intervention like that could derail his own process, which is going so well that I trust I don't need to make this intervention.)

P: I'm a good man.

(His response here confirms I made the right decision.)

T: Let yourself really feel that.

P: Embarrassment, being boastful.

P: My Catholic ideology.

T: Can you go back as your Adult self and say to your 5-year-old self “You are a good boy”?

(I purposely avoid any intervention regarding his embarrassment caused by his Catholic upbringing and the sin of pride. Instead, I pay attention to my instinct that bringing in Adult awareness is going to be most helpful.)

P: I tell him that and I hug him.

(Again my instinct was right, and there is emotion as he tells me.)

P: I have pride in him.

T: Tell him that as he continues to grow up he will continue to be good and will be a good man.

(I am repeating what he just said. My impression is the label “a good man” is accurate based on what he’s told me about himself as a father and husband and corroborated by his previous therapist. My intervention is to see if he can integrate his young and present self to see there is a continuum and to anchor the awareness.)

P: I’m calming.

P: I feel peaceful.

(I can tell he is getting close to a good place to stop the processing for that day, so I ask the following question.)

T: Where is your feeling level now on the 0-10 scale?

P: 1.

(This is in line with what I have observed since there has been such a significant shift in his voice and body since the beginning.)

T: What is the most positive thought about yourself right now as you reflect on all of this? Something will pop into your head, you don't have to think about it.

(This is the question I always pose at the end of a session, and every client has been able to articulate a positive thought, sometimes with the help of a few suggestions based on what I've heard them say in the processing. Here I do a short tapping set of 10-12 seconds.)

P: I'm honorable.

(This is interesting because it's not one I've heard before, but clearly it has real significance for him. This is so different from affirmations that clients repeat having read about them. This has arisen from deep inside him.)

T: Now I'm going use a different scale where 1 is completely false and 7 is completely true (the standard Validity of Cognition scale used in EMDR). Where do you put the belief that "I'm honorable"?

(I tap for a few seconds).

P: It's 7.

T: I'm going to tap again and perhaps it will get stronger. (I tap for a few seconds.)

P: It's a strong 7.

T: When you feel ready, come back to the room and open your eyes.

(He takes several minutes; and he looks different and calm.)

P: I feel different (long pause). I'm not looking over my shoulder (long pause). I don't have to justify myself (long pause). I feel this is a game changer.

I was flooded with happiness for Peter because I was resonating with him and knew that he had undergone a fundamental change. To facilitate cognitive understanding, I explained to him what happened in terms of memory reconsolidation and how he was open to new emotional learning. I pointed out that the shift started when he said, "What I did was inconsequential," and he replied, "I felt that." I used my usual exercise for ending an EMDR session. I ask him to feel "I'm honorable" in his body, to imagine standing, walking out of the office holding on to it, in the street, in his car, going home, and holding on to it the next day and at least until he came back the following week.

When he returned for the next session, I was curious to find out if the memory reconsolidation had truly been transformational and the old emotional learning had been erased. He started by saying the week had been "unsettlingly good," which made me think of the power of homeostasis, the purpose of which is the "biological imperative to remain the same, to stay with the familiar" (Erskine, 2021 p. 15). Something did not feel quite right about not looking over his shoulder, not having his internal critic constantly at him. In spite of that, what he mainly felt was "lightness, a sense of peace" and not "wondering if the other shoe was going to drop." He felt he had "a clean canvas" to reimagine his life. He said the only other time in his life he had felt a sense of peace like that was when he completed an 85-kilometer bike race, but that feeling only lasted a couple of hours. He had only heard his internal critic a couple of times during the week, and it felt "like the equivalent of a mosquito bite." He felt for the first time more in tune physically and emotionally.

When I said we would do some more EMDR processing to see if there was anything unfinished, he thought it was a good idea because he felt there was something but did not know what. The session lasted about 10 minutes. Again, there was a 30- to 40-second pause as I did tapping and Peter processed his internal experience.

T: What do you get when you go back to the memory.

P: Sympathy for father.

P: Calmness.

P: It happened because the dogs were sick.

P: I have no need to apologize.

T: Where is your feeling level on the 0-10 scale?

P: 1 to 2.

P: I was supposed to take care of them.

P: Feeling a warmth in my core.

(In spite of him saying he was supposed to take care of the dogs, something happened in his thoughts that led to feeling that warmth.)

P: No need to apologize; you did what you were supposed to do (meaning he fed them as he was instructed).

P: This is life. (This is a statement of acceptance, and I infer that he means death is a part of it.)

P: I can only control me, not others

P: I don't accept responsibility for others and their actions.

T: Where is your feeling now on the scale?

C: 0

T: Take some time to scan your body and see if there is any remaining tension.

P: No tension. I feel completely calm.

T: What is the most positive thought about yourself right now?

C: I'm proud of myself (without hesitation).

I had Peter go through a visualization of holding this now and in the future. Following this he said, "This is the final piece." He was quiet and clearly filled with joy. We still had

15 minutes left in the session, but he said he wanted to go home and hug his wife and kids. He felt no need to make another appointment, although I invited him to contact me if the need arose. He may continue couples therapy with the therapist who referred him to me.

It can take many therapy sessions before the conditions arise for this kind of emotional transformation to occur. I believe there must be a solid, trusting client-therapist relationship both before and after the intense memory reconsolidation. In this case, although I only saw Peter three times, he came with a positive transference based on his relationship with the referring therapist and what she had told him about my work with EMDR. As described, in Peter's case, the emotional transformation happened during one session of EMDR, but it could have occurred with empty-chair work or some other intervention. In addition, memory reconsolidation can take many sessions of EMDR until the key to the crucial new learning occurs to delete the old emotional learning.

Although the process might appear almost magical, there is a predictable outcome if the criteria for memory reconsolidation are met: full internal contact with the early emotional learning and, at the same time, disconfirming evidence or information. In Peter's case, the new learning came from inside him, which was the knowledge that a 5-year-old could not be responsible for the death of his dogs. In other cases, it might come from some new emotional knowledge or learning that the client has acquired through the relationship with the therapist, knowledge that contradicts the early emotional learning (e.g., feeling loved by and cared for by the therapist). Memory reconsolidation in the context of a healing relational therapy is a powerful tool that guides the therapist in attuning to a client's early emotional learning in order to facilitate the permanent erasure of the emotional component of a memory. Memory reconsolidation speaks to me of our innate ability to heal from emotional trauma if we are presented with the right experience and/or a nonjudgmental and accepting relationship.

Notes on Author

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