Implicit Memory: How the Imprint of Early Trauma Influences Well-Being

When Julie Lopez was born, she was removed from her first mother and taken to an orphanage, where she lived without a primary caregiver for two months until she was adopted. She had a good upbringing in a loving home, yet for much of her life was troubled by puzzling symptoms. At one point, for example, she experienced dizzy spells and disorientation that made her feel “as if time moved out of space.” She went to a neurologist who prescribed medication for what he believed to be extra electrical activity in her brain. “My life was pretty great, so some of the symptoms I had were inexplicable to me.”

It’s a phenomenon she believes is common among people who believe their early lives were essentially carefree. After working with a therapist skilled in brain-based therapies, she came to know that some of her symptoms were triggered by behavior-influencing codes stored in her implicit memory—the memory that can’t be consciously accessed. As a result of that therapy, the symptoms dissipated. Lopez attributes much of her own personal therapeutic success to those early experiences with brain-based work.

Cracking those codes is the subject of her new book, “Live Empowered!: Rewire Your Brain’s Implicit Memory to Thrive in Business, Love and Life.” There, she explores how these memories, which normally help people function efficiently, can become tripwires, setting off cascades of negative emotions and destructive symptoms. How can you be affected by experiences about which you have no memory or that happened before you were able to understand and express them through language?
It all begins in the hippocampus, a part of the limbic system, which controls the autonomic nervous system. It’s the part of the brain “responsible for coding and putting date and time stamps on our explicit memory — the memory we can consciously recall,” says Lopez. There are four circumstances during which information is stored in implicit memory.

1. When an individual is in the first three years of life, before the hippocampus is fully developed
2. Following a physical brain injury that damages the hippocampus
3. When stress levels are high, cortisol levels rise, and the hippocampus shuts off
4. When bodies dissociate from the experience of extreme trauma and the hippocampus similarly shuts off.

Implicit memory, says Lopez — founder of the Viva Center, a Washington, DC community of therapists specializing in brain- and body-based therapies and a trauma-informed approach to healing — is a concept developed in the early 1900s by a number of scientists in different disciplines to explain how our systems hold data that we don’t consciously remember.

Every human, says Lopez, has implicit memory, which she describes as a hidden control panel in the brain — not one you can consciously direct, yet which holds all the data that informs how we live. “Everything stored in implicit memory is there to help us in our most primary function, which is to survive and to excel.” Although we can’t directly tap into this vast reservoir of experiential data, it nonetheless influences our behavior and wellbeing, both positively and negatively.

Suppose, for example, there had been a time you felt unsafe during your infancy and that period of danger coincided with a terrible windstorm. Those experiences were encoded in your implicit memory. Now, when a strong wind blows, you may feel your heart rate rise, your palms sweat, and your breath
You don’t remember the inciting event or the windstorm. All you know is that when the wind kicks up, it stirs strong emotions. Or perhaps you were terribly frightened in infancy by a man with a big bushy moustache. Even now, without knowing why, you may recoil from anyone with similar facial hair. These implicit memories can be triggered by any sensory information — a scent, a color, a sound, or anything felt or observed. Infants and babies taken from their birthmothers tend to perceive that severance as a danger, a threat to their well-being. The physical sensations associated with being removed from their mothers and the consequent feelings of being unsafe are stored in the body and the mind as implicit memories — remnants of trauma that remain and can cause distress throughout life. But because individuals don’t understand these as memories — that is, as narratives they can express — they may not identify their experiences as traumatic or link their distress symptoms to these early preverbal experiences.

The loss of a primary care person, Lopez explains, is significant, and deprives a child of mirroring (when a parent reflects a baby’s emotions as expressed by voice or expression) and attunement (a sense of safety that develops when parents are responsive to an infant’s needs). Often, those who didn’t have those primal experiences have symptoms of anxiety related to friendships and intimate relationships. “That struggle can look like any part of the classic symptoms for PTSD,” says Lopez. “It doesn’t mean they meet the diagnostic criteria, but they’ll exhibit avoidance of things associated with vulnerability in relationships.” Other symptoms may include flashbacks, nightmares, dissociation (a sense of separation or disconnection from oneself), anxiety, and depression. They may rely on coping strategies to avoid having to be close, such as excessive drug or alcohol use or other types of behavioral addictions that help them avoid what they see as threatening.
“There may be codes that are put in our brains that tell us the way to get through life is not to attach to people, because when you really attach, you get hurt,” says Lopez. Many people who’ve had great losses in their lives or in relationships, she adds, have had those types of codes embedded without being consciously aware of it. She’s worked with clients who say they want a relationship, yet their behavior tells a different story because of those codes. Thus, for reasons they can’t understand, adoptees may fear being abandoned, be unable or afraid to securely attach to others, or find it difficult to trust people.

Similarly, those who were not raised by their genetic parents, even though they may not have been aware of that fact until adulthood — NPEs (non-paternal events or not parent expected), donor conceived people, late-discovery adoptees — also are likely to have been imprinted with memories about which they have no conscious awareness and which may cause dis-ease. They may react in ways they don’t understand to people, places, sights, sounds, smells, or other sensations associated with childhood experiences.

NPEs and others also may have stored sensory data from subtle or outright signals they observed that indicated they didn’t belong, were unwanted, or were a source of conflict between their parents — sensations that may stimulate feelings of disconnect, alienation, and inauthenticity. “When a child grows up without genetic mirroring and in situations in which there is deception — when the parents are actually sitting on a secret — the child picks up on data energetically, in a nonverbal way, and those pieces of information can be stored in implicit memory,” says Lopez.

Furthermore, she adds, “There are some physical and visceral experiences that go along with being disconnected from people that you’re related to.” Although in her practice she most often sees clients with expressions of anxiety, others may present with feelings of hopelessness and despair. There may
be uncomfortable bodily sensations and symptoms such as those associated with obsessive-compulsive disorder, “where they have a compulsive drive to put things where they belong or keep things in order or a difficulty handling stress either personally or professionally. They may have overly controlling behavior because it feels scary to loosen the reins on relationships.”

They don’t grasp that they’re being triggered by unconscious memories. It’s as if they’re being sent signals that they can’t see, hear, or understand. So the feelings their memories engender may seem to make no sense and to be incongruous to the situations in which they arise. And when symptoms occur, clients have no reason to suspect they’re linked to past experiences. But, says Lopez, symptoms are always telling a story. The question, she adds, isn’t what’s wrong with you, but what happened to you? When they don’t know the answer – when they’re unable to peg their symptoms to something in their past that was destructive – they may feel there’s something wrong with them, that they’re broken or defective. Lopez is dedicated to changing these destructive patterns and helping individuals realize that symptoms occur for a reason. Since traditional talk therapies are typically ineffective for treating issues arising from memories for which one has no words, she sees it as her mission to help people use more pinpointed techniques that have been advancing in the last 30 years. In “Live Empowered!” she describes three brain-based therapies – Eye Movement Desensitization and Reprocessing (EMDR), Brainspotting, and Neurofeedback – through which therapists can access the mind’s hidden control panel, explore the root causes of obstacles, and reprogram responses and behaviors.

Developed by clinical psychologist Francine Shapiro to mitigate symptoms linked to traumatic memories, EMDR is an evidence-based therapeutic method that relies on bilateral brain stimulation, whether through eye movements, sound, or
touch, to target and process memories stored in the nervous system and manage maladaptive behaviors that stem from them.

David Grand, PhD, who discovered Brainspotting, describes a brain spot as a “a point in visual space that a client has a strong reaction to.” With his technique, a therapist uses a pointer to guide clients’ eye movements across their fields of vision to help identify those points, which, Lopez writes, “hold an active memory (explicit and implicit) tied to an undesired symptom or corresponding to the neural pathway you want to modify.” Brainspotting helps them process and let go of the stored emotions.

Neurofeedback, or electroencephalogram biofeedback, is a therapeutic strategy that that tracks brainwave activity and teaches clients to modify their brainwaves. When those modifications move in a direction that influences the brain to function more efficiently, clients receive visual, auditory, or other types of feedback that reinforce their efforts.

Each of these techniques is effective due to neuroplasticity — the brain’s ability to adapt, reorganize, and form new neural connections. These aren’t the only approaches to accessing implicit memory and treating trauma. Other approaches falling under the umbrella of somatic therapy are used by some therapists to target the encoded memories through the body rather than the mind. And therapists can use many additional nonverbal approaches outlined in “Live Empowered!” to decode implicit memory.

Working with implicit memory, Lopez observes, is a great opportunity to clear troubles or roadblocks that might otherwise impede individuals for the rest of their lives. “It’s about changing the codes that are driving what’s going on now so that people can live more productive lives, be successful, and feel good about themselves.”

Check back for more in-depth explorations of these individual
brain-based therapies as well as somatic therapies that may also be helpful for problems arising from trauma stored in implicit memory. In addition to reading her book, you can learn more about Lopez and the techniques she uses at her website and in this episode of the Adoptees On podcast.