

Thoughts about Addiction, Memory, Trauma and Somatic Experiencing®



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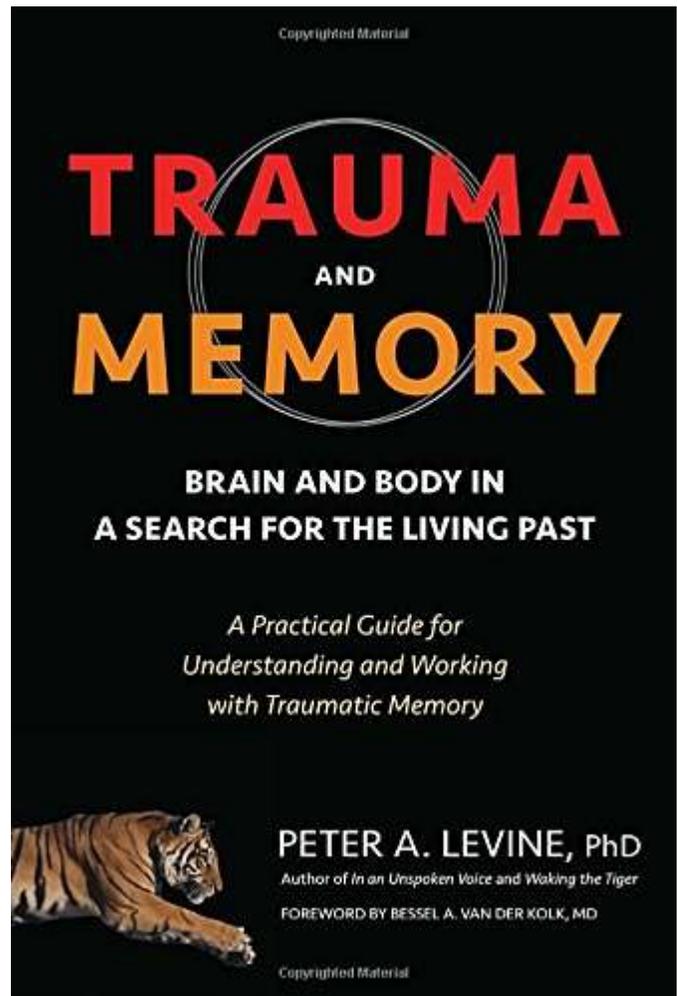
A big wooden gate leads to a large garden with tiled patios. Potted pansies, geraniums and hedge lined walkways welcome new patients as they enter the private inpatient detox and rehab center where I've worked the last four years. Whenever new patients walk into this serene



atmosphere, usually accompanied by close family members, I feel as though I already know their stories. I know that they come from chaos but may choose not to talk about it. I know that they lost control over their lives and suffered a great deal of pain but also inflicted pain on their loved ones and probably on strangers, too.

My professional experience had taught me that they were also severely traumatized and probably suffer from the ramifications of both developmental traumas (troubled relationships usually with primary caregivers) and shock traumas (events such as car accidents and assaults). Nevertheless, although trauma seems to be an inevitable part of the addict's life story, my experience has taught me that I probably won't be able to obtain a full trauma history from my addicted clients in the way it is usually possible with non-addicted ones. Although both kinds of clients may have difficulties identifying or describing their developmental issues, due to extended periods of intoxication addicts are only able to recall some of the shock traumas they endured. In fact, many addicts have no recollection of events they were involved in during time of active addiction. While part of this memory loss can be attributed to dissociation (a defense mechanism in which a person is detached from emotions, memories or sensations) as result of painful traumatic events, memory loss for short or extended periods of time (not necessarily trauma related) can also be attributed to excessive use of alcohol or drugs. If we consider the fact that substance abuse leads to impaired judgment and a higher chance for risky behavior such as driving under the influence and unplanned sexual encounters, it is quit probable that addicts expose themselves to further trauma although they might not be able to recall what had happened. In fact, clients consistently share stories of waking up in surreal circumstances.

Many of my clients, both men and women described waking in bed with people they're not familiar with, or lying on a bench somewhere, sometimes with unfamiliar bruises on their body. One of my clients realized he had spent the night at a cemetery as he was waking up after a long night of drinking beer. Another client woke up in a hospital after undergoing a hip surgery. Nurses told him he'd been found lying on the street, near the sidewalk; he assumed he had a car accident. Sadly, an addict's typical way of dealing with these circumstances involves the consumption of more alcohol, a few more prescription pills or other kinds of drugs. These types of events are typical and reoccur again and again in the course of the chaotic active addiction, which often goes on for years and years. Unfortunately, as I will discuss later in this article, having no memory of an event does not mean it has no impact on one's life. These 'forgotten' events might still affect people's perceptions, emotions and behaviors without them ever being able to make a connection between present and past or process them verbally at a therapeutic session.



The possible effect of events we cannot recall (not as result of dissociation)

In his book, *Trauma and Memory: Brain and Body in a Search for the Living Past*, Peter Levine (2015) describes the so-called good guy/bad guy experiment conducted by Antonio Damasio (considered one of the world's leading neurologists). In short, this experiment involved a man who has lived in a group home for the mentally disabled since he suffered severe brain damage to his limbic system (his temporal lobes including the amygdala and hippocampus, which affect emotions and short term memory). His intellect was above average and he appeared to be completely normal as long as the task-at-hand did not involve any emotional or social association. In fact, he was unable to remember or learn any new facts and as a result as soon as an interaction with another person was over, it no longer existed for him. He was neither able to identify the person with whom he was interacting or recall any content of the interaction. In this experiment, the staff at the group home was asked to consistently behave

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either in a friendly manner (to smile, be helpful) or in an unfriendly one (say confusing things) for five consecutive days. This experiment showed that although this person had no recollection of these interactions, 80% of the time he chose to approach the friendly people and avoided the unfriendly ones. His behavior was influenced by previous encounters although the decision to approach or avoid had no conscious awareness.

Another interesting case that was documented by Krikorian & Layton (1998) involved a construction accident in which a 53-year-old construction worker was completely buried for 15 minutes under 5.5 meters of sand. The man was conscious at first but lost consciousness after a few minutes due to anoxia (low oxygen). He was hospitalized and stayed in a state of coma for two days. Three weeks later he was released from the hospital after making a relatively good physical recovery. A few months

after the accident his doctors assumed he was able to resume his occupational and social activities. All this time, however, due to the anoxia, he had no conscious recollection of the accident. Nonetheless, in spite of his fairly good

physical recovery the man became depressed and anxious and constantly preoccupied with the possibility of sudden death with specific fears about the earth opening up and swallowing him. He avoided walking and driving outside his home and stayed away from construction sites. He met all the criteria for PTSD and his symptoms persisted for years despite psychiatric and psychotherapy treatments. Since he had no conscious recollection of the event, he assumed his problems were related to a physiological problem not yet discovered.

Implicit memory, trauma and Somatic Experiencing®

One common sense belief is that if we manage to pay attention to an event when it takes place, it affects our ability to remember that event. However, research has shown that while this is true with relation to explicit memory, it is not necessarily the case regarding implicit memory (Kean, Cruz & Verfaellie, 2015; Roediger & McDermott, 1993; Schacter, 1987).

Explicit memory and implicit memory are two majorly different ways through which previous experiences can be revealed. In explicit memory, conscious recall or recollection occurs. Implicit memory on the other hand, is revealed through our behavior and does not involve conscious recollection (Siegel, 2012).

Implicit memory includes both emotional memory and procedural memory (fixed action patterns), which constantly interact. Fixed survival-based emergency responses (such as fighting or fleeing) and approach and avoidance response tendencies (as seen in the experiment of the man in the group home) are all part of procedural memory. Emotional memory, on the other hand, is triggered when a situation provokes emotions in the same intensity as the emotions triggered by a different situation that was previously encoded as an important experience. These emotions, as charged signals,

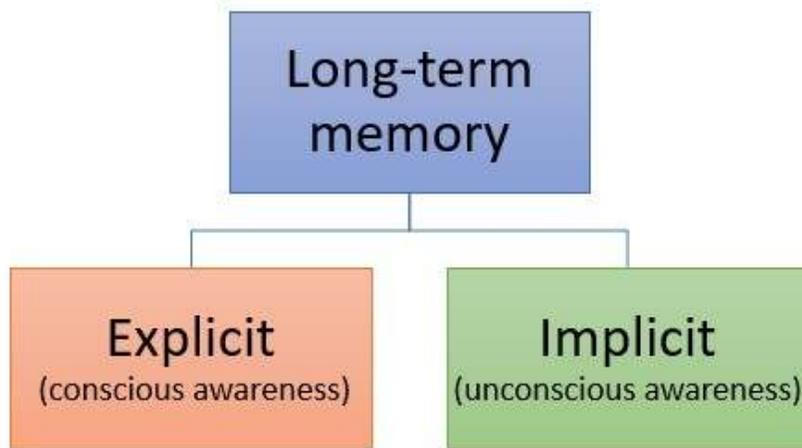
then provoke procedural memories (fixed action patterns). It is important to note that emotional memories are experienced not only on a mental level but also on the body level, as physical sensations (Levine, 2015).

How does reactivation of implicit memory affect and even

shape our lives? The basic elements of implicit memory are mental models that are activated automatically each moment by the brain and help us quickly evaluate a situation and conclude what will happen at the next moment (Siegel, 2012).

Mental models are involved in our development. As early as the first days of life the infant's brain originates such models through comparative processes in which the brain identifies similarities and differences across repeated experiences in the environment. In fact, the activation of old mental models, based on our relationships with important figures such as our caregivers, actively filters our interactions with others. This 'transference' happens many times outside the scope of our awareness, but nevertheless, results in automatic and/or repetitive behavior (Siegel, 2012).

Mental models are also activated when we need to protect ourselves. A generalized mental model of "large toothed animals are dangerous" that is based on prior experiences will lead to an



association of fear while recalling such an animal. Fear will then motivate us to run for safety at the sight of an even slightly different "large toothed animal" without the need to re-evaluate whether the situation is dangerous or not (Siegel, 2012). In this example, the emotional memory of fear (also experienced on the physical level as rapid breathing, tense muscles, etc.,) provokes the survival based fleeing response that is part of our procedural memory.



Picture retrieved from <http://childhoodtraumarecovery.com/>

In the case of intense fear experienced during a traumatizing event, explicit memory might be blocked from being encoded at the time of the event due to the restriction of hippocampal processing by the stress-induced cortisol. Nevertheless, implicit memory encoding may actually be raised and intensified due to amygdala discharge and the release of noradrenaline at the same time. In real life, trauma may be a situation in which parts of the experience are encoded implicitly but not explicitly. In this case, no narrative version of the traumatic event will be available; therefore, a person's nonconscious and conscious experiences will be affected without any awareness that he/she is, in fact, being influenced by a past experience (Siegel, 2012). Somatic Experiencing® (SE™), a chronic stress and trauma therapy developed by Levine (1977,

1997, 2010), offers us physiological access to these chronic dysregulated states, or in other words, SE™ offers us access to procedural memories.

According to the SE™ perspective, when one is confronted with an overwhelming event, intense emotions such as fear and rage lead to an unconscious selection and stimulation of the fixed survival-based procedural memories (fight or flight). These often fruitful response strategies are acted through exhaustive power. However, in the case of trauma, for various reasons fight or flight reactions are not completed successfully and as a result a freeze response (hyperarousal/overwhelm) or a helpless collapse (hypoarousal/shutdown) occurs in our autonomic nervous system. If these reactions become chronic, the individual is left with a sense of disembodiment, agony and confusion. In fact, the essence of every trauma contains continuous maladaptive emotional and procedural memories (Levine, 2015).

SE™ enables us to gradually revisit and renegotiate traumatic experience first by accessing procedural memories associated with these two dysregulated states (freeze and collapse) and then by completing the associated active responses. In a titrated process, as the client begins to move towards equilibrium, biology will continue to move the process into more relaxed alertness and a here and now orientation (Levine, 2015).

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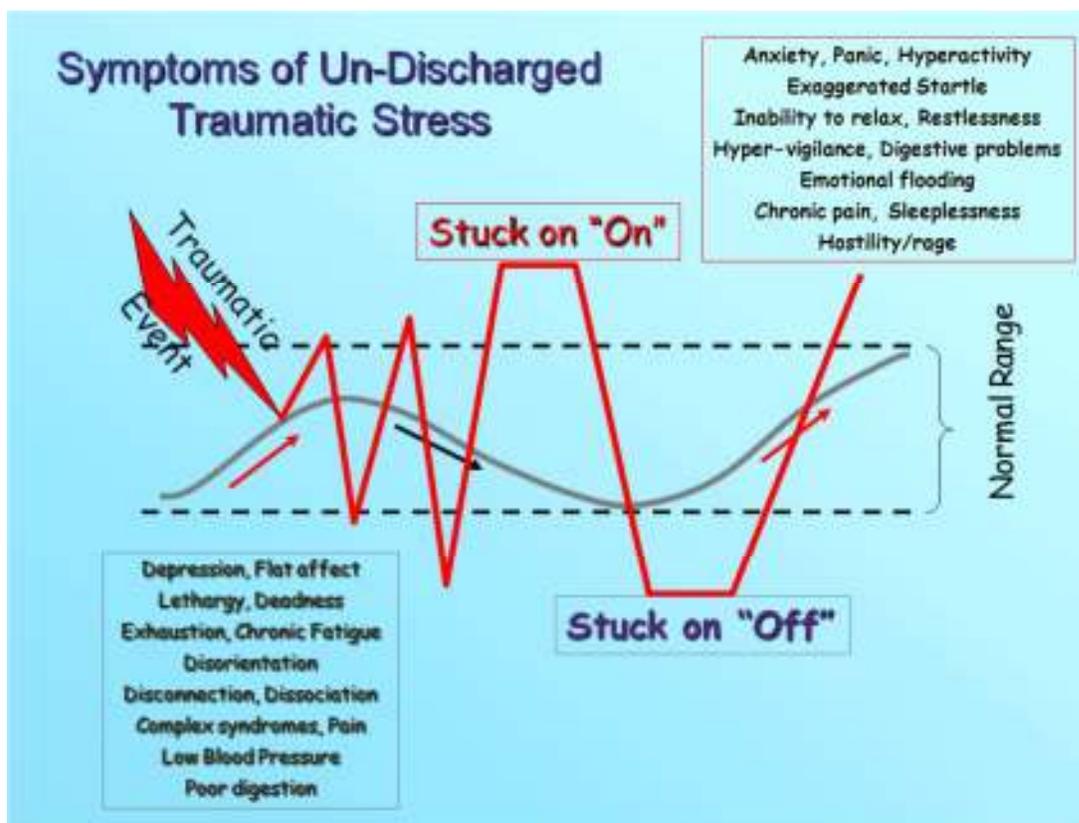


Image retrieved from <http://paradigmcalibu.com/teen-somatic-experiencing/>

I offer two client case studies who suffer from different addictions. In both cases I used an exercise thoroughly described in my former article (see Serebrenick-Hai, 2015). This exercise aims to detect and resolve physical boundary issues by actually approaching the client slowly and gradually from different angles (front, back and sides). At any sign of physical activation (fight or flight procedural memory activation, or a mental model such as: "when someone approaches me I might be in danger") the client, with the help of the therapist, will track and discharge this physical activation.

Alex, a 38-year-old heroin addict

It was our third session. As I began approaching Alex from the front, he started feeling various uncomfortable physical sensations (procedural memory). We worked through his activation according to SE™ principles; the activation was discharged although the sensations did not transform into any specific explicit memories. Then, I asked him to sit with his back turned against me. It was an extremely uncomfortable position for him. At first he tried to rationalize his physical activation by saying: "I probably feel this way because it is not polite to sit with your back turned against someone." I insisted we continue the exercise and used some psycho-education reasoning about the price he pays for having a mental model such as: "It is unsafe to have someone situated behind me." My arguments seemed to help and Alex was again willing to notice his body's sensations. At first, he described a strong uncomfortable feeling of warmth in his back (procedural memory). Following SE™ principles, I asked him to notice it and to see what happens next. I reminded him to let me know if any emotions (emotional memories) or images (explicit memories) were triggered in him. Alex then began recalling a fourth grade school teacher who used to beat pupils on their back with a ruler when they gave wrong answers as she was walking behind them (explicit memory). In order to discharge this activation, I asked him the SE™ "corrective experience question": if anything was possible, what would you have done at that moment? Alex replied that he probably would have turned around so that he was able to defend himself from her beating. I asked him to imagine himself doing that and then to notice the reactions in his body. He replied that his sensations did not change. I have asked him again to imagine what he would do if anything was possible and encouraged him to be more creative and even aggressive in the behavior he chooses. This time he chose to imagine himself turn around, grab the ruler in his hands and push the teacher away. His hands moved accordingly as he was describing how he would grab the ruler in his hands and push the teacher away (suggesting

the completion of an uncompleted movement). Again, I asked him to notice his sensations. This time he felt relaxed.

Ella, a 40-year-old alcoholic

About a year and a half ago, a former patient of mine, a 40-year-old female alcoholic, came for a friendly visit to the rehab center. Back in her treatment, she had successfully completed a full six-month program and was able to maintain sobriety. When I asked her whether she had taken advantage of the self-help program alcoholic anonymous (AA) she replied: "I go there every week because I know how important it is, but I don't feel comfortable there. The moment I walk in, all I want to do is to leave."

As her former therapist I started thinking about a possible reason for her distress. I remembered that she, as so many of my addicted clients, had a very difficult life. Although raised in a wealthy family, she suffered from both developmental traumas (emotionally neglected by her parents) and shock traumas (she was sexually assaulted in her teens and later on beaten by her ex-husband). Nonetheless, she managed to take advantage of her treatment and made much progress. As I was listening to her reply, it occurred to me that the issue she was now presenting about the way she felt in AA meetings was a physical boundary one. I decided to test this hypothesis. As she sat in my office, I moved away from her as much as I could and explained to her that I was about to walk slowly toward her. I asked her to notice her body, her sensations as I was walking towards her. As soon as I was in a fairly close distance I stopped and asked her how she felt, to which she replied, "awful." Because she was familiar with SE™ principles, it only took us about an hour to complete the full boundary exercise. It is important to note that although I had to stop many times during the exercise and instruct her to notice her sensations (until she felt comfortable enough so that we could move on), she had no recollection of any events during the exercise. Implicit memory was not transformed into an explicit one.

A few months after our meeting I received an exciting e-mail from this client. She mentioned not only how she felt more at ease at AA meetings, but especially how things had changed for her at work. As a cosmetologist she now realized how stressful she used to feel as she was approaching her clients. That former activation was no longer there.

In Summary

So what were my clients and I observing as I was slowly walking towards them?

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In some cases - implicit memory activation (procedural and emotional memories) has the potential to be transformed into explicit memories and the trauma story reveals itself. However, in many other cases, the activation remains on the implicit memory level and neither the client nor the therapist will know who the client is about to fight or what is he/she fleeing from. Addicts tend to experience tremendous traumatization; thus their reactions might be the reactivation of a mental model of primary caregivers who were abusive or neglectful. Or the same activation might be a slight freeze response due to a fight the client was involved in but does not remember. Or the result of a car accident the client remembers vaguely.

In my opinion, when working with addicts we cannot rely on their explicit memory recollections to help them make sense of their behavior. SE™ allows both the therapist and the client to resolve trauma symptoms and restore equilibrium regardless of the client's ability to recall what had happened - this ability is impaired and may never be restored, which is the case with most addicts.

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SPT Research Review: Neurodiversity

By Dawn Bhat



Fabri, M., Andrews, P.C.S. (2016) Hurdles and drivers affecting autistic students' higher education experience: Lessons learnt from the multinational Autism&Uni research study. In, Proceedings of International Technology, Education and Development Conference (INTED), 7-9 March 2016, Valencia, Spain.

A research group from the Autism&Uni project, which is funded by the European Union, surveyed five countries (United Kingdom, Poland, Netherlands, Spain) about the barriers and motivators autistic students face in higher education. This work was conducted in 2014 and presented in March of 2016.

The present study found two phases wherein autistic students may face challenges. In preparing for university, students may be overwhelmed and unable to imagine what to expect causing some students to avoid attending institutes for higher education. Upon arrival and initial settling phases, autistic students may not be flexible with changes in lifestyle, which causes anxiety and may lead to poor academic performance and the high attrition rates among those with learning differences.

The authors propose adopting the approach, called Universal Design for Learning (UDL), which proactively supports multiple paths to learning rather than a one-size-fits-all approach. "Adopting UDL may positively impact students without formal diagnosis or those who have not declared a disability in fear of discrimination. There is experimental and quantitative research that supports placing a value on diversity rather than emphasizing 'normality' or 'deficits' or any deviations from mainstream.

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