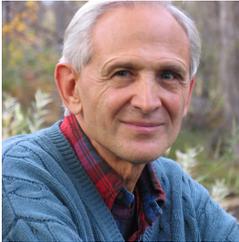




## Peter Levine: About memory

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Peter A Levine, PhD is a forerunner in body-oriented approaches to trauma. He is the developer of Somatic Experiencing® a naturalistic, approach to healing trauma which he has developed during the past 45 years. He has received the Lifetime Achievement award from the US Association for Body Psychotherapy, and an honorary award as the Reiss-Davis Chair for his lifetime contribution to infant and child psychiatry. Dr. Levine served as a Stress consultant for NASA in the early space shuttle development and has served on the APA task force for responding to large scale disasters and ethno-political warfare. He is currently a Senior Fellow and consultant at The Meadows Addiction and Trauma Treatment Center in Wickenburg, Arizona. He is the author of several best-selling books on trauma, including *Waking the Tiger*, *Healing Trauma*, published in 26 languages, and *Trauma and Memory; Brain and Body in a Search for the Living Past*.

Serge Prengel, LMHC is the editor the *Active Pause* project.

For better or worse, this transcript retains the spontaneous, spoken-language quality of the podcast conversation.

Serge:            *Hi Peter.*

Peter:            Hello Serge.

Serge:            *We're going to be talking about trauma, and traumatic memories.*

Peter:            Mm-hmm (affirmative). Okay.

Serge:            *That's a subject on which many people have some misconceptions, or wonder about. We think of memories as bedrock, as solid. Maybe that might be a place that we can enter this topic.*

Peter:            Yes, actually what I would say is that really in a way, memories form the bedrock of our very identity of who we are. If we found out, which happens to be the case, that memories are tremendously unreliable, then what foundation does our identity stand on? If you understand really the complexity, and the interrelation of different kind of memories, then we can accept an identity that is more fluid rather than fixed or concrete, or reified. I think an understanding of memory, just an understanding of the memory processes themselves are so valuable in how we go through our lives. Therapeutically, of course, they're very important because therapists are always helping clients, or very frequently helping clients deal with such difficult memories.

Serge: *As we listen to you, we can listen to you on parallel tracks. There is a part that says, OK you've paid a lot of attention to traumatic memories and dealing with them as a way to heal trauma. And there is another level in which we can listen to what you're saying in the sense that memories are what forms the bedrock of our identity. They're not the reliable bedrock that we think they are, so that there is more of that fluidity of our identity in ourselves. We can listen to this in parallel process.*

Peter: Yeah, I think that's a really good summary. Then the next question, or the next step here is, well OK really what is memory in the first place? I think to go to the first question, what is memory? The answer to that is basically what I wrote in my previous book, on *Trauma and Memory, Brain and Body in a Search for the Living Past*, because clearly the past plays an important role in our lives, whether we're aware of it or not. Let's see, if that's so, and I think most people would agree on that, especially with traumatic memory. When people have traumatic memories, or trauma really, they're unable to imagine a future different than the past. That's not a good situation because that keeps us repeating the past. Let's step back a little bit and look at what are some of the different types of memory, and how they might come together. The most common memory, and the one that most people think about, or think that this is what memory is about, is also confusing to a therapist as well. This memory is so called ... Well, there are two basic types of memory, explicit and implicit. Each of them has at least two subcategories, and actually a number of sub-subcategories. Declarative memory is: *I go down to the store on the corner. I know that I need butter, eggs, chicken, some olive oil, something like that.* It's not that big a list so I keep it in my mind. It's called working memory. I go down to the store and I recall what I want. I get my eggs, and blah, blah, blah, blah, blah. The same as when I'm traveling around Europe, and particularly in Switzerland. I know that I come down from my flat. I go to the tram station at [Snida Vidacan 04:50], and I know the next stop is [Bonhoff Vidacan, Bert, Stoffhockert 04:54] if I take the 14th and so forth. This is important. You can't navigate the world without this. There certainly wouldn't be any technology without declarative memory. However, in terms of its power and its impact on our lives, it's really relatively inconsequential. One percent, maybe, of the total effect of memory on our behaviors, and our feelings, and our moods. Our behaviors and our moods, that has nothing to do, or very little to do with declarative memory, very, very little to do. Again, this is the first type of explicit memory, and you tell me if I'm giving too much detail here.

Serge: *No, that feels great. That feels very great - - a very concrete sense of what it is. In a way, it's important moment by moment in terms of everyday task.*

Peter: Correct.

Serge: *But very little in terms of the big things in our lives.*

Peter: That's right. It's the type of memory we believe all our memory is about. Again, even therapists very often are asking the person to deliberately remember something. That's a declarative process.

OK, so the second type of explicit memory are called episodic or autobiographical memories. They're a lot more interesting. They have different hues and qualities. For example, you drift back... and what I found therapeutically is that these episodic memories, so called episodic or autobiographical memories, have a lot to do with how our life progresses.

Let me give you an example just from me. First day of school for my fifth grade class. I was walking home with some people that I knew, some friends from class. We were all talking about our new teacher. I said, "I have Mrs. Kurtz, and she is the worst teacher that I have ever had." Believe me, all of the teachers I had before her, and after her, today they would have been prosecuted and probably spent time in prison for some of the sadistic things they did. To say that she was the worst, that was ... Let's just say it was exaggerated. However, as I was telling my friend this, I get a tap on my right shoulder. I look around and it's Mrs. Kurtz. Even as I tell you this I get a little twinge in my chest here.

Serge: *Yes, yes, I can imagine.*

Peter: She looks at me with eye contact, and she says, "Oh Peter." She remembered my name, which was pretty amazing. She said, "Peter, am I really that bad?" The importance of this memory is that probably if I had not had this episodic memory, I wouldn't have really opened my curiosity and supported it through academic learning. She really helped me learn instead of being punished for not learning, like the other teachers.

After that, when I was in middle school, I found a teacher who was a mentor for me, and the same in high school, and then the same in university and in graduate school. That moment, you see, where I have that episodic memory takes me through a whole trajectory of my life, and where I am now. Directly, and indirectly, I'm mentoring tens of thousands of students, because Somatic Experiencing trainings are happening all over the world. We have now about twenty thousand students and practitioners. Again, I think without this, without her grace, without her humor, I don't think I would have ... I probably would have been a drop out.

Serge: *That moment is in a way akin to a key frame from a movie: When you see it, it orients your sense of what the movie is... Or like a defining moment, or something that captures your entry point into... more than just this moment.*

Peter: Yes, I like the term you used, "defining moment". That's a wonderful ... If I had talked to you before I wrote *Trauma and Memory*, I would have used that term. Yes, episodic memories are very much defining moments. I think there's more than ample evidence that this is not just the human form of memory. For example, a number of birds were studied, the scrub jay in particular. What they do is they get their seeds and so forth, and they stash them in different places. They bury them, and they put them by trees and so forth. When they retrieve those nuts, they go ... Not only do they know exactly where they are, but they

know which ones they did first. They go and get those, so they're having the freshest.

That's a tremendously complex memory. I believe it is, and some of the researchers, some of the ethologists, looking at this really believe, very strongly, that this is the biological root of our episodic memories. They're very important for our lives. Again, the famous, or the famous infamous story about Marcel Proust, when he had a cup of tea and he dipped in a madeleine, one of those French pastries, and then boom he was transported back to the streets of his childhood, walking through the narrow streets and alleys and so forth. It brought him there, but he didn't consciously think: "I think I'm going to remember what it was like when I was a kid walking through the streets". It was this association that took him there. Again, in that sense, it's much more subtle, much more nuanced, than declarative memories.

Serge: *You were describing the genesis of it in the birds, for instance, "remembering that sequence". There is a sense of memory being associated with action and sequence of movement, as opposed to memory being abstract ideas being stored.*

Peter: Yes. Yes, they're there for a reason. I believe that nothing makes sense in biology or in psychology outside of the theory of evolution.

Serge: *Mm-hmm (affirmative).*

Peter: It's really what the unifying factor is for all of the biological and behavioral sciences. Let's go on now. It's now starting to get a little bit more interesting.

Serge: *Good.*

Peter: Next, we go to emotional memories. These are much further out of the realm of conscious awareness, so called conscious awareness. These happen all the sudden with a friend, or a lover, or something like that. All of a sudden, we get into this really intense, heated argument where we're blaming each other for something. That's an emotional memory that's playing out and interfering with our current stream of awareness and our relationship. Something there from the past is registered and is tagged with a powerful emotional memory. Emotions, as we know are very powerful, especially those of fear, anger, and sadness. They're very, very, very powerful. We might just see somebody who reminds of somebody from our past, and all of a sudden feel great sorrow, or joy. These emotions are much more ... The episodic memories before, they have feeling tones, but they're not emotions. We don't have episodic memories of fear or terror. That's not what they encode. The emotional memories are very powerful and compelling in how we carry out our lives. We have one more type of memory which is ...

Serge: *Also, that emotional memory comes with a stronger encoding of the emotion, so that in a way, it just would be like a movie that would have sight and sound, but also emotion attached to it. A very, very strong code is part of ...*

Peter: Yeah. To use your analogy, to go further with your analogy, you're watching a movie, and it's an interesting movie. Then something absolutely horrific happens and you just are horrified, you're aghast. That's akin to the emotional memory. Emotional memories are deep. What people don't realize is there's a strata of memory which is deeper -- way, way deeper generally than even the emotional memories. These are what are called procedural or body memories. Those are generally, if you look in an academic psychology text... those memories have to do with skills, motor skills, motor learning. For example, a child the first time they get on the bicycle, and the parent or an older sibling is by their side, and they've walking together. Then at one moment the parent lets go, and the child is riding a bicycle. Think about what that entails. The child has to learn very rapidly all kinds of physics extrapolations. They have to learn about force. They have to learn about momentum. They have to learn about center of gravity. They have to learn about turning radius. They have to learn about all of that stuff implicitly. If you wanted to learn how to ski, for example, and you got a book on skiing, and that's all you had: You can be up on the ski slope with that book, and you will not be able to learn how to ski.

Serge: *Right.*

Peter: What I've added to this mix ... Also, procedural memories involve what are called valences of approach or avoidance. I'll give you an example of that, which I think was fairly revealing. One day in my probably mid forties, I guess, I was visiting my parents in New York. I had gone down and spent the day in museums looking around and enjoying myself. I was heading back on the train and it was rush hour. The car was packed with mostly with men, all wearing more or less grey suits with newspapers under their arms. I had the strangest feeling as I just looked to one part of the car. I just couldn't understand what it was. It seemed to me to be related to this one man, fairly tall man, and I just watched it for a while. I felt a warmth in my belly and an openness in my chest, my diaphragm, the chest. At 205th Street, that's the last stop on the D train, he also got off. I went up to him, and touched his arm. I didn't know ... Again, I had no idea why I was doing this. I touched his arm and the words came out of my lips, "Arnold." We looked at each other. He was in my first grade class, some 35, 38 years ago. I entered the class late. I was small for my age. My ears, you see right now, those are the same size ears I had when I was five or six years old. I was bullied a lot. Arnold was the one kid that really befriended me. Again, that was this approach avoidance, which then took me into an episodic memory.

Serge: *Seeing him put you into the procedural memory, the same way as riding a bike or skiing. You went into that relationship, that moving, that acting felt action relationship with him.*

Peter: Yes, that is correct. That is correct. You think about it, that's miraculous. Those memories are going on with all of us all of the time. A person, for example, who has had sexual abuse, or sexual trauma, when their lover, when their partner touches them and they freeze, that's a procedural memory. You can work, you can understand it, you can do behavioral interventions, and so forth, which may

be of some use, but you fundamentally can't change that until the procedural memory changes. Or said another way, until the memory completes itself, and so this can then be designated into the past.

Serge: *I want to just stay there a little longer. We are talking about procedural memory. In that moment, that procedural memory is like a how-to, a track, a procedure manual that says: "When in that circumstance, this is a prescribed way of doing things". And you have no way to deviate from it, unless there is a way that it can actually... unless you can find a way to let it get its course. Then you can go beyond it.*

Peter: Right. Very well said actually. Very, very well said. It means contacting them, and their body memories. Again, a lot of times people struggle when they recover a traumatic memory. They go through the question: "Is this is real, is this false?". I'll give you an example in how the procedural memory changed, and how everything above that changed as well. In 1988, or whatever, maybe '89, I was starting a move out to Boulder, Colorado. I was asked to see this young man who was in a fairly serious depression. I think he saw a therapist who was training with me, and they asked me if I would see him.

He had seen a therapist about a year ago for a depression, a mild depression compared to what he was experiencing then. She said to him... I think he was having sexual problems along with the depression. She said, "I hate to tell you this, but your symptoms are exactly the same kind of symptoms my patients who have been exposed to sexual and ritual abuse have." After that, he joined the group with her. The people in the groups were reliving all of these horrendous memories, and he was too. He went again deeper, and deeper into a depression during this time.

When I saw him, I reassured him that we were not going to go to try to get any memories. I could see this relief on his face. I explained to him a little bit about somatic awareness, and what we do in Somatic Experiencing. I guided him into some simple awareness exercises. He reported, after a bit, well first he reported some pain in his lower back. Then, as I helped him to find out what was underneath that, he felt a strong tension throughout his whole lower back and pelvis. I guided him to very slowly feel into the tension and then just to let the tension move his pelvis, move his body in any way that the tension would want to.

His back started to arch as he pulled his pelvis backward. Then he reached this moment, and he just took this deep, deep breath. Tears came rolling down his eyes. Again, I continued to guide him until the tension released. Then he felt a wave of feeling through his whole body, and especially of warmth in his pelvis. At the end of the session we were talking a little bit. He said, when I did that exercise a picture came up and it was a really strong picture. When I was 12 years old, I had to get a circumcision. It was supposedly a medically necessary circumcision. His mother, who felt very uncomfortable with her own sexuality... She was supposed to take the bandages off and clean them. Instead, she just ripped them off. That was what was going on. That was what was underlying his depression. Getting away from that, this is an example of how important it is to work with the procedural memory, allow them to complete their meaningful course of action,

and then allow that to bubble up. That was the emotions, that was the tears, tears of sadness of loss.

Then this memory, which is more like a ... Not a flashback, but it's kind of between a flashback and an episodic memory, of being able to see his mother and then realizing what this had cost him in his life, in his sexuality. We did a few more sessions to really be able to get more sensation throughout his body. He then started dating a woman. I don't know if they eventually married, but they became very close and he was able to have a healthy sexual relationship, something he could not even imagine before.

Serge: *Let's go back a little bit to a moment of articulation with that episodic memory... that procedural memory that is recovered there. You're going back to it, but obviously not in such a way as to re-traumatize him. There was something in which you helped him connect back with that experience, in a way. He obviously did not want that to happen. He wanted to avoid ...*

Peter: That's one of the fundamental tenets of Somatic Experiencing, in all the books I've written. It is not overloading the client, not reactivating these trauma circuits to such a degree that they are unable to observe them and to let them move through. To the nervous system, if it's reliving a traumatic event, it is reliving it with just a lot of emotion and so forth. The nervous system can't tell the difference between that and the original trauma. Essentially, you're now having a trauma and then a somewhat identical trauma, and you're just adding one trauma to another. This is critically important. When we work with these memories, we work to touch into them, to visit them, to access them through the procedural memories as with this young man. That's really the key, because in the procedural memories is our sense of power. Let me actually continue with the episode with Arnold from my first grade class.

Serge: *Sure.*

Peter: As I continued to walk up the street, we said goodbye. I continued to walk up the street towards my parent's house. I had this episodic memory of walking up the street near the house, Gun Hill Road, in the first grade, and these two kids, they were twins, came to torment me. They forced me out into the street. Then I started to, out of the blue... started to swing my arms. I scared the hell out of them. After that, nobody picked on me in school, and I became part of the class. Very important, how does this connect? Because my being supported by Arnold is what gave me enough of the foundation to really know that I could defend myself. The way these memories interact, and again, how they are constantly revivifying and refining our lives, and our identity, and how we see ourselves, and how we see ourselves in the world, and how we perceive the world, all come from these important procedural memories.

Serge: *In a way, relating it to what we were talking about the identity, you could say that Arnold is a very important part of your identity. The bullies are, and Mrs. Kurtz was, and Arnold is a major part of your identity. It's nice to think of... It gives a little bit more of a concrete sense of our identity as made of all these memories.*

Peter:

Exactly, because it enriches it. Instead of having our identity based on a fixed memory, using a placid memory, or a traumatic one, having it fixed rather than being able to explore that entire wonderful landscape and the gifts that they give us, are so, so, so important. Even how these memories go beyond things that have happened to us. The last chapter, chapter nine, I think in Trauma and Memory, I talk about generational memory.

I've worked with many people, who for example: In a session a strong procedural and emotional memory comes up of smelling burnt flesh. Some of these were vegetarians, so they weren't even exposed to that. These, it turned out, in these cases they had parents, or now even grandparents who were in the Holocaust, who experienced these horrific, unbelievable, inhuman conditions. It didn't make sense, because memory can't go skip from generations. It just didn't make any sense at all.

Just a short few years ago, a very interesting experiment was done where they exposed... They gave rats a shock. Then before the shock, they gave them the scent of cherry blossoms. If rats are at all like us, it's probably a pleasant smell, they seem to like it, they seem to enjoy it. If you pair it a number of times with the shock, this is a Pavlovian conditioning: When you give the scent itself, what happens is the animals freeze and shake, and defecate. That's no surprise. However, after breeding these animals, and going to the fifth generation, when they presented the animals with that scent, they immediately froze and trembled, and defecated, just as though their great, great, great, great grandfathers had. These things get passed on in the implicit memory system, in the procedural memory system. It's not only the harmful things that we need to be able to unattach from, and realize that they are not our memories, but we get very important information. This is, for example, when we were working in southeast Asia after the tsunami, the horrific southeast Asian tsunami. A number of the tribal people, as soon as they felt the earthquake, they ran up hills. So did the animals, the elephants did that. You can imagine that the people, the tribal people, their stories were told to keep this alive, for 300 years remember, because that was the last time there was a tsunami like that. The elephants and other wild animals? Again, I thought, hmm, this is very interesting.

I thought back about a client I had. I don't know if you remember, there was a flight from Denver to Chicago, United flight 232. Actually, somebody who just wrote a book about that has asked me to give a little endorsement for their book. What happened there is, there was an explosion and the entire hydraulic system was decommissioned, was broken. It was virtually impossible to land the plane. What they tried to do is steer the plane by changing the thrust of the different engines. They did land in a near cornfield. There were explosions and fireballs. I think more than half of the people survived. I worked with some of the people who were on that flight.

One particular woman, when I was working with her with some of the procedural memories, she had the memory of undoing her seat belt, because the fuselage was upside down and crushed. She could feel herself crawling on her belly. Then she saw a pinhole of light. That's all it was. She heard the words, "Go, go to the light." She was also a Buddhist student, so it had this other meaning. As we continued the session, and we got to where she was in the cornfield, sitting out in

the sun, feeling the sun on her body, she remembered that her father and grandfather both were in airplane crashes, one commercial, the other military, and both of them survived the fireball by crawling to the light. That information was transmitted somehow.

Again, you could say yeah, but they may have told stories about that and so forth. Even so, how those words come at that moment. It defies credibility. Again, I think this is one of the miracles, and why I've been so fascinated in studying memory, and especially studying traumatic memory. We look at wars and things like that, and the effect that that's going to have, not only on people in that area, but probably throughout the world for generations. We see right now, kind of a worldwide trauma. Anyhow, I guess trying to get back to the basic subject, how we navigate these, differentiate and navigate our memories, both traumatic and otherwise, really is what allows us to ...

Serge: *We were talking about the case of that client with the circumcision, the sense of helping find the procedural memory, while at the same time giving a sense of safety and empowerment.*

Peter: Yes, that was absolutely the key. You said it better than I have said it. It was really about that, and about the empowerment that I got from Arnold, and how that took me to my power, and how my episodic memory with Mrs. Kurtz took me to learning and being mentored, and mentoring. It's much more interesting to have a fluid identity.

Serge: *Mm-hmm (affirmative).*

Peter: Particularly as one ages. I'm noticing that with myself: That I seem to be open to and accessing more procedural memories in the last five or so years. I'm curious about that, and I think that's probably part of the aging process, but also the transition from life to death, whatever that is. I think it keeps us vital, it keeps us engaged. And, therapeutically, it's essential to understand the roles and the differences of the different kinds of memory systems.

Serge: *I would like to stay a little bit more on that notion of transition. Either to give you more room to expand, or to share with you what it evokes for me, whatever feels right.*

Peter: Tell me. I'd like to know.

Serge: *What it evokes for me, in that context of fluid identity, is a sense of... more of the procedural memories coming up as a sense of an enrichment of self, and of feeling... A sense preparing to have a larger connection with the universe as a whole, in terms of not finding oneself as an isolated little self, but as at the intersection of all these circumstances and episodes, and moments.*

Peter: Yes. Yes, it's the richness. It's the richness. I think it does. It gives us a bigger connection, a larger connection. For me, a lot of that has come out, I guess sort of in my Dharma way of having developed this methodology and teaching it until it

became an international program. In a way, I was hyper focused on that. I see myself now much more open to these felt sense images that give me a greater connection. They give me more of a sense of OK, not only have I completed maybe some of what was my Dharma commitment in the world, but also my relationship to life in this world, and my transition to the next world, whatever that is or isn't.

Serge: *Mm-hmm (affirmative). What I'm hearing is the difference between the hyper focused, on the one hand, and a larger connection on the other hand.*

Peter: That's right. Yeah. I mean, I've always felt that developing the work, and spreading the work was a spiritual commitment. I've always felt that, but I haven't so much allowed myself to be held personally by those presences, which again are also akin in many ways to procedural memories, to memories which are shared. These are interesting times that we're in, of course, needless to say. I think one of the things that I hope for is that people will get more and more... get tools to be able to work with these type of procedural memories so that they are less influenced by fear and rage.

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