

Why the Vagal System Holds the Key to the Treatment of Trauma

The Neurobiology of Post-Traumatic Growth

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Why the Vagal System Holds the Key to the Treatment of Trauma: Extra Bonus

The Neurobiology of Post-Traumatic Growth

Dr. Buczynski: We all know this scenario: a person experiences trauma and their nervous system responds to defend them.

Sometimes the response is fight or flight, but there's also the freeze response as well as total shutdown.

These immobilizing defensive responses can sometimes get misinterpreted and misunderstood by the client.

Stephen Porges says that some clients can feel that their body betrayed them during the exact moment they needed it most. And they'll carry this painful narrative with them for years.

Here, Stephen discusses the crucial neurobiological factor of trauma that we need to explain to clients to help them move on from self-blame and open up to healing.

Dr. Porges: When we deal with individuals who have had traumatic experiences, we're very concerned with how they live through that and how they transition back into the real world.

So, what I've learned over the two decades that I've been involved in this area is – it works from two directions in terms of fostering better outcomes.

One is a respect and understanding of the body's own reactions and responses *to* the traumatic event and how that has changed that person's neurophysiology. They may have shifted in their physiology to be more reactive.

But the first point is to respect and to understand one's own bodily responses.

The other part is really what I call *personal narratives*.

"When we understand the neurophysiological reactions that are wired into our system, we no longer blame our body for responding."

We've talked about the body as being a bottom-up model, but you also have to put with that a top-down.

When we have bodily feelings, we generate a personal narrative, and that narrative makes sense to us. But often when we understand the neurophysiological reactions that are wired into our

system, we shift and change our narrative; we no longer blame our body for responding – we have more self-compassion.

I'm not a clinician, but a lot of clinicians talk to me and a lot of their clients actually send me e-mails. I got an e-mail from a woman who was in her late 60s and she had been raped when she was 19. When she was raped, her body immobilized; she was unable to fight or to flee.

When she told this story to her daughter, her daughter basically said, "Well, why didn't you fight the perpetrator off? Why didn't you be more aggressive?"

And the woman felt very shameful; she felt very, very bad, and she carried that shame with her because she had been ineffective at fighting this off.

When she learned about the Polyvagal Theory, she learned that the body can reflexively immobilize and it's not an intentionality of movement – it's not a volitional response.

And she felt personally vindicated.

What she really was saying is that, as her personal narrative changed to respect her own body, it gave her the growth and the ability to transition. And she wanted to share that with me.

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I had another experience – I was talking, and in the audience, there were a couple of women who started to really cry when I was talking about the body immobilizing. At the break, one of the women came up to me and told me *her* story.

Her story was that her daughter had been raped as a teenager by a man who was about 10 years older, and they brought it to court and the court literally threw it out and didn't do very much because she did not *fight* the perpetrator off.

And when she heard this story, the notion of this neurophysiological model, it gave an understanding to what her daughter had experienced; she then had this *very* profound change in herself and when she came up, she said to me, "This explains my daughter," and she said, "and also explains my sister."

So, in many ways, we start learning to respect our bodies and not to be blameful at them.

Dr. Buczynski: Using Stephen's insights, we can look at two important ways to facilitate growth in our clients.

One: we help clients develop a better understanding of their biology and how the body naturally reacts to a traumatic event.

And two: we help clients change their personal narrative around the traumatic event.

We do this through educating clients on the body's neurobiological response to trauma, including the freeze and shutdown response.

Continuing on, Stephen now ties these ideas together by breaking down the way the mind reacts during different behavioral states.

Dr. Porges: We have to understand that we really have three different behavioral states: one which is very socially engaging, understanding, attached, connected – we pick up the cues; and another one where we are quite defensive and often misinterpret cues – so we might see engagement as intrusiveness.

But there's a third state which we really haven't elaborated much within our culture, and that is when people immobilize out of fear.

Immobilization out of fear is far from a fight/flight reaction. It's different; it's very primitive; it's also linked in many people to experiences of dissociation.

Basically, their mind is going someplace else and just literally left their bodies.

Dr. Buczynski: It's this kind of immobilization that can often lead to the question: "well, why didn't you fight?"

By the way, that question can really be taken as a second assault.

You know, first you have the rape, and then you have a societal judgment about, "Well, you brought it on yourself," or, "Were you really raped?"

Dr. Porges: Well, we have that not only in rape; we have this in terms of veterans who have been injured in the military and they get rehab, and they say, "Hey, there's nothing wrong with you – go out there and fight again." And they say, "I can't."

When a person is raped, their body gets changed and they *can't*.

We really have a blindness to this whole immobilization defense, and we criticize people if they do it. And

when I say *do it*, it almost implies a volition, and what we really should be saying is they don't *do it*, they *experience it*.

Their body has an organizational set of principles; it's trying to protect them, it's doing it in many heroic ways, but it's not voluntary behavior.

Dr. Buczynski: So just to review, Stephen detailed three behavioral states that can help explain the way our clients respond to stimuli.

One, there's the socially engaged and connected state.

Two, there's the defensive and mistrustful state.

And three, there's the state of immobilization from fear.

This is where some people might dissociate or have an out of body experience.

Once our clients understand the involuntary way the mind and body can take control, it can help them find relief from shame or even experience self-compassion.

But what happens when a client's response to trauma becomes stuck or it's left unprocessed in the body?

Here, Dr. Pat Ogden shares two ways she helps clients work through this kind of traumatic memory and begin the process of growth.

Dr. Ogden: In my work, working with the body is what works the best and the most efficiently.

"Trauma impacts the body so strongly, people get stuck."

The reason is, trauma impacts the body so strongly and the responses that the body has are often not metabolized, so people get stuck in, what Onno van der Hart calls, *trauma time*. They can't move on from it until those responses are metabolized.

That can happen in different ways when we pay attention to the body. If somebody's remembering the trauma or talking about it, talking about it *is* reliving it, so their body responses start to emerge as they're talking about it.

That gives us a chance to focus on the body and help to complete those responses. It could be that their nervous system gets dysregulated and they start to shake, and the more they talk about it the more they

shake and the more they get terrified.

We want to forget about the memory, because you don't need the content of trauma anymore. It's already simulated the incomplete responses in the body.

So, I'll ask somebody to put the memory aside and focus *all* your attention on your body right now, until your arousal starts to come down. They're often surprised because it *will* start to come down; it will come back into that window of tolerance and they'll feel calm again.

Then we'll revisit the traumatic memory – and almost always the response has changed somewhat.

The other intervention – in terms of the body through post-traumatic growth – is to work with the somatic and muscular systems to reinstate responses that were elicited in the body at the time of the trauma but were not executed.

If it's a traffic accident, to turn a steering wheel, turning the body; or if it's an abuse or an assault, to be able to protect yourself or to get away.

I've found completing those responses at a bodily level to be effective with post-traumatic growth.

“Completing those responses at a bodily level to be effective with post-traumatic growth.”

Dr. Buczynski: When we're looking at integrating these responses in the body, we can approach it in two ways, as Pat said.

One: focus on the body first instead of the memory until arousal levels come down.

And two: work somatically to complete actions that were stopped in the moment of trauma.

Now, Pat's description of working with the body to reinstate these types of responses led me to another question.

I asked Pat if she saw a distinction between healing from trauma and experiencing post-traumatic growth.

Dr. Ogden: Healing from trauma recalibrates the nervous system and completes the actions in the body – and all the other things that go along to bring a person back to baseline functioning and regulated emotion.

But I've had so many clients tell me, after that has happened, the growth that they have felt as time goes on from that experience has been profound.

I had one woman who was severely, severely abused; she had dissociative identity disorder and she had so many terrible symptoms and reenactments of the trauma.

But after she felt that she had completed all those responses and the trauma was actually over, she *actually said*, “I’m glad that happened to me because I have learned so much.”

That to me is post-traumatic growth.

She did it on her own and also in therapy.

“I’m glad that happened to me because I have learned so much.”

When you start to resolve those effects of trauma and you have those sessions where the person feels like, *Oh, it’s getting over now. I’m not constantly pulled back because of these incomplete responses*, the session keeps working inside them.

This is part of the beauty of being human – when something is started, say in the therapy session, it will continue to affect the client for days, weeks, months, and even years afterwards.

The downside is that it’s the same when something negative happens – that’s the problem with trauma; when trauma happens, it’ll keep getting revved up inside the system.

Dr. Buczynski: So even when we no longer have our clients in session, the work is still sitting with them.

There’s a self-perpetuating element to this kind of healing.

But this can also happen with negativity.

Dr. Ogden: That’s also neuroplasticity: in therapy, we’re laying down new neural networks –new ways of *being with* themselves and in the world, new ways of living in the body, new beliefs that they start to consider – and that starts to form new neural networks in the brain, and from there other things start to develop.

I see therapy as just the beginning. Then the person has the tools and the shifts inside that will keep that process going. That’s what happens a lot with post-traumatic growth.

Dr. Buczynski: The body can hold onto traumatic memory long after the event itself.

And as Pat explained, some clients can transition to growth once they’ve completed the body’s unprocessed response.

For another take on Pat’s and Stephen’s ideas, Dr. Joan Borysenko shares a sobering personal account of the

body's response to trauma.

Dr. Borysenko: I used to do a lot of work with people who had cancer and people who had AIDS. Cancer can be a big trauma for people. And there was a colleague of mine — she herself was a cancer survivor — who did a tremendous amount of work with other people who had cancer. It was very embodied work.

It involved things like going swimming and revealing scars, and things that would normally be very traumatic for people — all to realize, *I'm not the only one. And it's okay, and I can integrate this into my self-image. Look at her. Look at him. It's okay.*

She did really very, very beautiful work, particularly in using social support to help people with their trauma, peer support.

So, we were in New York City. Both of us were speaking at a conference at the New York Academy of Medicine, which is up around Spanish Harlem. I'm not a New Yorker, and it never occurred to me that a place that was safe during the day might not be safe at night.

Dr. Buczynski: After the conference, both Joan and her colleague decided to go for a walk.

They ended up at the edge of Central Park and decided to sit down on a park bench.

Because they had both come in from Boston that morning, they had their overnight suitcases with them.

And Joan still had her high heels on from the meeting.

That's when someone approached them and set a change into motion that would have a life-changing effect.

Dr. Borysenko: It was a very tall young man, and he either had a hand in his pocket or a gun. And he said, "Take off your jewelry and give me your handbags."

You never know in a situation like that — that's a traumatic situation — *how am I going to respond physiologically?* We had two very different responses. My response was to get up, knee the guy in the groin, shriek at the top of my lungs, and then I took off chasing him through Central Park, carrying my suitcase and in my high heels. I wouldn't have known that that would have been my response.

Her response was a freeze response. She just sat there, in her own words, "like a deer in the headlights." And that was so traumatic to her.

What happened? I didn't catch the guy, but I chased and chased him until I came back to the bench.

Bystanders are weird. There were several bystanders who came over and said, "Oh, it's great you chased him."

And I thought, "Yeah, well, where were you? Why didn't you chase him? You're bigger and taller than I am."

But it's not something to be proud of or ashamed of. Most of my friends said, "Joan, that was the stupidest thing I have ever heard of. Why would you possibly get up and chase somebody who could have shot you?"

"I couldn't help it. It was the way that my own body happens to respond to trauma."

But I didn't think about it. I couldn't help it. It was the way that my own body happens to respond to trauma. And my friend also could not help it. That's the embodied way that she responds to trauma. But she didn't know that.

Back then, we didn't understand that people had different ways of embodying this kind of response, and it's hard to say this, but it pretty much destroyed her belief in herself. She'd spent all of this time trying to overcome the idea of being a victim and of being helpless.

And because she didn't understand this as a normal physiological response, she started to blame herself and said, "All this work I've done with myself and others, it's all a fraud. It's all terrible. I really have done nothing at all but delude myself and others."

While I'm not making a direct causal link here between that and the fact that her cancer recurred and she died a few months later, there was probably something in that. Her immune system did not do well with the self-blame, the whole hormonal system, the whole system of what my old buddy Candace Pert called *informational molecules*, was really disrupted by this.

And I think that's why it's so important for us as therapists to legitimize whatever it is – *however* it is that a person responds to trauma.

Dr. Buczynski: As Joan reminds us, we can't predict how the body and nervous system will respond to a traumatic event.

And because of that, we also can't ascribe blame to these reactions.

This can help lift the burden of guilt a client might feel as a result of this response, because it wasn't their choice.

Now, Joan's friend experienced the freeze response during their traumatic experience.

And according to Dr. Kelly McGonigal, there are two things that get particularly restricted in this state.

Dr. McGonigal: One of the things that we know about the freeze response, or being paralyzed in a crisis or trauma, is that two of the things that get powerfully inhibited are the breath and the ability to make noise.

And one of the things that I think has not gotten a lot of attention in trauma research is the importance of teaching people how to breathe — not to calm down, but to counteract this tendency to hold the breath, or restrict the breath during fear or during intrusive memories and making sound, sounding as a therapeutic practice.

“One of the things that has not gotten a lot of attention in trauma research is the importance of teaching people how to breathe to counteract this tendency to restrict the breath during fear.”

So, I wanted to tell you about this study that I actually published when I was the editor of the *International Journal of Yoga Therapy* that was done by researchers at Fayetteville State University in North Carolina. This is from 2006.

They used yogic breathing and sounding in coordination with testimony therapy to help survivors of domestic abuse and intimate violence recover from that trauma. All of the participants were women who had recently experienced this abuse. And the testimony intervention was talking to a trained listener about the story of the violence or the abuse.

We know that it can be therapeutic — telling the story to someone who is really trained to help you tell your story, and listen in a non-judgmental and supportive way.

But they found that, when it was combined with teaching yogic breathing and sounding before the testimony, it had a more powerful effect on self-efficacy and depression.

“The breathing techniques help people experience full deep breath—not just relaxed belly breaths, but breathing into the ribcage and right into the chest.”

I love this study. The breathing techniques are exactly what you think they might be — helping people experience full deep breath — not just relaxed belly breaths, but breathing into the ribcage, breathing into the chest, making noise like humming and sounding.

And I think of those as techniques that are very practical— trying to resolve something that happened in trauma by finding your voice.

And I love that this research team found the voice — both literally and figuratively — through telling a story.

Think about how you could integrate that into a therapeutic session, where people are already telling their story and processing the narrative.

Dr. Buczynski: Somatic exercises like breathing techniques can help clients process their experience with trauma.