Cultivating a Trauma Informed Approach to Yoga

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1. Introduction

Based on my research for this project, and my own direct experience, I have witnessed the positive and profound effect that Yoga can have on the lives of trauma survivors and those who suffer from traumatic stress. I have also experienced first-hand the harmful effects Yoga can have when taught from a non-trauma informed perspective. I believe there is a real need in our culture for Yoga teachers who can approach their teaching from a trauma informed perspective.

For survivors of trauma experiencing traumatic stress, the traumatic event/s are not simply recalled as memories in the past, in many instances they are not recalled in the form of cognitive memories at all, they are re-experienced viscerally (felt), within the brain and body's systems, as a very real and present terror. Long term traumatic stress has a lasting impact on cognitive, physiological and neurological function.

The overall aim of this project is to increase awareness of traumatic stress disorders, to acknowledge that trauma and traumatic stress are not rare and to promote the need for a trauma informed approach to teaching Yoga. We are likely to come across a traumatised person in our classes.

Throughout history trauma theory has always been intertwined with political movements. Trauma is, and always has been, a political issue, a feminist issue, a human rights issue. A human issue.

As Bessel Van der Kolk one of the leading trauma theorist's states:

"No-one wants to remember trauma. In that regard society is no different from the victims themselves. We all want to live in a world that's safe, manageable, and predictable and victims remind us that this is not always the case. In order to understand trauma, we have to overcome our natural reluctance to confront that reality and cultivate the courage to listen to the testimonies of survivors"

(Van der Kolk 2014)

One of the current issues surrounding trauma and trauma theory is that of diagnostics. Many diagnostic categories that apply to trauma survivors place the 'disease' within their personality rather than seeing it as a complex set of responses to a very real event or events. Thanks to pioneering Doctors, Therapists and Researchers, Vietnam War Veterans and the Women's Liberation Movement, there is at present more research and lobbying being done on behalf of trauma survivors than ever before.

Complex post-traumatic stress disorder is a condition that is still not recognised by the American Psychiatry Association's hand book *The Diagnostic & Statistical Manual of Mental Disorders* (DSM-IV) which is the worlds leading diagnostic manual for mental health. Instead a range of behavioural disorders are listed which place emphasis on the behaviour of the survivor rather than what they have suffered. Trauma isn't a simple issue and it cannot be defined by a fixed set of symptoms or by the behaviour of the patient. Trauma isn't a disease. It's an experience.

Traumatic stress – particularly when it is prolonged or inescapable – has a huge impact on our physiological and neurological systems. Systems at the very core of our sense of self. Over time the body and brain attempt to adapt to an environment where they are constantly under threat. Since

the dawn of trauma theory in the 1800's to present day it has been understood that traumatic stress produces physical symptoms, and in recent years neuroscientists have been able to amass evidence that it fundamentally changes the way our brains work, the way our bodies work and the way we behave. This knowledge has led to changes in the way we view trauma and the way we treat trauma.

We need to create the opposite of trauma in order to heal from trauma – safety. Fundamental to recovery is a sense of safety within the body and in relation to other people. Trauma is very much a human issue, if not only because one of the key factors in recovery from trauma is the ability to be around other human beings and feel safe. This need for relational safety and attachment to others is primal. It's a survival instinct at the very core of our existence as mammals. Human beings must remain attached to someone, hopefully their Mother, until at the very least the age of 8/9 or they would simply not survive. We aren't made to live alone or deal with frightening, overwhelming events and their effects alone.

Trauma informed talking cures can provide some relief but the focus of research is shifting ever more into the realms of body based and mindfulness practices, like yoga, to help manage the neurological and physiological adaptations of traumatic stress.

Yoga can do this by creating a sense of safety, and agency, through connection to the body and sense of self. Yoga can also help anchor the brain and bodily experience in the present moment. Yoga is providing survivors with opportunities to become masters of themselves and their own experiences. It is my informed opinion that even as general yoga teachers we are highly likely to come across people who have experienced or witnessed trauma to the extent that it effects their mental and physical health, their sense of self and their sense of safety.

How can we modify our teaching to be more inclusive to those survivors who are no doubt living among us? Many of whom may never feel able to share their experiences on a medical form. Those who, for whatever reason cannot tolerate physical assists, or closing their eyes, or lying still, or simply noticing what is happening in their body, or being told what to do. Those who find lying in Shavasana or Ananda Balasana anything but joyful and relaxing. Those who try to eke out a little extra space for themselves on the floor. Some of those 'difficult students' I read about on teaching forums. Perhaps they are the very students whose practice could be transformed by a trauma informed approach to yoga. Whilst we can never truly know or assume the inner thoughts, feelings and trauma histories of our students - what we *can* easily do is provide a space that gives them opportunities to experience connection, choice and safety, whether they are traumatised or not. A trauma informed approach to Yoga can also be applied to a much wider range of students such as those who suffer from depression/anxiety/chronic pain/stress and sleep related illnesses.

I think this topic raises interesting questions about what our function as yoga teachers actually is, and I think the wider subject of trauma theory throws up some very interesting questions about our individual and collective responsibility to acknowledge traumatic experiences and move beyond them.

2. Historical Perspectives on Traumatic Stress

"*The knowledge of horrible events periodically intrudes into public awareness but is barely retained for long. Denial, repression and dissociation operate on a social as well as an individual level. The study of psychological trauma has an 'underground' history. Like traumatised people, we have been cut off from the knowledge of our past. Like traumatised people we need to understand the past in order to reclaim the present and the future. Therefore, an understanding of psychological trauma begins with rediscovering history*"

(Herman 1992)

The history of the study of psychological trauma is deeply entwined with the political and social movements of the time. Great periods of activity and enquiry have been followed by periods of almost total amnesia and disinterest. In the last century, there have been three periods of time when the investigation of the psychological effects of trauma has peaked.

The first of them was in the late 19th Century when what we now understand as traumatic stress was commonly referred to as *Hysteria* – the archetypal psychological disorder of women. For two decades *Hysteria* was a major focus of inquiry in Europe and was widely considered to be a disease which only affected women and originated in the uterus. Whilst the classification of *Hysteria* was inherently misogynistic it did lead to a period of time when physicians became much more interested in listening to women's experiences.

The most famous and enduring of those physicians is the Father of psycho-analysis Sigmund Freud. Freuds early work centred around the traumatic theory behind *Hysteria*, and the root causes of the disorder. He and his colleagues noted that patients experienced flashbacks, somatic disturbances and that *Hysteria* was found indiscriminately amongst the highest and lowest members of society and was not simply a case of predisposition, weakness or suggestibility. Freud also discovered that hysterical symptoms could be relieved when the traumatic memories, as well as the intense feelings that accompanied them, were recovered and put into words. By 1896 In his study '*The Aetiology of Hysteria',* Freud claimed that he had discovered the source of *Hysteria* - major traumatic events of childhood concealed beneath hysterical responses to more recent and often trivial experiences. His study was a compassionate and ground-breaking piece of work which legitimised women's stories and experiences. Less than a year later, apparently troubled by the radical social implications of his theory, Freud disassociated himself with his work. By now so many women had been diagnosed with *Hysteria* that he would be forced to conclude that abuse of women and children was endemic, even amongst the upper echelons of society he had worked with.

Instead Freud spent the early 1900's making a complete reversal of his earlier findings, and without any actual evidence, concluded that his hysterical patient's tales of abuse were no more than unconscious desires, fabrications and over-reactions. To do otherwise would have meant publicly acknowledging the depths of the sexual oppression of the women and children in Europe at the time. Perhaps this turnaround can be understood more easily in the context of the world in which he lived. A secular 19th Century France in which the only source of validation and support for his traumatic theory was the very new and small feminist movement. To ally himself, a man of ambition and intelligence, with such a movement was unthinkable, so he went on to spend most of his later career discrediting women and pitching them as fundamentally inferior to men.

His later theories prospered and thrived under the anti-feminist political climate of the time and became central building blocks of modern psychological theory. *Hysteria* was largely forgotten and it was left to the small feminist movements of the time to continue looking into the psychological traumas experienced by women.

The next time the term *Hysteria* really resurfaced was just after the First World War – a war which saw 8 million men killed in four years and along with them died the illusion that war was a manly and glorious thing where soldiers returned as heroes - valiant and brave. Soldiers were experiencing traumatic psychological symptoms in alarming rates. Cases reported included men breaking down and weeping or screaming uncontrollably, freezing and refusing to move, as mute and unresponsive with incidences of memory loss and incapacity to feel. Many Soldiers began to act like the 'hysterical' women of 19th Century Europe.

At first there were attempts to give these psychological symptoms a physical source, which military doctors attributed to the concussive effects of exploding shells. The resulting nervous disorder was called *Shellshock*. It soon became clear that similar effects were experienced by soldiers who hadn't been near enough to exploding shells to have been physiologically effected by them, and although the name remained for a while longer, military psychiatrists were forced to acknowledge that the emotional stress of prolonged exposure to violence and death was producing a neurotic syndrome resembling *Hysteria* in men. They eventually renamed it *Combat Neurosis*. The military attempted to down play the early numbers of psychiatric casualties as a result of WW1 due to their demoralising effect on the public.

When the existence of *Combat Neurosis* could no longer be denied or downplayed, controversy centred around the moral character of the patient. Soldiers who developed *Combat Neurosis* were considered to be morally inferior, cowards, weak and undeserving of recognition or war pensions. A few years after the end of the war medical interest in the subject of psychological trauma faded again before resurfacing during the Second World War when soldiers continued to experience psychological trauma as a result of exposure to violence.

By now there was some recognition that any man could break down under extreme pressure and that psychiatric casualties were inevitable in combat situations. Focus shifted to finding quick cures and ways to prevent further breakdowns. Psychiatrists at the time observed that strong relationships between soldiers, their units and their leaders seemed to help protect soldiers from acute breakdowns. The military medical strategy of the time was to minimise the soldiers time away from the battlefield with the goal of returning him to his unit. Treatment centred around getting soldiers to recover quickly by recollecting and reliving their traumatic memories with all their resulting emotions and then getting back to the business of war.

The psychiatrists who pioneered these techniques already knew that reliving memories alone wasn't enough to cure the men and warned about the long-term effects of recalling traumatic memories. Their warnings went un-heeded as treatments appeared to be working in the short term, with many men returning to duty quickly. As long as they were able to function on a minimal level they were thought to have recovered, and little attention was paid to what happened to them after returning to the line of duty and even less when they returned home.

Systematic investigation of the long term psychological effects of combat were not undertaken until after the Vietnam War. The motivation for this study came from the organised efforts of disaffected soldiers who were protesting against the war and demanding that their distress be recognised. These groups had been meeting to support each other and share their burdensome experiences of

war in informal setting rather than going to the Veterans Administration for help. They wanted to meet on their own terms where they were in charge.

By the end of the 1970's pressure from veteran's organisations resulted in the Veterans Association starting an outreach program staffed by veterans and providing peer counselling and support. In the years following the Vietnam War the V.A studied the impact of wartime experiences on the lives of returning soldiers. The moral legitimacy of the movement against the discredited war and the efforts of the veteran's organisations made it impossible to deny psychological trauma as a lasting and inevitable legacy of war.

By 1980 the American Psychiatric Association included *Post-Traumatic Stress Disorder* in its official manual of mental disorders handbook *The Diagnostic & Statistical Manual of Mental Disorders* (DSM-V) and the extensive studies of combat veterans led to the development of a real body of knowledge about traumatic stress.

Whilst much headway had been made in terms of the veteran's movement there was still little attention being paid to the experiences of violence and terror that women and children suffered as part of their civilian lives. It wasn't until the women's liberation movements of the 1970's that it became apparent that women suffered more from traumatic stress in their everyday lives than soldiers did whilst engaged in combat. For women, the war was within the home hidden in domestic life. A life that women were encouraged to keep private - particularly in light of Freuds widely accepted inference that women were prone to become hysterical, fabricate stories of abuse and over-react to minor issues.

During the women's liberation movement support group's similar to the veteran's groups began to emerge. The creation of these safe spaces made it possible for women to begin to overcome their feelings of shame, denial and secrecy and finally put a name their injuries. Women were used to keeping silent, or speaking of rape and domestic violence but not being believed. In the healing environment of these consciousness raising groups, women were finally able to say what happened to them, and be understood and believed. These meetings originated as a means to effect social change and this new feminist understanding of sexual assault and violence empowered survivors to support one another and take collective action. This led to increased public awareness, reforms in rape legislation and generated an explosion of research into the preciously ignored subject of sexual assault. For the first time, this research was conducted by women. The results of these investigations confirmed the reality of women's experiences that Freud had dismissed a century before – violent and sexual assaults against women and children were shown to be pervasive and endemic in our culture. Feminists also worked to redefine rape and domestic violence as a form of political control, enforcing the subordination of women through terror.

The phrases *Rape Trauma Syndrome* and *Battered Women's Syndrome* were often used to describe the psychological effects of trauma on Women. It wasn't until the 1980s that it became clear that the psychological syndromes seen in rape, domestic violence and childhood abuse survivors are the same as those seen in survivors of war and diagnoses of *PTSD* finally began to include traumatised women and children.

The study of psychological trauma is now firmly established as a legitimate field of inquiry, but as history shows it requires a political movement to inspire and sustain it in case it be forgotten again. The movement at present requires us to acknowledge that traumatic stress it is not something outside of the range of usual human experience, but is fact a common part of our existence. It also requires us to re-examine the way we diagnose and treat people whose problems/adaptations are a

result of traumatic stress. And it still requires us to fight for Human Rights – especially those of women and children. Trauma is not rare. Trauma is a Human Rights Issue.

3. How common is Traumatic Stress?

'Nobody wants to remember trauma. In that regard society is no different. We all want to live in a world that is safe, manageable and predictable, and victims remind us that this is not always the case, we have to overcome our natural reluctance to confront that reality and cultivate the courage to listen to survivors'

(Van der Kolk 2014)

It is hard to find exact statistics regarding the percentage of people who have experienced significant trauma and the amount of those people who go on to experience what is most commonly known as *Post-Traumatic Stress Disorder* - characterised as being a victim of, or witnessing, a traumatic event and/or being exposed to prolonged, inescapable trauma.

Statistics from the National Centre for PTSD in the U.S.A estimate that around half of U.S Citizens experience a 'significant' trauma in their lifetime with 7-8% of those going on to develop *PTSD*. Women are more at risk from *PTSD* with 10% of the population developing the condition at some point in their lives, compared with 4 % of men.

The World Health Organisation figures relating to childhood trauma and abuse are staggering. In Europe alone 18 Million children are reported as experiencing sexual assault and abuse, 44 million experiencing physical abuse and 55 million experiencing mental abuse and neglect. (*ICD-10*)

I would argue that the true figures are likely to be much higher, as many traumatic experiences, particularly those occurring in childhood go undetected or unreported. They may not even be remembered in a cognitive sense. They may surface in later life as mood, behavioural and personality disorders. When trauma is not acknowledged and treated appropriately it can lead to a myriad of associated health issues and a high likelihood of re-traumatisation in later life.

We live in a culture that normalises the abuse of power, our Political systems appear to thrive on it. Many survivors have been silenced to preserve the status quo and vilified when, and if, they dare to speak up. Most people have little knowledge or understanding about the psychological, physiological and neurobiological changes caused by chronic trauma, therefore social judgement of chronically traumatised people can be incredibly harsh. They can be seen as weak, helpless, complicit, passive, attention seeking, dependent, self-sabotaging, 'asking for it'. There is evidence all over the media of the tendency to victim blame, to seek flaws in the character or behaviour of victims rather than perpetrators. Our media promotes sensationalism, encourages desensitisation, and serves to create a disconnect between suffering 'over there' and suffering 'over here'. Many studies have tried to suggest that a certain kind of person is predisposed to experience chronic abuse, but no consistent profile has been established. All these studies made clear is that ordinary healthy people can become trapped in prolonged abusive situations and even those with the most resilient personalities are no longer ordinary or healthy after their escape. Whilst certain factors expose existing trauma victims to further traumatisation Trauma can happen to any of us.

The above statistics suggest that more than half of us will experience significant trauma as a child or an adult, and up to one in ten of us will develop some form of *PTSD* during the course of our lifetime.

Trauma is not rare.

4. Diagnostic Classification of Traumatic Stress Disorders

The word *Trauma* comes from the Greek language and literally translates as *'a wound'.*

Medical classifications and incidences of psychological conditions/diseases are decided by the American Psychiatric Association and their handbook *The Diagnostic & Statistical Manual of Mental* Disorders (currently known as "*DSM-IV*") which we also use in the UK, supported by The World Health Organisation's *International Statistical Classification of Diseases and Related Health Problems* (currently *ICD-10*).

DSM-IV outlines six criteria for a diagnosis of *Post-Traumatic Stress Disorder*: the disorder first recognized in the 1980s after the Vietnam War, the disorder most commonly attributed to men returning from war.

Post-Traumatic Stress Disorder;

'1. Exposure to Stressor. Intense fear, helplessness or horror experienced in the face of event(s) involving actual or threatened death, serious injury, or bodily violation.

2. Event Re-experienced through intrusive memories, distressing dreams, feeling as if the trauma were recurring, intense distress when exposed to cues symbolizing an aspect of the trauma, or physiological reactivity when exposed to cues.

3. Persistent Avoidance and Numbing. At least three symptoms are required from a list including avoidance of internal or external stimuli that arouse memories of the trauma; inability to remember an important aspect of the trauma; diminished interest in formerly pleasurable activities; feelings of detachment; and restricted range of affect.

4. Persistent Symptoms of Increased Arousal. At least two of the following: difficulty falling or staying asleep; angry outbursts or irritability; difficulty concentrating; hyper vigilance; and exaggerated startle response.

5. Symptoms persist for more than one month

6. Life Disrupted / Functioning Impaired'

(DSM-IV 2010)

Another two categories were proposed thanks, in the most part, to the work of Judith Herman MD, Author of *Trauma and Recovery: The Aftermath of Violence – from Domestic Abuse to Political Terror* - which is a groundbreaking work on the subject of trauma.

They proposed categories are *Complex PTSD* and *Developmental PTSD*. *Complex PTSD* was considered for inclusion within the category: '*Associated Features of PTSD'* for the *DSM-IV* under the catchy name of '*Disorders of Extreme Stress Not Otherwise Specified'*, but in the end, was not included. Her suggestion for a diagnosis of *C-PTSD* is below.

Complex Post-Traumatic Stress Disorder*:*

C-PTSD is a disorder that may develop following exposure to an event or series of events of an extreme and prolonged or repetitive nature that is experienced as extremely threatening or horrific and from which escape is difficult or impossible (e.g., torture, slavery, genocide campaigns, prolonged domestic violence, repeated childhood sexual or physical abuse). The disorder is characterized by the core symptoms of *PTSD*; that is, all diagnostic requirements for *PTSD* have been met at some point during the course of the disorder.

In addition, *C-PTSD* is characterized by

1) Severe and pervasive problems in affect regulation;

2) Persistent beliefs about oneself as diminished, defeated or worthless, accompanied by deep and pervasive feelings of shame, guilt or failure related to the stressor; and

3) Persistent difficulties in sustaining relationships and in feeling close to others. The disturbance causes significant impairment in personal, family, social, educational, occupational or other important areas of functioning."

Instead of going with the above definition, the latest version of the *DSM, DSM -IV* has grouped together several disorders under the heading '*Trauma and Stressor Related Disorders*'. The current section includes many long and confusing subcategories.

The list includes:

- *Pre-school PTSD*
- *Dissociative Subtype of PTSD*
- *Acute Stress Disorder*
- *Adjustment Disorders*
- *Chronic Adjustment Disorder*
- *Other specified Trauma/Stressor Related Disorder*
- *Reactive Attachment Disorder*
- *Disinhibited Social Engagement Disorder*
- *Dissociative Identity Disorder*
- *Dissociative Amnesia*
- *De-personalisation/De-realisation Disorder*
- *Persistent Complex Bereavement Disorder*

That is in addition to current categories that can be associated with traumatic stress such as *Mood Disorders, Borderline Personality Disorder*, *Multiple Personality Disorder*, *Generalised Anxiety Disorder, Eating Disorders, Addiction,* and *ADHD.*

In 1992, when first proposing the inclusion of Complex PTSD, Judith Herman stated:

'*Concepts of personality developed in ordinary circumstances are frequently applied to survivors, without an understanding of the deformations of personality which occur under conditions of coercive control. Thus, patients who suffer from the complex sequelae of chronic trauma commonly risk being misdiagnosed as having personality disorders*.'

(Herman 1992)

Health care and social care systems still use coercive control as a means of managing their patients physical and mental health, and many of the treatments and procedures offered do not attend, at least not fully, to the fundamental problems/adaptations at the root of the traumatic stress. Trauma cannot be 'cured' but it can be understood and managed. Events can't be undone but they can be integrated within the mind and body, as in the past rather than as an ever-present and unmanageable danger.

Many trauma survivors are still being diagnosed with confusing and frightening sounding conditions. These diagnoses do little to acknowledge what the patient has been through as a survivor of trauma. As has been the trend in history, there is a tendency to explain and define trauma in terms of victim behavior. Just reading through the *DSM-IV* list above provides some insight into how ironically traumatising it might be, to be suffering from traumatic stress and then on top of that, to be diagnosed with one of the following – '*Disinhibited Social Engagement Disorder'* or '*Reactive Attachment Disorder'*. Both come under the heading of '*Trauma and Stressor Related Disorders*' yet place the problem, by their very definitions, in the patient's personality, as a disease.

As Peter Levine – a leading researcher and therapist in the field of how the body stores and releases trauma puts it;

'*Trauma cannot be reduced to the diagnostic traits compiled by the DSM. Trauma is not a disease, but rather a human experience rooted in survival instincts. Inviting the full expression of our instinctive responses will allow the traumatic state to loosen its hold on the sufferer*.'

(Levine 2010)

5. The Impact of Trauma on the Brain

Trauma is not just an event that happened in the past, it is also the imprint left on the brain, mind and body by that experience. This imprint affects how the survivor manages to survive in the present. Trauma not only changes how we think and what we think about but also our capacity to think. It results in changes in the way the mind and brain manage perceptions of threat. This in turn leads to changes to the physical and hormonal responses of the body. The body and brain systems become hypervigilant, prepared to be assaulted at any time, or start to shut down and give up; accepting the danger is inescapable. Usually post-traumatic stress can cause a mixture of both of these responses. Many traumatised people report feeling fully alive in the face of danger but feeling numb in situations that are objectively 'safe' like at home or family gatherings.

When we feel threatened we have a number of physical and neurological responses: our first response is attempts at social engagement – we might call on others for comfort and support, try to engage others around us with our facial expressions or call out for help. If no-one responds, or if the danger is immediate, we might freeze momentarily until our fight or flight responses come online. They are initiated by the sympathetic nervous system and provide surges of hormones like adrenaline and cortisol and require huge amounts of oxygen and energy to sustain. Hopefully we use them to fight off our attacker and run to safety. In which case, if we had a fairly well attached up-bringing, and have a good support system, we'd stand a very good chance of not going on to develop a complex form of *PTSD*.

However, if this fails and we can't get away or we're physically trapped, those systems will start to shut down. The para sympathetic (automatic) nervous system will take over again, and try to conserve energy and calm the heart rate. Finally, if we accept the inevitable is going to happen and there's is no way out, an evolutionarily ancient part of the para sympathetic nervous system known as 'the reptilian brain' or dorsal vagus complex, is activated. This is our 'shut down'. In this state we disengage, we don't experience what's happening fully or at all, we don't feel pain, the mind disassociates from the body and we cease to really exist in the present moment.

These responses are mechanisms for survival. They aren't conscious choices made by the rational part of the brain. They are primal responses to imminent or inescapable danger. Being traumatised is to be permanently stuck in one or both of these states. Each person will respond differently to trauma depending upon the 'hard-wiring' of their brains, childhood experiences and social support systems.

Until recently we weren't able to talk about trauma beyond an individual's subjective experience. With recent advances in neuroscience, such as brain imaging, we are now able to understand changes in the brain that occur both at the time of a traumatic incident, and in many cases in the days, weeks, months, and even years afterward. We can understand this now in terms of actual neurobiological changes to the brain rather than as changes to behaviour and social functioning. We can also understand that resilience against trauma depends on how we experience and have previously experienced lack of control and danger. The distinction lies in the 'hard wiring' or conditioning of our brains and the cumulative impact of learning and life experiences. People who experienced abuse and neglect in childhood are more likely to experience symptoms of hyper-vigilance or disassociation than those who were raised in a secure, loving environment but experienced trauma as adults. Hence why Judith Herman wanted to add *Developmental Post Traumatic Stress* to the diagnostic categories.

Neural Networks

The brain is made up of billions of cells called neurons. These neurons pass information between each other, and then to the rest of our body, chemically and electrically. They often 'fire' in groups that can be described as neural networks or brain circuits. During child-hood our neurons become wired together in a more permanent sense depending upon the responses of our main caregivers to our needs. This in itself is a very complex and wide-ranging subject. There are two main things I'd like you to understand about neural networks for the purpose of this project.

1) They're mostly *automatic* - it's important to understand that many responses to trauma (both during the traumatic experience and afterward) are often automatic – the result of neurons firing in patterns that you can't just 'wish away' or logically 'think away.' In fact, many of the circuits that condition our responses to trauma have been ingrained or hard wired into the brain. They protect us from attack in a primal way.

2) If you believe in evolution, these circuits can be seen as the result of an evolutionary process developed to protect human beings from attacks by predators. (See Porges Poly Vagal Theory for more information on this). If you believe in intelligent design, they can be seen as part of the incredibly intelligent design that is the human brain.

The patterns in which brain circuits fire don't just go away or change on their own. They can be changed but it requires intensive treatment/work. Whether they are patterns developed through evolution, or established through repetitive behaviours (like habits), we often fall back on them even after years of inactivity. Our automatic responses don't simply disappear just because the experience, battle, or war ended. Brain circuitry that is activated during a traumatic event will often continue to guide our responses for years to come, perhaps all of our lives.

Prefrontal Cortex

To get a sense of where this region is in the brain, make a fist with your thumb on the inside of your fingers and hold your arm up. Your forearm is your spinal cord. Your elbow is the base of your spine. Your palm just below your thumb is the base of the brain. Your thumb represents something called your limbic system (which we'll look at in a moment), and the two fingernails of your middle and ring finger are your prefrontal cortex. Most people who have heard of the prefrontal cortex are aware that it plays a role in our ability to think logically and plan. When you thought about what you had to do today, you were largely using your prefrontal cortex. When you made plans to be a yoga teacher, get married, go on holiday or buy a car, etc. Those choices involved a logical decision and some planning.

Another function of the prefrontal cortex involves with memory. When it comes to memories of events we tell others about these memories as if they were stories. For the most part, our telling of events will typically have a beginning, middle, and end. We may not put everything in chronological order, but we probably could if asked to. We may not even respond to the question with a narrative description at all, but instead offer a basic summary like 'It was great'. That summary will typically be based on our ability to think about the event, evaluate our overall impressions of what happened, and then put together a story of the event. These memories do not become stories until the prefrontal cortex gets involved. Initially they're just points of 'data' – a collection of sights, sounds, smells, tastes, bodily sensations, and emotions. The prefrontal cortex plays a crucial role in integrating those various data points and weaving them into a coherent account or narrative. This

narrative is then what we produce when talking about a memory of an event, and it is what we expect people to produce when we ask them about an event they may remember.

Another role the prefrontal cortex plays is in helping us to control our attention. With the assistance of our prefrontal cortex, we are able to decide what we want to focus on. Whether it is a sunset, a conversation, or a project about Yoga for trauma. This is called top-down attention. Memory itself is a function of attention: If you're not focused on something, it probably won't get encoded into memory, so you won't remember it.

For example, if you're sitting at dinner and your phone rings, your prefrontal cortex is involved in the ability to shift your attention from the dinner and to make the decision to get up, leave, and take the call. It may be *habitual* for you to look down at your phone when it rings, but the decision to focus on the call and decide whether to attend to it largely involves your prefrontal cortex. It's a logical, rational decision.

The Limbic System

The limbic system includes a number of brain structures but can roughly be represented by your thumb, if you are still holding your folded fist in the air. All of the parts of the brain that are located below your fingers are called 'sub-cortical' which means they are not part of the 'thinking brain.'

Defence Circuitry One primary function associated with the limbic system is our defence circuitry. The limbic system is part of our neural network and includes the brain circuitry needed for defending ourselves against attack, which includes detecting threats in the environment and responding to them. Whenever we respond to a perceived threat it will involve the limbic system. Our response may not be something we are able to consciously think about or make logical decisions about. In fact, while we're reacting to a threat, our prefrontal cortex may not even get involved. Often, our responses to threat will often not be logical, reasoned, or thought-out.

Memory Encoding The second function involving the limbic system is memory encoding. Earlier I explained how memory begins as a collection of data points in the form of sights, sounds, smells, tastes, bodily sensations, and emotions. The limbic system plays a role in encoding those data points with context, and associations, that make it possible for the prefrontal cortex to later recall the data points in the context of a coherent narrative. Damage to the functioning of the limbic system results in damage to the part of the brain that encodes data with the context and associations that help us tell the story of our memories.

Emotions The final function of the limbic system in relation to this subject is its role in emotion. You may have heard the phrase, 'Emotions have no logic.' This saying is not entirely accurate in terms of neuroscience, but it comes from the fact that emotions get traction not in the prefrontal cortex (logical centre of our brains) but in the limbic system. The experience of *having* an emotion has more to do with the limbic system, while the *awareness* of having that emotion comes from other brain systems. For the purposes of this project I mainly want to illustrate that sometimes people can have emotional experiences without any conscious awareness.

If we think back to how the brain deals with threat in general – it senses danger, often freezing briefly while scanning the environment, assessing the threat, and then reacting or responding to that threat. In particular, remember that the prefrontal cortex may not come into play until the threat has passed (depending how severe the threat is, and how long it lasts). Research shows a significant difference between a situation that is highly stressful and a situation that is both stressful and involves threat, danger and/or fear. The difference is that you can sometimes use stress reduction techniques to regain your ability to think clearly in a high stress situation, if it is not dangerous. Introduce threat or fear into that situation, however, and the dynamic changes dramatically. So,

what are we left with when our prefrontal cortex is impaired and we have lost much or all of our ability to plan and think logically? One answer is habit. When we find ourselves in a traumatic situation, we often respond to a threat without the benefit of our prefrontal cortex, so our brain reverts to behaviours that are habitual and ingrained, rather than those based on logical planning or thought. In addition, our brain may respond with a variety of survival reflexes, which are often characterized as the fight or flight or shutdown responses I outlined at the beginning of this chapter.

To summarise – the traumatised brain struggles to access social engagement behaviours (smiling, talking in a calm manner). It does not rely on logical thought to make decisions, it cannot integrate sensations and memories into a coherent narrative, and begins to respond to any perceived threat with a physical/hormonal stress response. This results in an automatic and habitual stress response which makes it virtually impossible to feel 'safe'. For those who experienced developmental trauma in childhood there may be no concept of what safety is or what it feels like.

6. Cultivating a Trauma Informed Approach to Teaching Yoga

Working with survivors of complex and developmental trauma as a specialist yoga teacher requires specialist training and supervision. It would be unethical to attempt to teach *Trauma Sensitive Yoga* therapeutically unless you had the appropriate training and supervision. There is a real risk of the trauma dynamic being played out and trauma being triggered during the therapy. People who are suffering from the most complex traumatic stress disorders are recommended to be in trauma informed talking therapy as well as yoga.

The opposite of trauma is safety. It is only from a fundamental sense of safety that any real improvement can be made in the lives of those who suffer from traumatic stress. Trauma informed yoga can help students experience a visceral (feel-able) sense of safety within their own bodies – inter-relational safety, and within their environment in relation to themselves amongst other people – intra-relational safety. It also provides opportunities to be present, to have agency (control) over one's own mind and to make choices with another person present without fear of reprisal.

Below are some suggestions for cultivating a trauma informed class;

Language/Speech:

- A slow, soothing voice will help create a calm atmosphere of healing and convey the priority of slowing down to experience each moment in time.
- Use phrases that assist students in moving away from self-judgement and towards an attitude of inquiry and interest in their own internal experiences.
- Trauma sensitive language tends be concrete and gently brings attention to visceral experiences (what's happening in the body). This is favoured over imagery and metaphor in because one of the aims would be for the person to experience what's happening in the body right now.
- It is advisable not to instruct students on *how* to feel - 'you feel calm'. Instead we could say 'you might like to notice what happens to your breath in this form.'
- The language of inquiry: use phrases like "notice", "feel", "experiment", "approach with interest", "feel" and promotes a mindful approach to yoga, in which there is no right or wrong, just experimentation and curiosity.
- Invitatory language: uses phrases like "as you're ready", "if you like", "when you feel ready" to promote choice and control.
- Repeat instructions: As in Yoga Nidra the voice is an anchor for students. Repetition creates predictability which creates safety.

The aim is to build a sense of empowerment within our students over their own bodies and their own experiences. As long as there is no serious safety issue we want to allow students to exert their own control over making decisions about what feels right to them. This again emphasises that students are in charge of their own experience and can interact with postures in their own way.

Teachers Qualities:

- Engaged, calm, welcoming, and approachable.
- Competent and at ease with the Yoga material but able to invite feedback, listen and make appropriate changes in relation to that feedback.
- Loose, modest clothing
- Do not move around the class and let students know if you are about to.
- Be present before and after the class to welcome students and listen to feedback.
- Do not be attached to any outcome from your students practice – aparigraphia in action! Students will pick up on whether you want them to do things a certain way so don't.
- Be fully present in your own mind and body during the class.

Class management:

- Start and end classes at the same time, on time and in the same way to create predictability (safety) and promote healthy boundaries. If you wish to add a new posture put it in the middle not at the end or beginning.
- Allow a set amount of time at the end for feedback and make the timing clear to students. "I will stay behind for 10 mins after class if anyone wishes to discuss anything with me"
- Do not call out students by name or single them out during the class.
- Observe students with care. Try not to gaze too long whilst students are experiencing postures, just enough to ensure physical safety or look out for cues of distress.
- Do not praise or criticise. We want to honour the subjective experience of the student and allow them space to have a difficult experience without trying to call it something else.

The aim is to cultivate a safe, stable, predictable environment in which our students can have their own experience, whether it's 'good' or not, and then support that as best we can. We do not need to create challenges or dictate what's 'good for trauma' etc.

Environment:

- Allow a good amount of space for each student so that they will never have to touch.
- Minimal external disturbances – noise, people coming in and out, exposed windows.
- If noises or disruptions occur – name them, as this helps students stay present.
- Keep the room clean, light and free of religious or ritualistic iconography, no photos of yoga postures in leotards/bikinis! This is to minimise 'triggers'.
- Keep the environment the same – lay the mats out in the same way and sit in the same place each time.
- Include students in decision making about the environment as much as possible. Recognise when you can't and name it.

Adjustments/Assists:

- No physical assists – reassure students prior to the class that there are no 'hands on adjustments' or advertise it that way.
- Only use visual assists to demonstrate low intensity postures or modifications to make postures more accessible. This type of visual assist emphasises that doing what is 'best' or 'right' is for each student to decide for themselves. Complex demonstrations can serve to create a desire to 'succeed' rather than to experience. They can also be intimidating.
- Verbal assists can be used to support, encourage and invite students to move, or not. They can be very valuable as they show the student they are noticed and cared for but their space and boundaries are respected.

Exercises:

- Exercises are focused on the goal of helping students develop a connection to their bodies and not on achieving perfect alignment or form (though that may come in time!)
- Teach at a good pace giving students time to know the postures well and feel into them but also don't give so much time that they start to 'space out'
- Bear in mind posture choice – strong hip openers/prone postures *may* be very challenging and should be staged or left out until you know your students well.

Shared Power Dynamics:

- Create ways in which students can share the decision-making power within the class. 'Should I open the windows or not?'
- Create opportunities for students to feed back (even if anonymously) what is and isn't working for them. And listen.
- Acknowledge power dynamics
- Do not use Sanskrit or terms students don't know. If you want to use Sanskrit make it a shared, learning experience.

7. Conclusion

The first few times I went to Yoga I found many aspects of the classes incredibly hard to tolerate, but experienced profound moments of connection unlike anything I had experienced before. Being 'in my body', breathing, feeling the freedom of movement and autonomy was exhilarating. I absolutely could NOT tolerate lying on my back and closing my eyes. I couldn't meditate without having uncontrollably disturbing thoughts or complete dissociation. I found watching the teacher's demos intimidating, and I jumped out of my skin whenever she came over to adjust me - yet she still did it every week. I felt incredibly aware that I wasn't always doing what she asked me to do and she didn't like it and eventually I stopped going.

At the time, I had not even begun to acknowledge my own trauma. No-one seemed to know I was traumatised, least of all me. I kept 'doing yoga' at home on my own terms. I went to many different classes and I struggled in all of them. A few years ago, I had a teacher who had trained at Mandala Yoga Ashram and she was different. The space she held felt so much safer and inclusive and it enabled me to gain a deeper awareness of what was happening inside of my mind and body. As I continued with my practice and started to train as a teacher myself I gained greater mastery over my own experiences and found that my tolerance was higher, especially in regards to relating to others. There are some things which may never feel 'right' for me and my body. The journey is ongoing.

More and more YTT courses seem to take a more trauma-informed approach when training teachers. Since I have been teaching using this approach, I have had very positive feedback from students and many express that they 'didn't know yoga could be like this'. Some of them have had a history of trauma that I know about, and others not.

I believe there is still a long battle ahead in terms of acknowledging the realities of trauma, and that yoga is a powerful tool in that fight – to help survivors heal, to help us all develop a greater mastery over our internal experiences and to create changes in our external world that may help lessen the incidence of trauma.

Bibliography

The Body Keeps The Score: Mind, Brain and Body in the Transformation of Trauma, Bessel Van der Kolk, Penguin 2014

Trauma and Recovery: The Aftermath of Violence – from Domestic Abuse to Political Terror, Judith Herman. M.D., Basic Books, 1992

In an Unspoken Voice: How the Body Heals from Trauma and Restores Goodness, Peter Levine, North Atlantic Books, 2010

The Diagnostic & Statistical Manual of Mental Disorders (*DSM-IV*) The American Psychiatric Association, 2010

Overcoming Trauma Through Yoga, David Emerson and Elizabeth Hopper, North Atlantic Books, 2010

http://traumadissociation.com/complexptsd#icd11 (May 31, 2016.)

http://commonhealth.legacy.wbur.org/2010/12/harvard-brigham-medical-study-yoga-veterans-ptsd

http://www.evawintl.org/Library/DocumentLibraryHandler.ashx?id=842
Understanding the Neurobiology of Trauma and Implications for Interviewing Victims, Christopher Wilson, Psy.D. Kimberly A. Lonsway, Ph.D. Sergeant Joanne Archambault