**Brief outline of Polyvagal Theory – Supplemental notes to Powerpoint Slides – Day 2 – An Introduction to Working with Trauma**

Earlier trauma theory suggested the ANS was an on-off switch and the problem was trauma survivors had an over-activation of the SNS resulting in too much fight/flight or not enough activation leading to freeze. On its own the PSNS was originally seen as being associated with the good effects of relaxation and digestion. So it was felt trauma survivors needed more of this rest and digest PNS response to help counteract the effect of the SNS.

However Stephen Porges’ Polyvagal Theory really challenged that. He said there are **three neural circuits for regulation function** – 1 is the circuit for Mobilisation (found in the SNS), 1 is for immobilisation (found in the PSNS fed by the dorsal vagus part of the vagal nerve) and the third circuit is the most recently evolved system called the Ventral Vagal system (also found in the PSNS and fed by the vegus nerve) which is our social connection system which helps us engage, communicate and connect. This is hugely important in our recovery from trauma.

There are two presentations of PSNS activation which are controlled by the vagas nerve (in this case it is the dorsal vagal part of the vegus nerve) – both cause immobilisation but of very different types. When we are feeling safe one circuit of the PSNS kicks in and does indeed have that rest and digest and rejuvenating response previously identified in trauma theory, **it immobilises us or slows us but down in a very positive way.**

However it also has a second circuit - an older circuit (also fed by the dorsal vagal part of the vagus nerve) which kicks in when threat is felt. **This presentation is a DEFENSIVE response resulting in full immobilisation into collapse** shown through disassociation, depression, hopelessness, helplessness and numbness which it appears survivors of prolonged trauma appear to show more of.

When we feel threatened, we will typically will move through a sequence of three autonomic nervous system pathways; each aimed for survival. When possible, we will first try to engage our “social nervous system” to re-establish a sense of connection and safety. If that doesn’t work the person will drop into the SNS which is a movement/mobilisation response which is driven by fight or flight – feelings of fear or anger. If that doesn’t work and the threat is still imminent the immobilisation part of the PSNS may kick in and the person may freeze or collapse - it’s a biologically driven hope to survive by feigning death.

We regulate our NS through our earliest attachment relationships and if a parent can’t tolerate difficult emotions, reacts strongly, is very angry, fearful or unpredictable the child feels fear and may respond with fight, flight responses due to high levels of activation in the sympathetic nervous system or they can become disconnected, excessively compliant or numb due to parasympathetic activation. Effectively these repeated fearful experiences become conditioned in the nervous system.

If my pre-conditioned state is a sympathetic response then I may get very hyperaroused at a trauma trigger – I am more likely to go into fight/flight because my system has primed me for mobilisation. And the opposite is true if my pre-conditioned state is a collapse response - my behaviour is more likely to move towards feeling feel unsafe, utterly numb, dumbfounded or I may even dissociate because I am immobilised.