

# THREE ORGANIZING PRINCIPLES OF THE AUTONOMIC NERVOUS SYSTEM

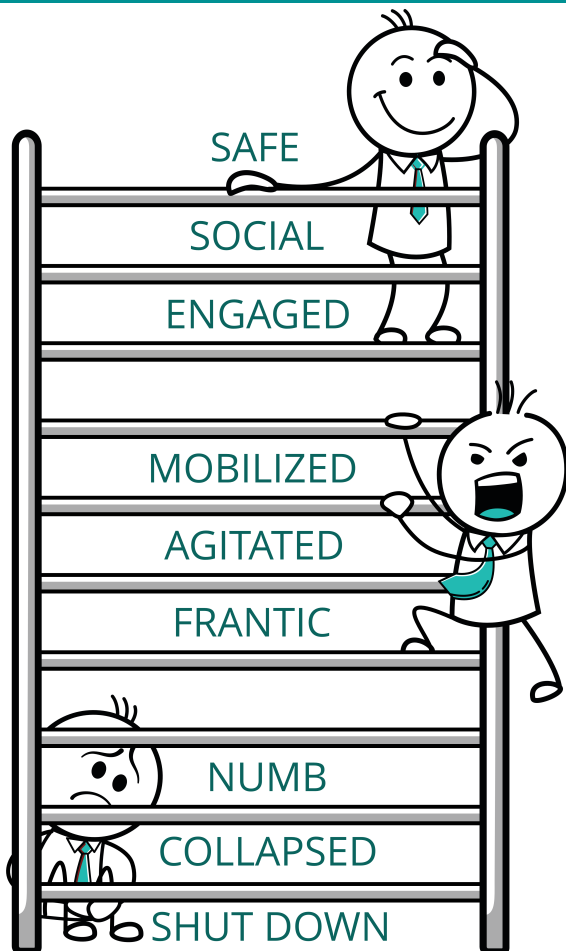
## ACCORDING TO POLYVAGAL THEORY

Your autonomic nervous system (ANS) always monitors your internal and external environment as you move through your day. If all goes well, you cruise around mobilizing your resources and then slowing down and recovering, as necessary, to meet the challenges of the day. But if things start to spiral out of control, you might find yourself descending into a place of numbness and exhaustion. According to Polyvagal Theory, as presented by Deb Dana in her book *The Polyvagal Theory in Therapy*, there are three main organizing principles that guide this daily activity:

The first organizing principle of the ANS is **Hierarchy**.

"The autonomic nervous system responds to sensations in the body and signals from the environment through three pathways of response. These pathways *work in a specified order and respond to challenges in predictable ways.*"(1) You can envision the activity of your ANS as a kind of ladder of physiological and resulting emotional states. You move and down that ladder all day long. Any stirring of unease triggers the sense of danger and makes you move down the ladder.

## AUTONOMIC NERVOUS SYSTEM AS A LADDER



### VENTRAL VAGAL ACTIVATION

*Attitude:* "I am feeling at ease and can manage whatever comes my way. I feel empowered and connected. I see the "big picture" and connect to the world and people in it."

### SYMPATHETIC ACTIVATION

*Attitude:* "I am getting overwhelmed and having hard time keeping up. I feel anxious and irritated. The world seems dangerous, chaotic and unfriendly."

### DORSAL VAGAL ACTIVATION

*Attitude:* "I am buried under a huge load and I cannot get out. I am alone in my despair. The world is empty, dead and dark."

If you find yourself at the bottom of the ladder, it will take some action and effort to climb back up.

## The second organizing principle of the ANS is Neuroception.

Your ANS constantly scans the world around you “for cues of safety, danger and life-threat *without involving the thinking parts of the brain.*”(1) Neuroception precedes perception and it is assembled from many cues. “Information from the viscera (heart, lungs, intestines) and cues from the place we are in and from the people and things around us are all important components of neuroception. “ (1) Long before you become consciously aware that something is not quite right, your ANS has already detected it and already initiated a physiological response to protect you from harm. By the time you consciously perceive danger, your body has already reacted to it, and then your mind tunes in and tries to figure out why you feel the way you feel. “The mind narrates what the nervous system knows. Story follows state.”(1) Whatever story you tell yourself about why you feel a certain way, you are trying to explain your physiological response after it had already happened. Sometimes you are correct in identifying what had happened, sometimes you are not. In terms of our psychological well-being, “perception is more important than reality”, because this is what guides our emotional states and our actions. This happens for the most serious events (EX: almost getting run over by a car) and the most mundane ones (Ex: your child giving you attitude).

## The third organizing principle is Co-regulation.

“From the first moments of life, when we instinctively turn toward our mother’s face, to the end of life, we have an enduring need to be in attuned relationships with others... Co-regulation creates a physiological platform of safety that supports a psychological story of security that then leads to social engagement. The autonomic nervous systems of two individuals find sanctuary in a co-created experience of connection.”(1) In other words, it is necessary for us as humans to have close reciprocal relationships with other human beings. We rely on those relationships for physiological and resulting emotional regulation. We seek co-regulation not just from friends and family members, but also from our therapists, yoga teachers, checkout clerks and all people in general. You know how a friendly smile on a bad day can make you feel a little better. We look for friendly signs from strangers to decide whether or not to approach and engage, but we usually do not feel particularly hurt if the signal we get is “Do not engage”. However, we *expect* emotional reciprocity from our closest relationships and feel very hurt if we do not get it. When our most important people betray our expectations, and do not engage in heartfelt listening and responding, it inhibits our ability to effectively regulate our nervous systems. This is wired into our physiology.

“A working principle of the autonomic nervous system is “every response is an action in service of survival”. No matter how incongruous an action may look from the outside, from an autonomic perspective it is always an adaptive survival response. The autonomic nervous system doesn’t make a judgement about good or bad; it simply acts to manage risk and seek safety.” (1)

### **Resource**

1. Deb Dana “The Polyvagal Theory in Therapy”