Polyvagal Theory In Action
Harnessing the Healing Potential of the Autonomic Nervous System

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Polyvagal Theory

The science of connection…

The science of feeling safe enough to fall in love with life and take the risks of living…

Trauma is a chronic disruption of connectedness.

Stephen Porges

The Autonomic Impact of Trauma

Trauma sidetracks the development of autonomic regulation.

Traumatic experiences interrupt opportunities to exercise the neural circuitry of connection.

Trauma replaces patterns of connection with patterns of protection.

Adaptive survival responses replace social engagement.

Co-regulation is unavailable/dangerous.

Self-regulation is ineffective/inadequate.

A flexible autonomic nervous system…

Reduced inflammation, control of immune response

Lower risk of stroke, heart disease, diabetes

Emotional regulation

Increased capacity for friendship and connection

Resilience

Compassion

A rigid autonomic nervous system…

Impaired immune functioning, Inflammatory diseases

Digestive problems

Respiratory problems

Chronic fatigue

Depression

Anxiety

Social isolation/loneliness

A Polyvagal Roadmap

The drive to survive ⟷ The longing to connect

Regulated in relationships ⟷ Shaped by experience

Sending and searching for signs of warning
and signals of welcome

The Three Organizing Principles of Polyvagal Theory

1. Neuroception - detection without awareness
2. Hierarchy - three predictable pathways of response
   - Ventral Vagal
   - Sympathetic Nervous System
   - Dorsal Vagal
3. Co-regulation - a biological imperative

Neuroception
Detection without Awareness

This intent listening happens below the thinking parts of our brain and away from our conscious control.

The autonomic nervous system responds to cues of safety, danger, and life-threat from:

- inside our bodies
- outside in environment around us
- in the relationships between us and others

Being safer does not necessarily make us feel safer.

Many of our social systems are focused on features of danger and yet we have a profound sensitivity to features of safety and exposure to these can foster resilience. (Porges)

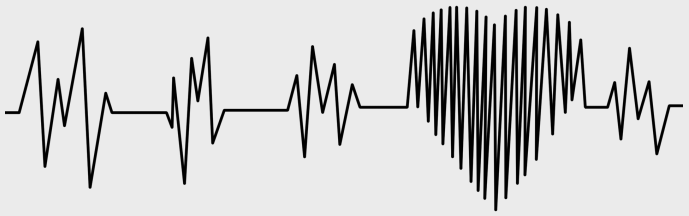
It is not just the reduction or resolution of cues of danger but also the active experiencing of cues of safety that our autonomic nervous system needs.

We need to attend to the BOTH/AND of danger and safety.
A regulated system depends on both!

The clinical question: In this moment do you see me (does your neuroception sense me) as a restorative resource or as a threat?

What are the cues of safety? Cues of danger?

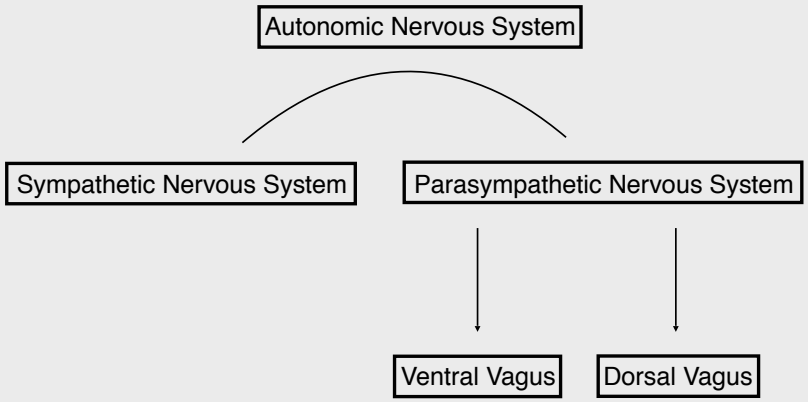
At this moment in and around your body?
At this moment in your environment?
At this moment in your connection with others?



A healing environment is a safe environment.

Create a healing environment by listening to your ANS.

Two Branches – Three Pathways



In Service of Survival

parasympathetic ***dorsal vagal***	**sympathetic**	**parasympathetic** ***ventral vagal***
500 million	**400 million**	**200 million**
immobilized disconnected	mobilized fight and flight	safe and social connected

Hierarchy of Response

Parasympathetic Nervous System
Ventral Vagus

system of safety and connection

health, growth, restoration
individual and interactive regulation
social engagement

Sympathetic Nervous System

system of mobilization

adaptive protection through action
aggression or active escape

Parasympathetic Nervous System
Dorsal Vagus

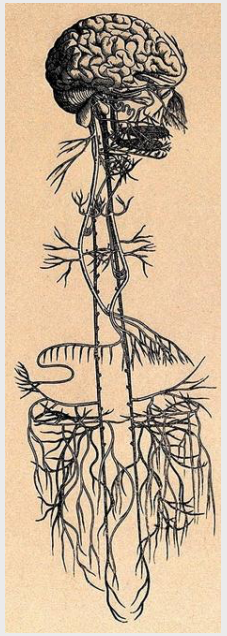
system of immobilization

adaptive protection through "disappearing"
conservation of energy and resources

The Parasympathetic Branch
The Vagus Nerve
the "wanderer"

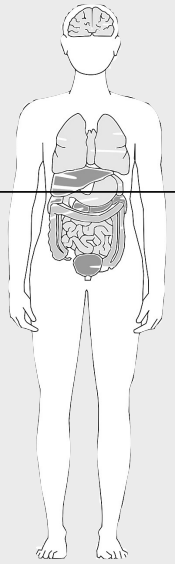
From the brain stem at the base of the head (medulla), the vagus travels down through the lungs, heart, diaphragm, and stomach… and upward connecting with nerves in the neck, throat, eyes, and ears…

…to form the "face-heart" connection



Wellcome Library London

safe and social
calm and connected

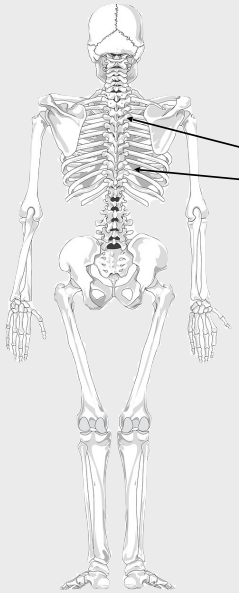


Ventral Vagus

diaphragm

Dorsal Vagus

out of awareness
out of connection
into collapse



The Sympathetic Nervous System

Middle part of the spinal cord
(thoracic and lumbar)

Fight and Flight

Emergent Properties

From a state of protection, (mobilization or disconnection) survival is the only goal. Adaptive survival responses close the system to connection and to change.

From a state of connection, (social engagement) health, growth, and restoration are possible.

What is your ventral vagal experience?

The world is…
I am…

Where does mobilization take you?

The world is…
I am…

How does dorsal vagal disconnection happen for you?

The world is…
I am…

The Personal Profile Map
The Polyvagal Theory in Therapy: Engaging the Rhythm of Regulation (Norton, 2018)

Earliest Evolutionary Circuit - Dorsal Vagal

Scared to death

- Shut down, collapsed
- Dissociation (foggy - not here)
- Disconnection
- Numb
- Breath almost imperceptible
- Decreased heart rate
- Despair
- Escape into not knowing, not feeling, almost a sense of not being
- Safety and hope feel unreachable

The path of last resort

The Sympathetic Response

Protection Through Movement

- Sense of unease — impending danger
- Fight and flight
- Misread cues — neutral is experienced as dangerous
- Scan the environment looking for danger
- Narrowed focus
- Listen for sounds of danger and don't hear the sounds of friendly voices
- Sense of separation — cut off from others

Sacrifice social engagement for survival

Newest Evolutionary Circuit - Ventral Vagal

Safely Embodied

- Co-regulation, self-regulation
- Healthy homeostasis
- Regulated heart rate, full, easy breath
- Take in the faces of friends.
- Tune into conversations and tune out distracting noises
- Attention is toward connection (self and others)
- Acknowledge distress and explore options
- Reach out for and offer support

Resourced and resourceful

The Essential Notice and Name Skill

Engage with a state not just be engaged by it…

1. Notice where you are on the autonomic hierarchy.
2. Name the state.
3. Turn toward your experience.
4. Bring curiosity.
5. Listen for a moment to the story of your state.

The Vagal Brake: A System of Regulation through Relaxation and Re-engagement

The vagal brake:

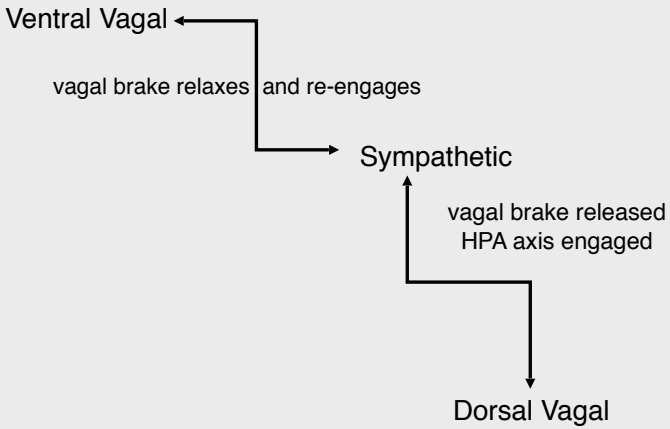
allows us to rapidly engage and disengage

to quickly energize and calm

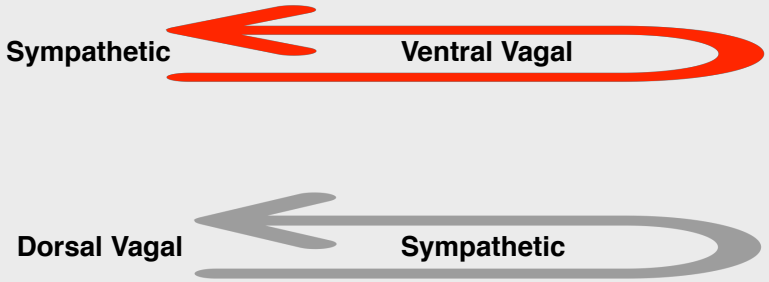
brings a sense of ease to transitions

When the opportunity to exercise the vagal brake is a missing experience, the ability to move between states is impacted.

Hierarchy in Action



Autonomic Loops



Without a Ventral Vagal Anchor

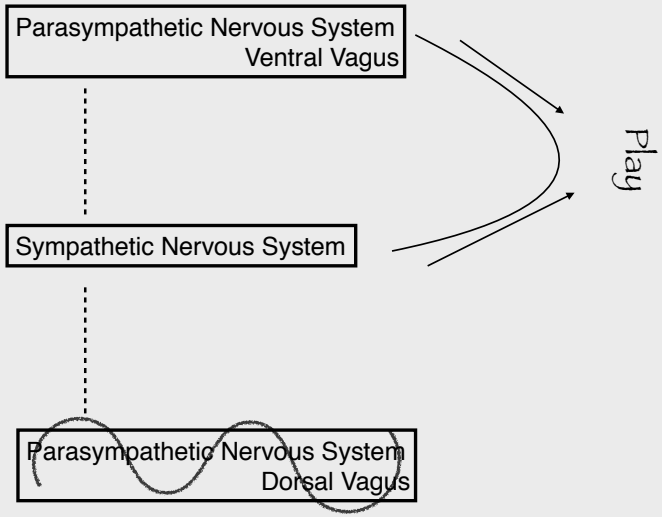
An autonomic system that is missing the regulating influence of the ventral vagus…

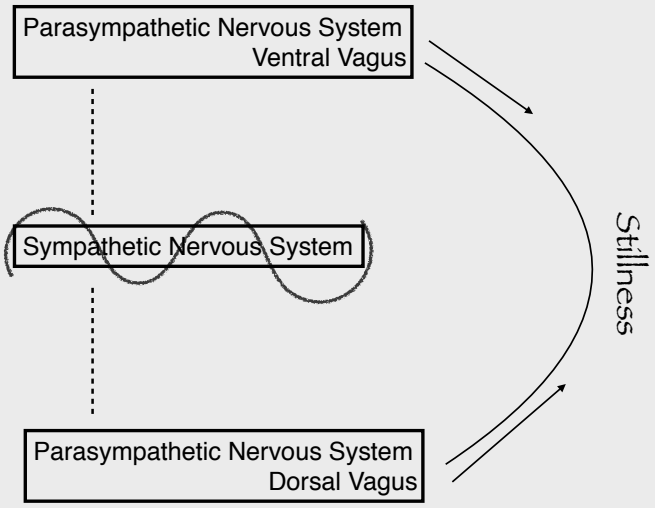
brings health challenges
creates distress in relationships
shapes a daily experience of suffering

Finding Ventral Vagal Anchors

1. Identify the predictable *who, what, where, and when* of your ventral vagal system.
2. Create a practice of turning to these when looking for a resource.
3. Use them to deepen a ventral vagal state.

Blended States





Savoring Skills

Savor the State → Tone the System

Savor the Experience → Shape the System

Wired for Connection

We come into the world wired to connect.

We are wired to want connection.

We are waiting for connection.

Co-Regulation

Connection is a biological imperative.

Loneliness and perceived loneliness are physiological and psychological risk factors.

Social support does not always correspond with social connection.

Through reciprocal regulation of autonomic states we feel safe enough to move into connection and create trusting relationships.

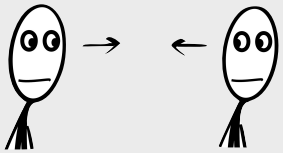
The autonomic nervous system is shaped and regulated through interactions with others.

The autonomic nervous system *SENDS and SEARCHES FOR* cues of safety or danger

The cues sent from one system to another either:

co-regulate or increase reactivity

reinforce habitual response patterns or create new possibilities



"…without the experience of an organizing other…the nervous system is stunned." (Sebern Fisher)

In our work, we are responsible for being the regulated and regulating other. If we are dysregulated, there will be a rupture in attunement and our client's autonomic response will be an automatic move out of connection into protection.

What message is your autonomic nervous system sending?

Co-regulation is a necessary prerequisite for self-regulation. If we miss co-regulating opportunities in childhood, we feel the loss in our adult relationships.

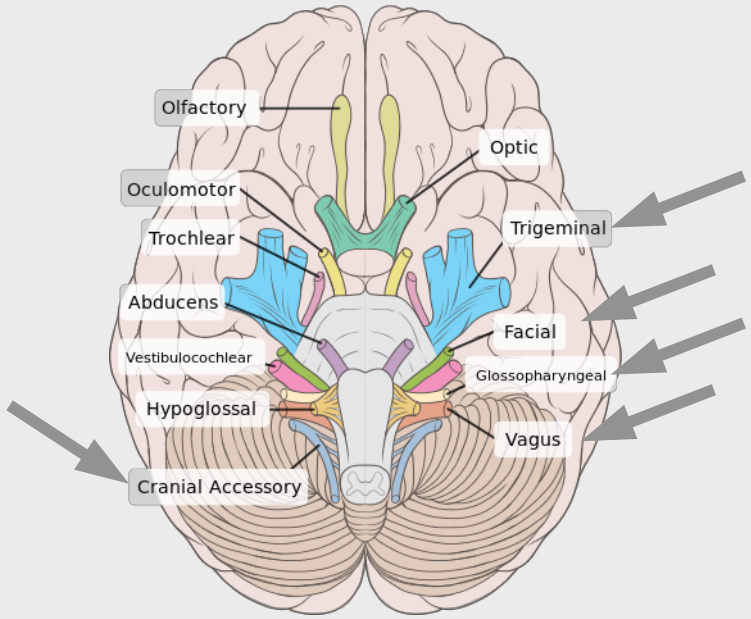
Our clients' autonomic nervous systems have often been shaped away from connection toward protection.

The Social Engagement System

Formed through the evolutionary integration of Cranial Nerves V (trigeminal),VII (facial), IX (glossopharyngeal), X (vagus), XI (spinal accessory)

Controls:

- Facial expression (emotional expression)
- Eyelids (social gaze)
- Middle ear (hear human voice)
- Mastication (ingestion, sucking)
- Larynx, pharynx (vocalizing, swallowing, breathing)
- Head turn and tilt (social gesture, orienting)



The Social Engagement System

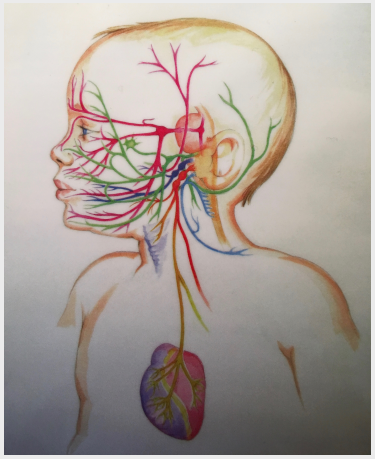
Five cranial nerves joined in the search for connection through our…

eyes

ears

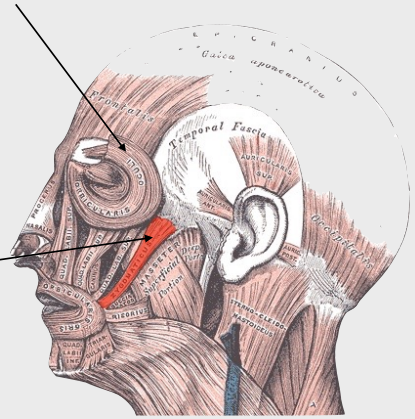
voice

face and head movements



Moving in and out of eye contact is a regulating action.

We use the eyes (orbicularis oculi) to sense safety and signal safety.



"…the zygomatic major can be willed into action, but only the sweet emotions of the soul force the orbicularis oculi to contract." Duchenne

Gray's Anatomy of the Human Body 1918

Experimenting with the Power of Eyes

Stare (strong, focused, a hint of a glare, you might feel your eyes moving outward from their sockets)

Look (neutral, less strongly focused, you might feel you eyes settling back into their sockets)

Gaze (soft, warm, you can feel your eyes deeply resting in their sockets)

Both as a sender and a receiver:

Track your ANS response to each.

What is your neuroception?

The Power of Prosody

- The music of the voice
- Patterns of rhythm and sound
- Frequency
- Duration
- Intensity
- Reveals the underlying intent

Intonation before Information

Connection through Vocal Bursts

When you don't know what to say…use a vocal burst.

"non-language sounds" we use to communicate
ahhh, mmmm, ohhhh, humph
understood across cultures
understood across species
understood with a high degree of accuracy

What is the autonomic message you are sending?
What does your client's neuroception tell them?

Reciprocity - Rupture - Repair

Neuroception is at work beneath awareness in every moment shifting states in adaptive responses.

Small ruptures are common experiences.

Unless explicitly "noticed and named" they will create moments of misattunement.

Use the power of the Social Engagement System to bring safety and connection.

Create a habit of awareness and a practice of repair.

Breath

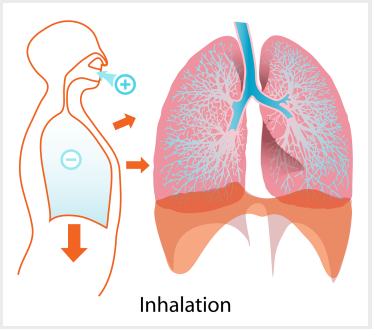
Breath is a portal to shifting autonomic state

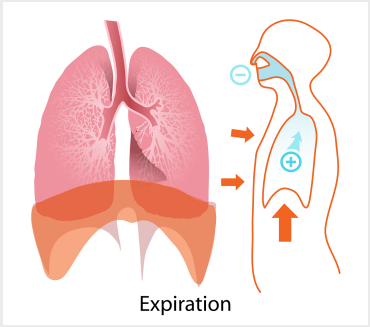
"There is a way of breathing
that's a shame and a suffocation
and there's another way of expiring,
a love breath, that lets you open infinitely."
Rumi

Engaging the Breath

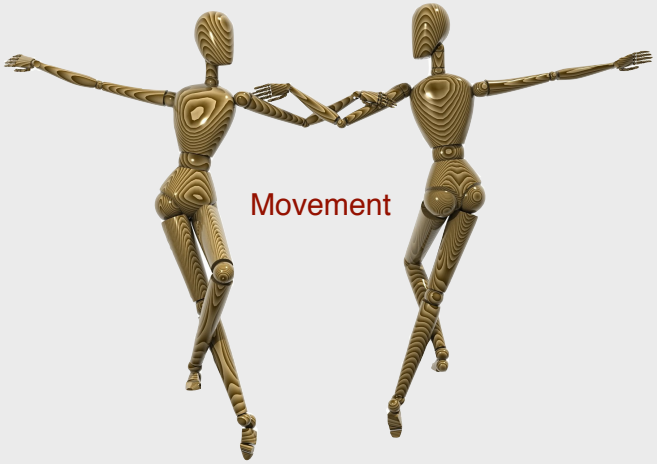
I will breathe after my own fashion. Thoreau

- "R's" of breathing
  - rate
  - regularity
  - ratio
  - reminder
  - remember
- The science of sighing





Dish ⟷ Dome



Exploring the Edges of Safety

- Flexors and extensors
- Express a state in the form of motion
- Sequence through the hierarchy
- Remind the ANS it has an inherent knowing about how to transition
- Mirroring movement
- Playful movements
- Moving into stillness

Playing with Proximity

Experiment with distance and placement

Track neuroception with each shift

Options in the office

Together, in this moment, in this place, doing this work, where do our nervous systems want us to be?

The First Guiding Question

What does my nervous system need in this moment?

The Next Guiding Question

What does my client's nervous system need in this moment?

Reshaping practices remind the autonomic nervous system that it has an inherent knowing about how to flexibly navigate the autonomic hierarchy.

A flexible system is a resilient system…

…and a resilient system carries stories of possibility.

Benevolence

The active, ongoing, use of ventral vagal energy in service of healing…