Polyvagal Theory:
A Brain-Body Science of Connection, Trust, and Safety

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No Health Without Mental Health:

- Problem
  - Individuals with major mental illness die 14 to 32 years earlier than the general population
  - The severely mentally ill die of chronic health disorders such as cancer, heart disease, stroke, pulmonary disease, and diabetes
- Solution
  - Understand the common mechanisms involved in mental and physical health
  - Apply interventions that function as ‘neural exercises’ rehabilitating and promoting resilience

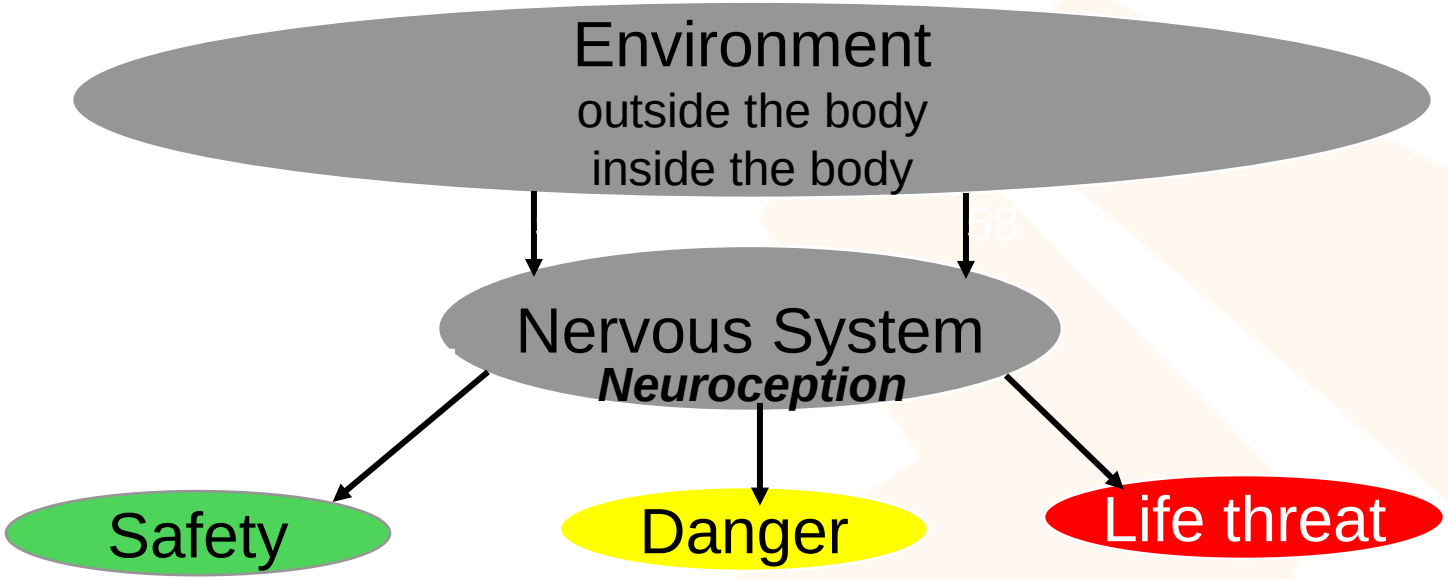
Do Mental and Physical Diseases Have Common Mechanisms?

- Most chronic diseases are autonomic or involve the autonomic nervous system (ANS).
- Most mental health disorders involve a disruption to the neural regulation of the ANS.

Do Mental and Physical Diseases Have Common Portals of Treatment?

- Portals of treatment
  - Neural exercises reconnect the body with the brain.
  - Neural exercises connect individuals through their social engagement systems
- Neural exercises
  - Yoga
  - Mindfulness
  - Breathing exercises
  - Singing/chanting
  - Listening
  - Playing
  - Team sports

The Quest for Safety:
Emergent Properties of Physiological State



Spontaneously engages others	Defensive strategies	Defensive strategies
eye contact, facial expression, prosody	fight/flight behaviors (mobilization)	death feigning/shutdown (immobilization)
supports visceral homeostasis		

Trauma Triggers Dissolution:
Evolution in Reverse

Structure	Function	VVC	SNS	DVC
Head	Communication	+		
Limbs	Mobilization		+	
Viscera	Immobilization			+

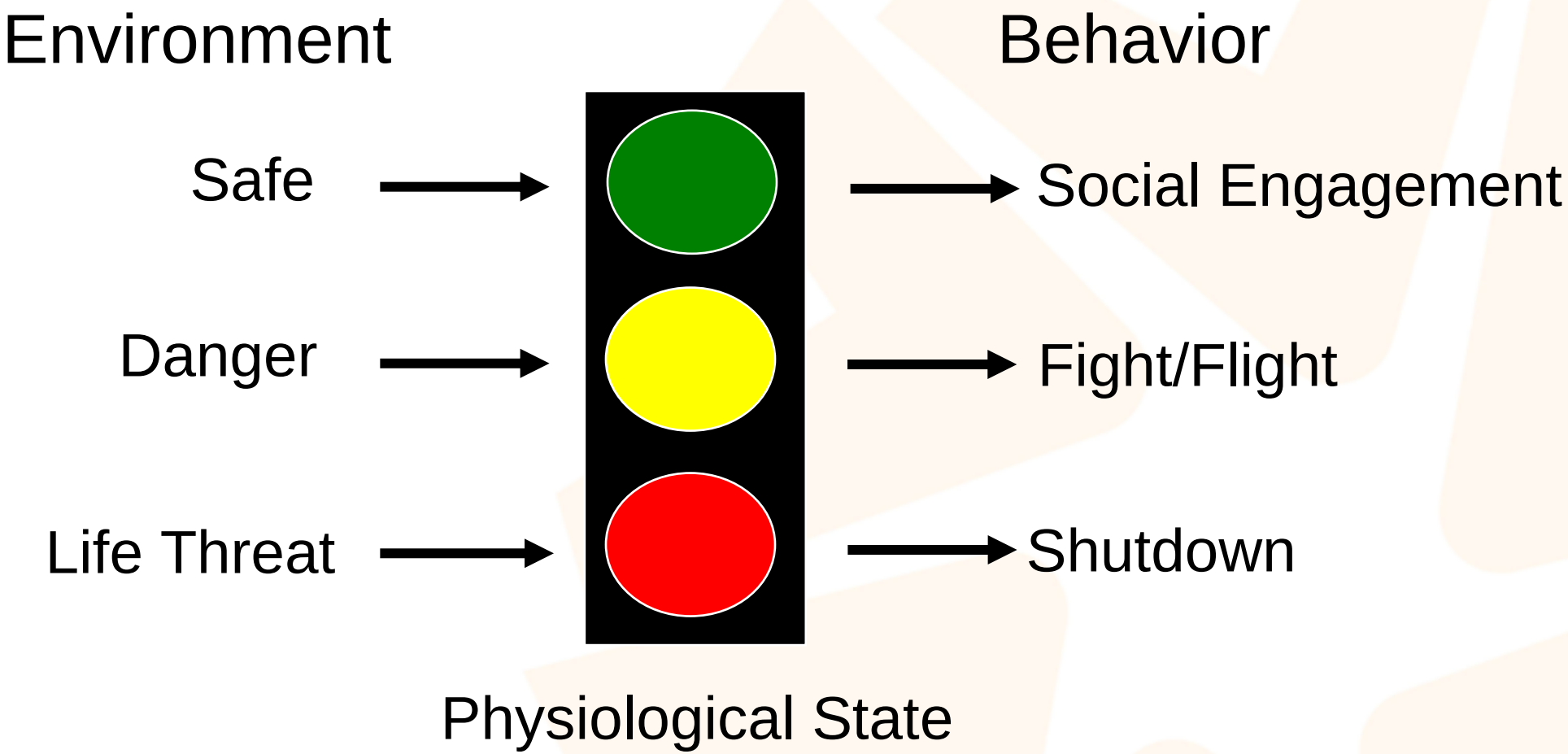
Neuroception

Unconscious Evaluation and Detection of Risk

- The nervous system's detection of risk in others – *without awareness.*
- Can dampen defensive systems and facilitate social behavior (safety).
- Can promote defensive strategies of mobilization (fight/flight) or immobilization (shutdown, dissociation).

Neuroception
Our Personal TSA Agent

Neuroception

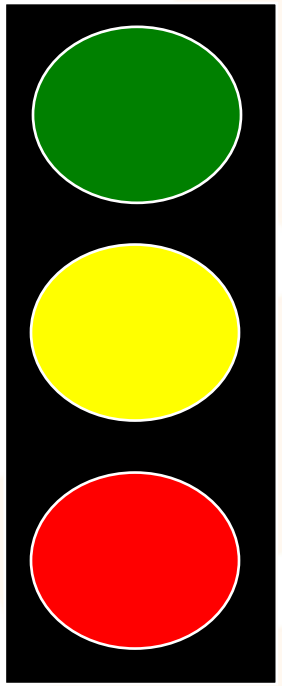


Neuroception

Environment

Behavior

Safe



Social Engagement

Play

Intimacy

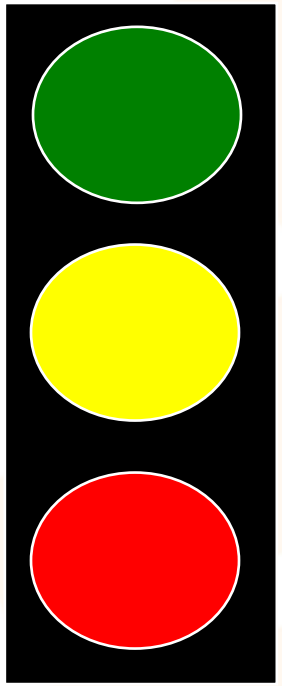
Physiological State

Three Circuits, Five States

Social Communication

Circuit

Behavior

VVC →  → Social Engagement

Physiological State

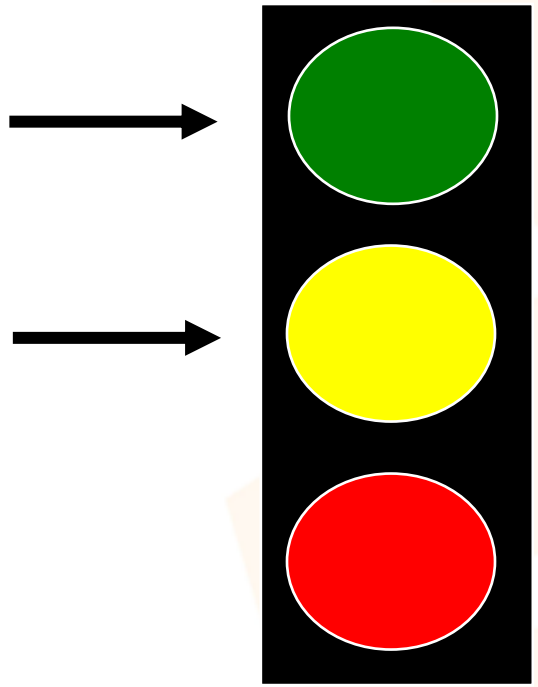
Play/Dance

Circuit

Behavior

VVC

SNS



Social Engagement

Mobilization

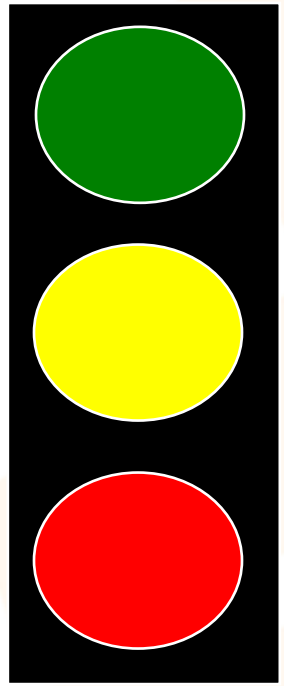
Physiological State

Fight/Flight

Circuit

Behavior

SNS



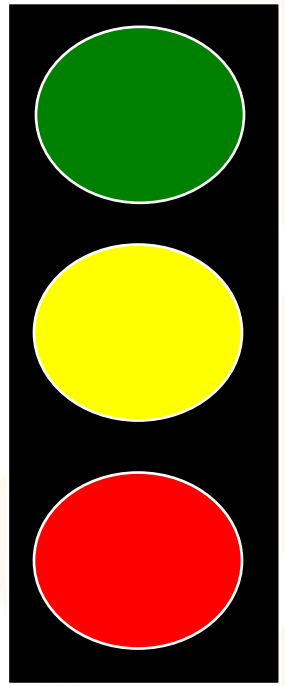
Mobilization

Physiological State

Intimacy

Circuit

Behavior



Social Engagement

DVC

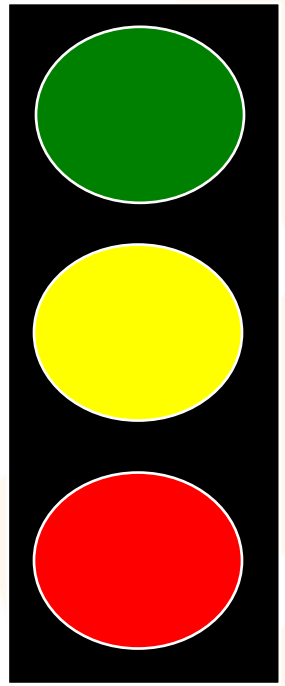
Intimacy

Physiological State

Shutdown/Dissociation

Circuit

Behavior



DVC → → Immobilization

Physiological State

Immobilization with Fear

- Immobilization as a defense strategy is a missing concept in psychology and psychiatry, although forced immobilization (restraint) is a frequent feature of trauma and chronic abuse
- Not all stressors result in “fight/flight”
- Not all vagal (parasympathetic) influences are restorative

Apnea and Bradycardia

Immobilization with Fear

Immobilization with Fear

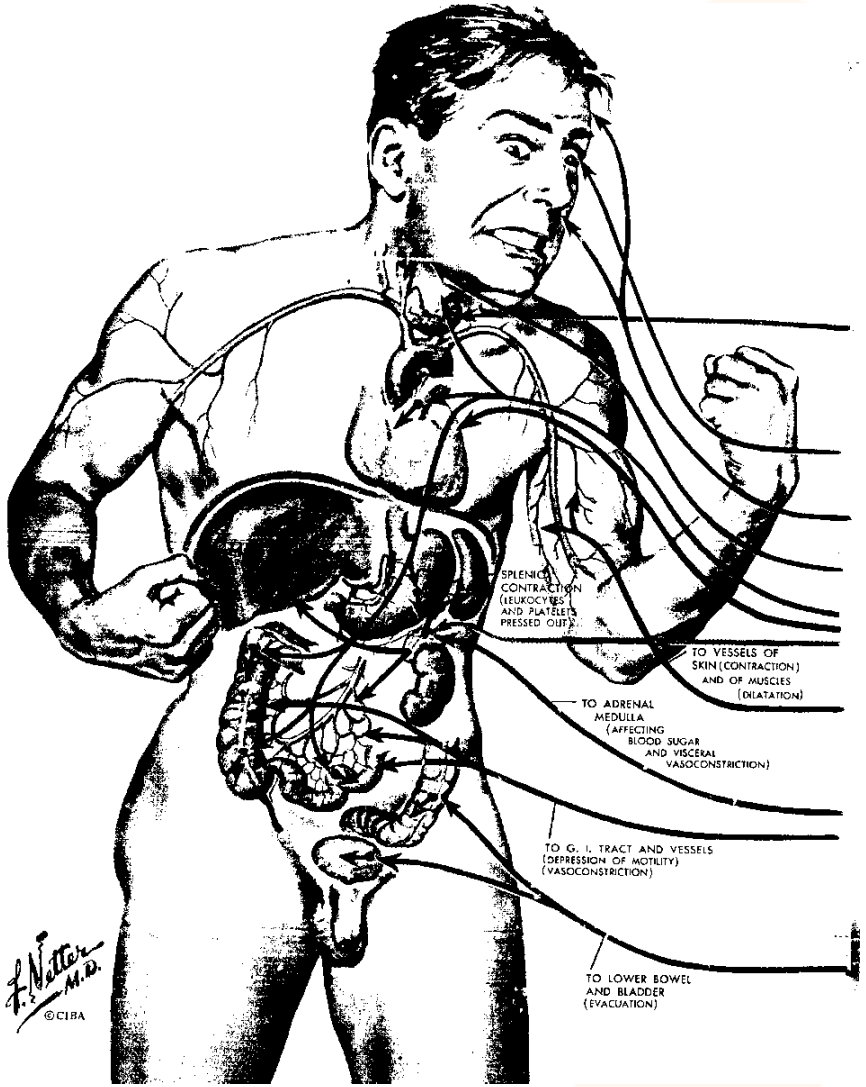
… I read about the body immobilizing instead of fighting or fleeing. I am now 69 and when I was 18 I was nearly strangled and then sexually assaulted. Years later I was speaking with my daughter about this incident and she was disbelieving that I did what I did and that I froze. I felt so ashamed and judged. After reading your theory I cannot tell you how excited and vindicated I feel.. I am crying right now.

personal communication

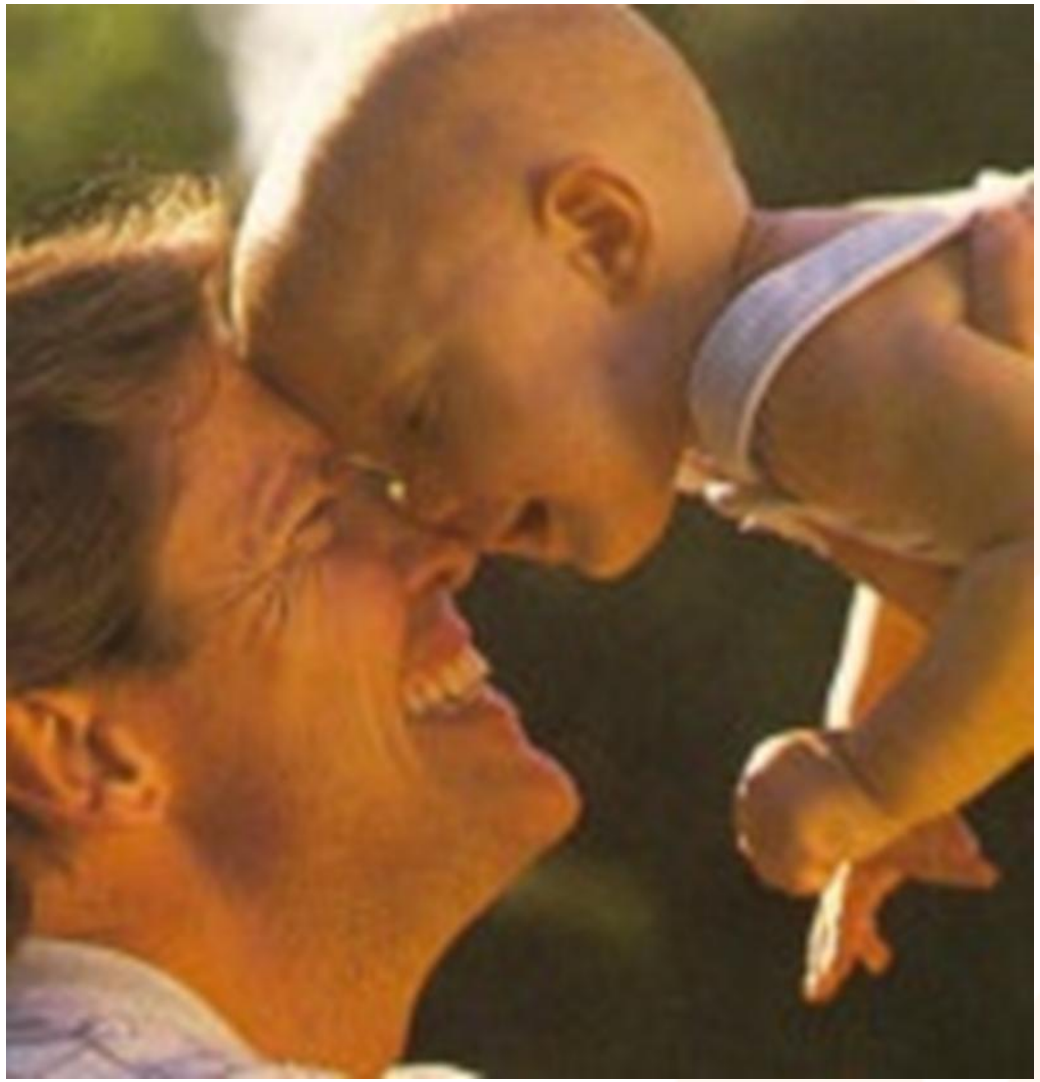
Co-morbidities: Viberzi Commercial for IBS

Mobilization with Fear

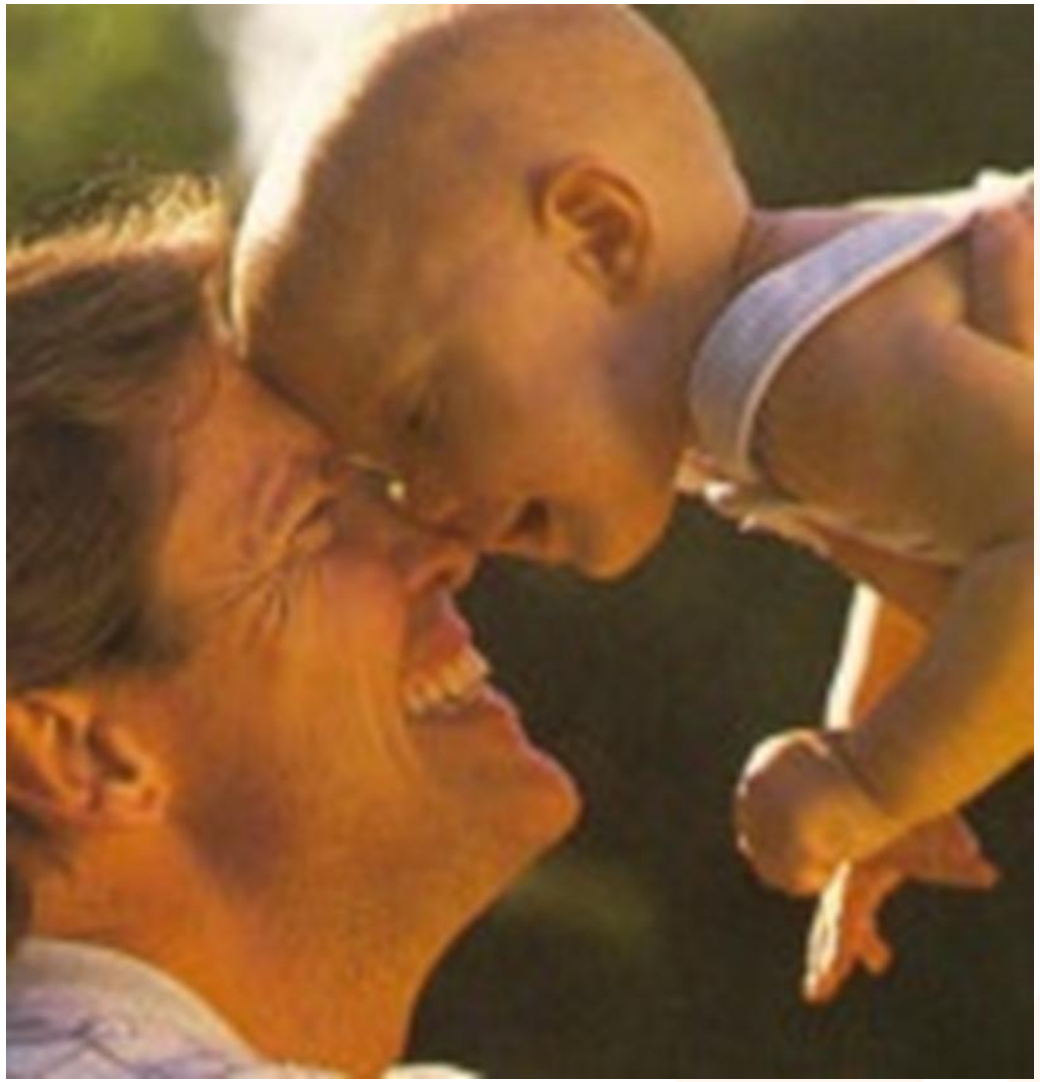
Mobilization with Fear



Social Engagement



Through Evolution the Social Engagement System Became Integrated with the Body



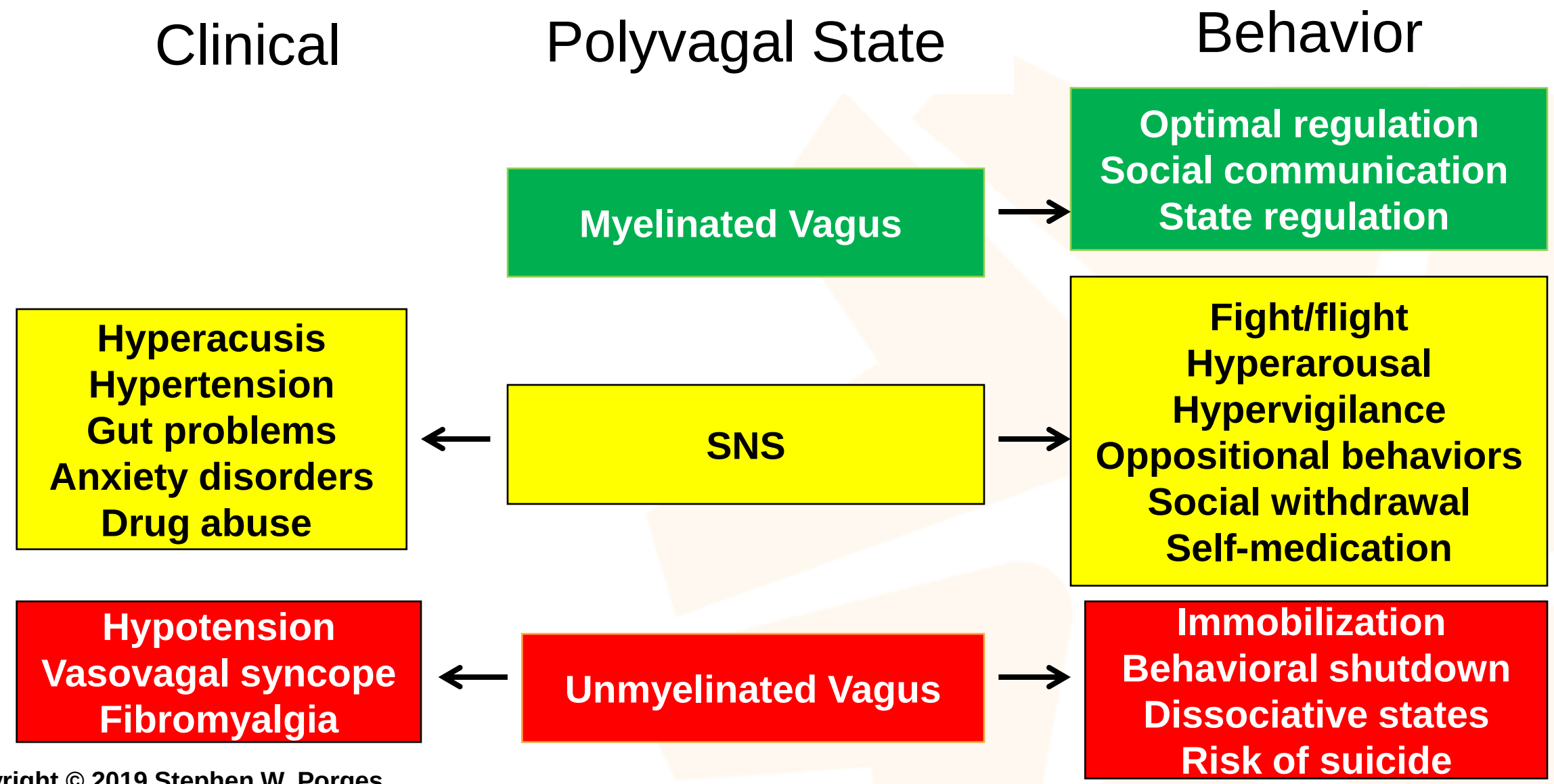
Deconstructing the Social Engagement System

Social Engagement System

Observable Deficits in Several Psychopathologies

- Lack of prosody
- Poor eye contact and difficulties in social communication
- Blunted facial expressivity
- Difficulties in behavioral state regulation (hypervigilant, anxious, distractible, impulsive, tantrums, hypoarousal)
- Compromised vagal regulation (e.g., state regulation, digestion)
- Difficulties in listening, following verbal commands, speech-language delays
- Sound sensitivities
- Oral motor defensiveness (e.g., ingestive behaviors)

New Model



No Health Without Mental Health:
Polyvagal Informed Brain-Body Perspective

- The same neural circuits that optimize “physiological” health, optimize social behavior and “mental” health.
- The same neural circuits that optimize behavioral defense, disrupt the circuits that maintain mental and physiological health.
- Health is based on “regulation” of physiological states and humans require social interactions to “co-regulate” physiology.
- The autonomic nervous system is the bidirectional connection between the brain and visceral organs.
- This perspective leads to the use of brain-body neural exercises to optimize mental and physical health.

Polyvagal Syndrome: Symptoms

- Lack of prosody
- Poor face⇔face gaze
- Flat affect (facial expressivity)
- Sound hypersensitivities
- Inappropriate posture during social engagement
- Poor mood and affect
- Atypical state regulation
- Low threshold to become fight/flight
- Low threshold to be dissociative
- Lower gut problems
- Fibromyalgia

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What if Descartes Where Trauma-Informed

- Je pense, donc je suis (I think, therefore I am).
- Je ***me*** sens, donc je suis (I feel, therefore I am).

The Look of Love:
Inferring Polyvagal State from the Face

The look of love is in your eyes

The look your smile can't disguise

The look of love is saying so much more

Than just the words could ever say

And what my heart has heard

well it takes my breath away

I can hardly wait to hold you

Feel my arms around you

Burt Bacharach & Hal David

The Look of Love:
Inferring Polyvagal State from the Face

The look of love is in your eyes

gaze- orbicularis oculi

The look your smile can't disguise

facial muscles

The look of love is saying so much more

facial, neck, lip muscles

Than just the words could ever say

prosody

Burt Bacharach & Hal David

The Look of Love:
Inferring Polyvagal State from the Face

And what my heart has heard

vagal regulation of the heart, middle ear muscles, face-heart connection

well it takes my breath away

vagal regulation of the bronchi

I can hardly wait to hold you

Feel my arms around you

intimacy (immobilization without fear and not restraint)

Burt Bacharach & Hal David

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Traumatic Stress Research Consortium

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