

Play-Social Connection: Neural Exercise to Build Autonomic State Resilience

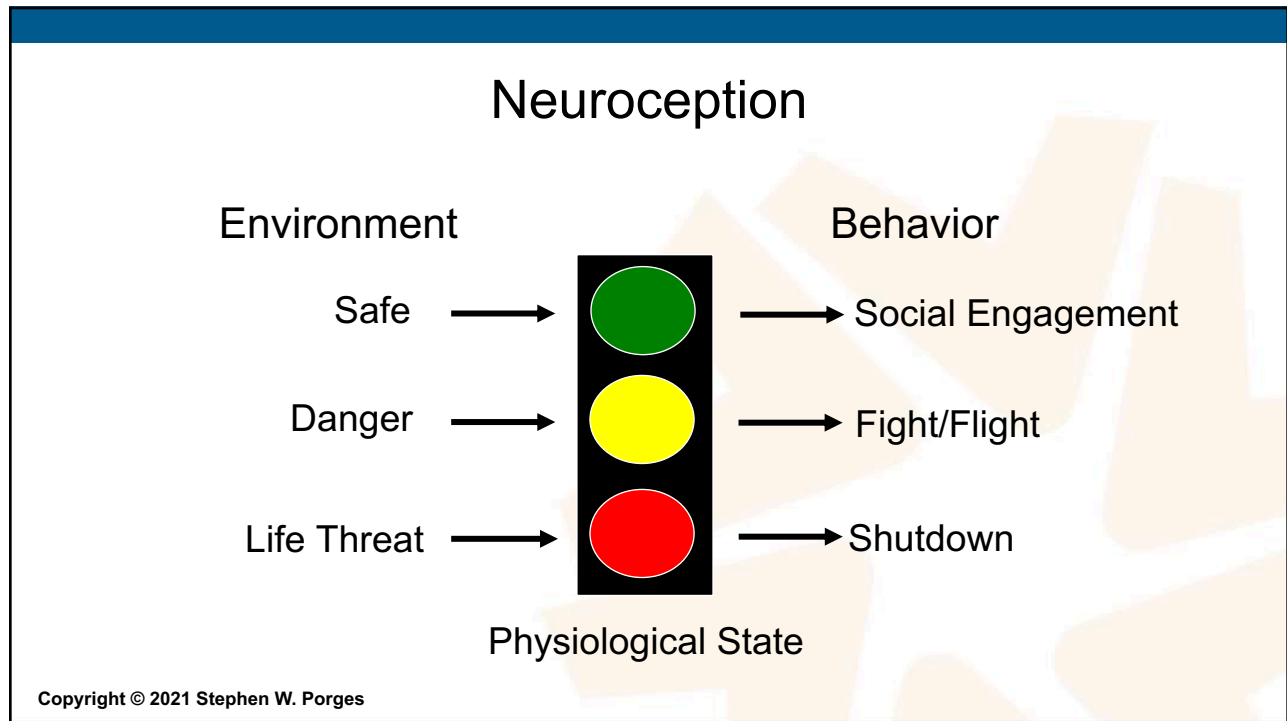
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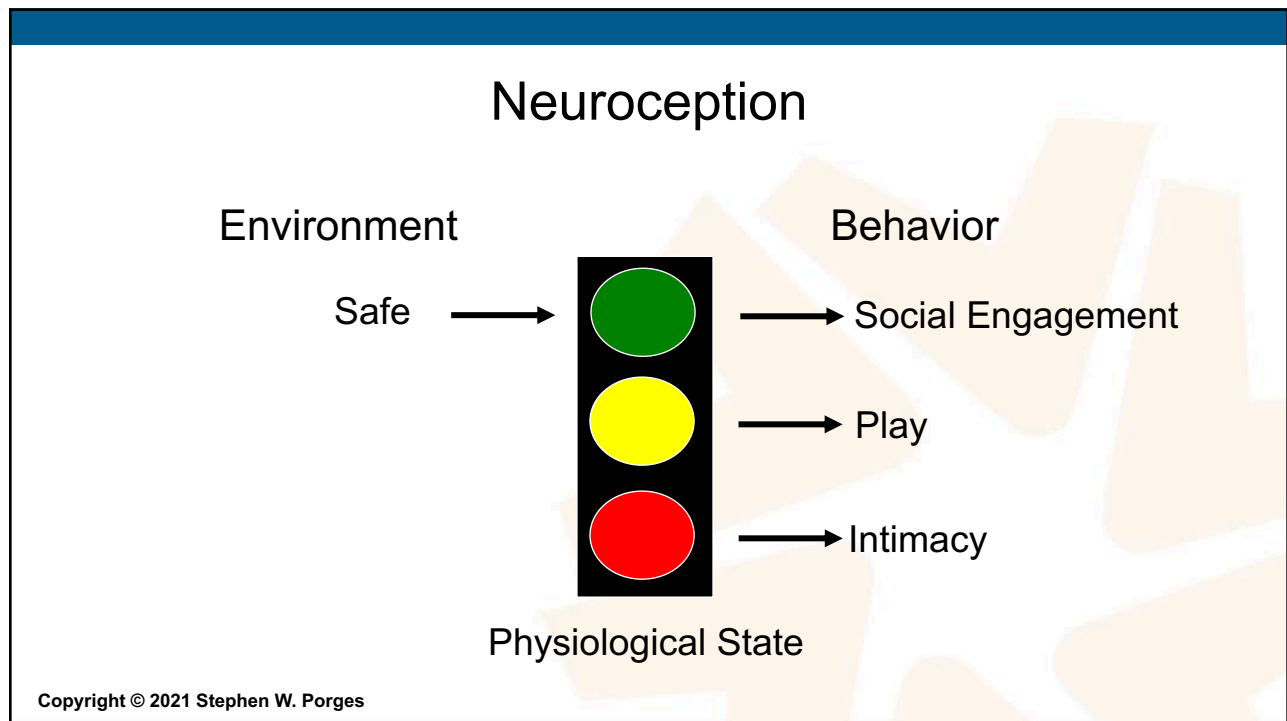
Play as a Neural Exercise

- Play is a “neural exercise” that enables the co-regulation of physiological state to promote neurophysiological states that support mental and physical health.

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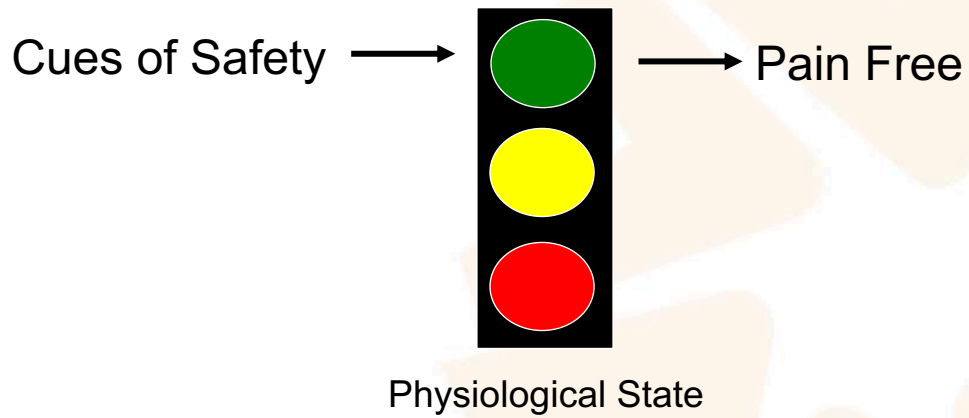
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Physiological State

An Intervening Variable Capable of Biasing Responses

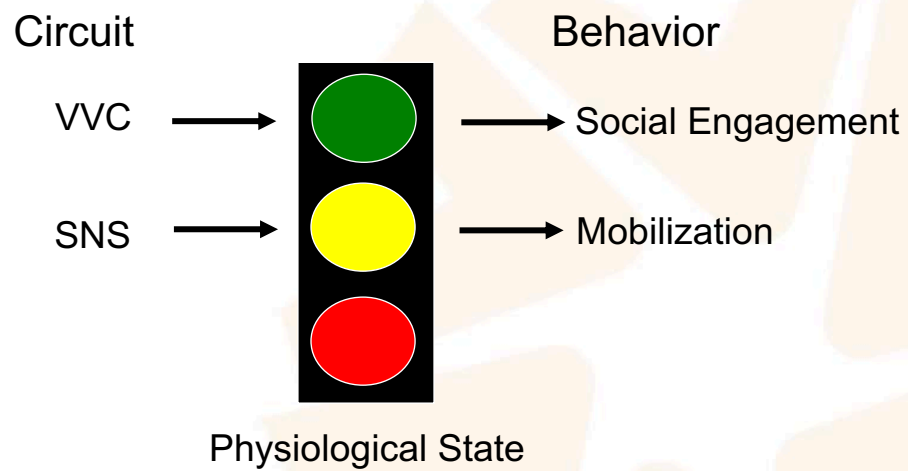


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Play/Dance

Pain Free



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Play as Neural Exercise



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Play as Neural Exercise



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Play as Neural Exercise



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Play as Neural Exercise



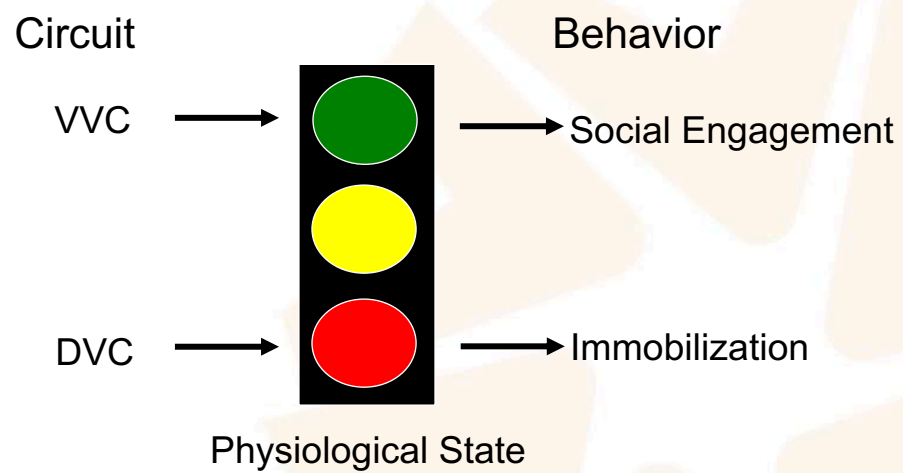
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Play as Neural Exercise



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Intimacy Pain Free



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Principles of Play

Similarities to Therapy and Relationships

- Reciprocity
- Movement and inhibition of movement
- Face-to-face interactions and/or prosodic vocalizations to dampen potential defensive reactions to movements, proximity, and touch
- Play (therapy) as a neural exercise

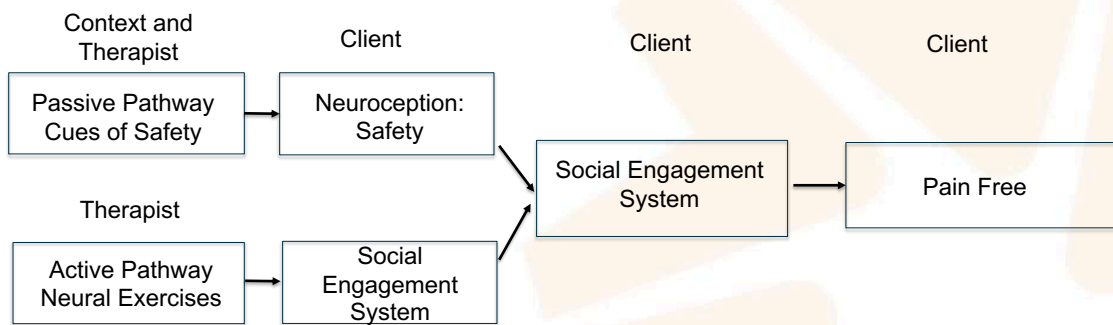
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Polyvagal Processes in Pain Therapy

Stage	Polyvagal Process
1. Experience therapy in safe context [recruit passive pathway]	• Neuroception of safety • Remove predator cues • Add acoustic cues of a loving mother (prosodic voice)
2. Perform 'neural' exercises moving between biobehavioral states [recruit active pathway]	• Exercise 'vagal brake' to enhance autonomic flexibility and resilience
3. Become explicitly aware of subjective experiences associated with each biobehavioral states	• Mental exercises involving brain functions that are dependent on maintaining 'ventral' vagal state
4. Develop personal narrative and new 'neural expectancies' of safety while shifting biobehavioral states	• Emergent property of resilience, while moving between states of immobilization, mobilization, and safety ('ventral' vagal, social engagement).

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Polyvagal-Informed Therapy



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