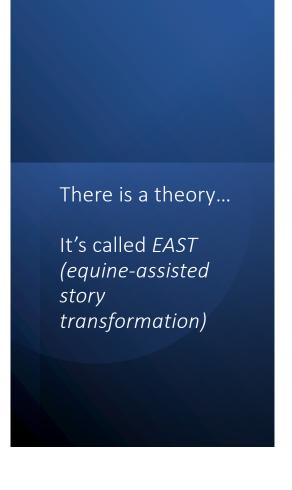
# EAST: An explanatory theory of horses, humans & psychotherapy

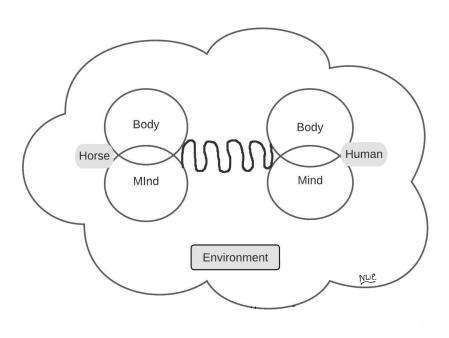


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# Objectives of presentation:

- Recognize the need for a unifying theory in EAI
- Summarize the basics EAST
- Identify one research or clinical problem where EAST may be applicable





#### WHAT IF....?

- There was a way to compare what happens during similar types of EAI
- We could compare what happens in one type of EAI with another type of EAI?
- We could identify common factors across EAIs that lead to change?



#### Common factor paradigm

- Model driven paradigm (MDP) says that change is result of the unique things in a therapy model.
- Common factor paradigm (CFP) says that change is the result of common factors shared by different therapy models
  - Contextual, emphasizes interactions of complex variables
  - Takes into account multiple dimensions of complexity
  - · Asks "how does intervention AND its context affect implementation and outcomes?"
  - In CFP, the models are the vehicles where common factors are potentiated
- Equine assisted interventions (EAI) have multiple, interacting parts, complex, unpredictable interactions variables are pantheoretical
  - We are not yet ready to look at common factors in EAI because we have insufficient information about intervention variables and context in research studies
  - EAST gives us theory as a starting place to look at context, content and complexity in a given EAI model and then across models

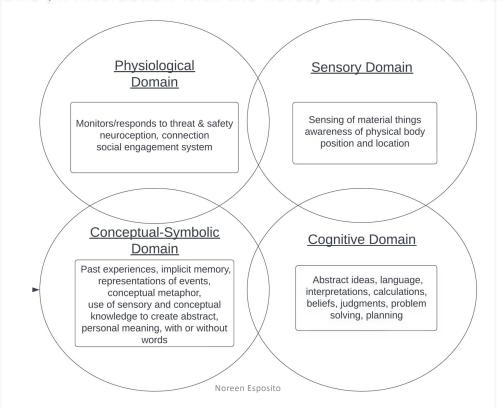
## How EAST was developed

- Developed over time using an iterative process combining practice and science
  - Informal observational data from practice
  - Literature review
  - Experts (practitioners and researchers)
  - Retrospective application of EAST to clinical experiences (autoethnography)





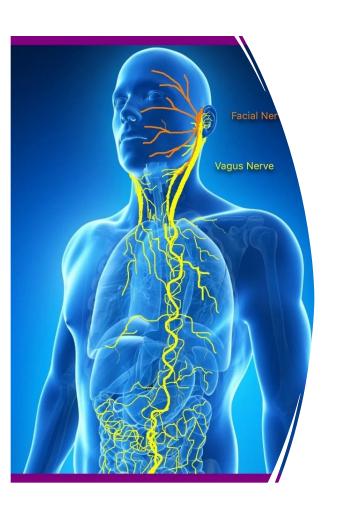
#### Human domains (in interaction with the horse, environment & facilitators)



## Theories used by domain of experience

- Physiological domain (polyvagal theory)
- Sensory domain (eg. interoception & perception)
- Symbolic/conceptual domain (eg. conceptual metaphor theory)
- Cognitive domain (narrative theory)
- Horse theory
- Change theories (transformational learning theory (TLT) & Kolb's experiential learning theory (ELT)





# Safety and danger

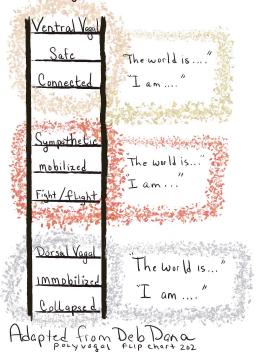
 Polyvagal Theory provided us with a more sophisticated understanding of the biology of safety and danger, one based on the subtle interplay between the visceral experiences of our own bodies and the voices and faces of the people around us.

> Bessel van der Kolk

# Polyvagal theory (physiological domain)

- Survival, safety & social engagement
- 3 Tenets
  - Hierarchy of the defense-survival system
    - Ventral vagal (Social engagement)
    - Sympathetic (defense)
    - Dorsal (defense)
  - Neuroception
    - Surveillance system, "is this safe?"
  - Co-regulation

# 3 Physiological States

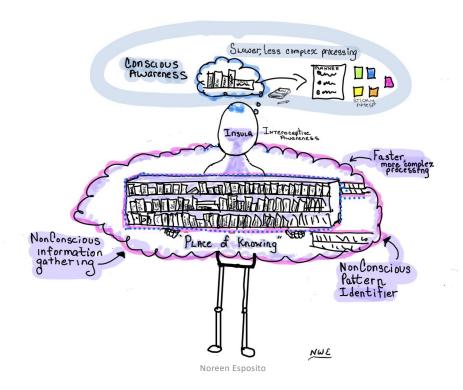


Neural experience of surveillance (neuroception) that occurs outside brain, and influences physiological state, moves up to the brain to influence thought, emotions, & story that shape meaning.

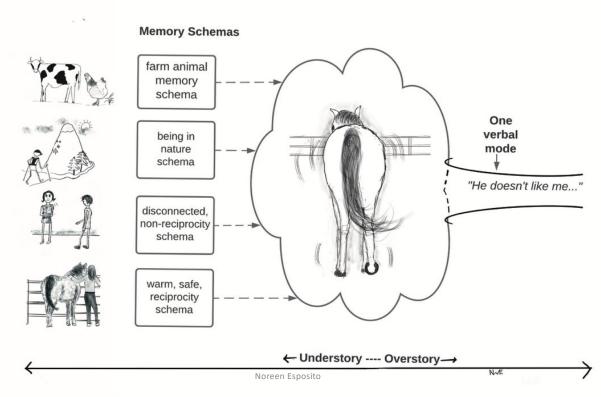
#### Polyvagal and the Autonomic Nervous System

|   | nwe  | <b>†</b>  |
|---|--|---|
| Parasympathetic NS<br>Dorsal Vagal Branch   | Purpose: Survival through shutdown, used when there is a THREAT TO LIFE, used as a last resort, if SNS failure  Looks like: Collapse, fainting, feigning death, disconnected from self and others  How: Conserve all energy, decreased heart rate, decreased metabolism, limited oxygen to brain, shutdown, barely alive   | When thing are safe, ven vagal can be active with dorsal vagal stillness & intimacy                                       |
| Sympathetic NS                              | Purpose: Survival through physical mobilization, defense, aggression, flee. It is the default system when there is a THREAT or absence of cues of safety  Looks like: Muscles tense, defensive stance, mobilized for flight or fight, experience of unease, fear, energy, unable to socially connect  How: Vagal brake release, increase in heart rate, increased oxygen to body                             | When cues of safety are present, ventral vagal can be active in SNS for mobilizing & connection through play, sports, etc |
| Parasympathetic NS:<br>Ventral Vagal Branch | Purpose: When CUES OF SAFETY are present, a biological need to connect can be met, facilitating social engagement with others thus supporting survival  Looks like: Facial expression, gaze, vocalizations, head tilt are aimed at social engagemet  How: Applies vagal brake, slowing the heart rate, calms, is integrated with CN V, VII, IX, & XI, connects the heart with the face to engage with others |   |

# Conceptual-symbolic domain



# Moving to Cognitive Domain



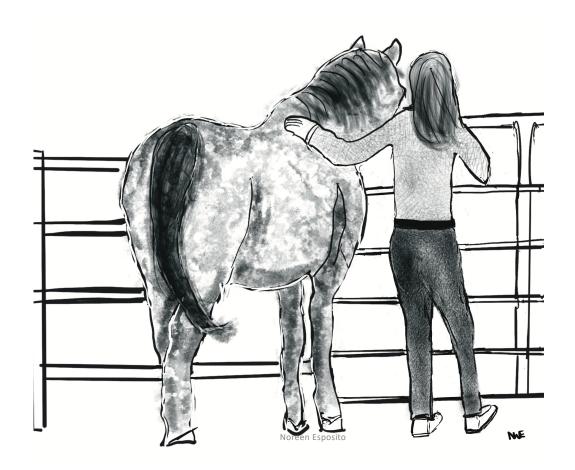
## "Theory" of the horse

- Social, autonomous, sensitive, large, reactive, responsive & dynamic
- Non-predatory
- At liberty or not (influences behavior)



#### Complex & dynamic horse-human interactions

- H&H: Arousal & awareness, elicit anxiety & calm
- Human:
  - Provoke thought, intensify memory, evoke metaphor & story
- Horses function as part of the
  - Physiological domain of experience
    - · Horses & physical environment can be cues of danger or cues of safety
    - Humans and horses co-regulate (?)
  - Sensory domain of experience
  - Conceptual/Symbolic domain of experience
    - Horse as metaphor gives form to personally significant complex feelings, concepts, experiences and patterns
    - Space, distance and movement of horse create dynamic experience
  - Cognitive domain of experience
    - Become objects, story



#### Theories of change

- Transformational learning theory (Mezirow, 1991)
  - New experiences are viewed through existing perspective
  - The mind searches for similarity in past experience, seeking a frame of reference)
    - · If mind locates something similar,
    - Accept what fits with what we already know "oh, that's just like..." (confirmation bias)
    - · Dismiss unfamiliar
  - If incongruence between past and what is happening? "Wait, what's this?"
    - A disorienting dilemma: doesn't fit what we know, disrupts the status quo
    - Mental transderivational search to find some match
    - If nothing is found, then we might choose to ignore (non-learning) or choose to reflect
    - Disorienting dilemma + reflection/ examine our assumptions = transformational learning.
  - The horse can be a catalyst in creating disorienting dilemmas
  - Process involves multiple domains

## Experiential learning theory (ELT)

- Knowledge happens in a process of grasping, understanding and giving new meaning transforms an experience.
- 4 step process
  - Concrete experiencing (only in the present)
  - Reflective observation and remembering
  - Abstract conceptualization
  - Theorizing
- Most memorable experiences flood the senses, elicit a being-in-themoment feeling & are outside of the norm



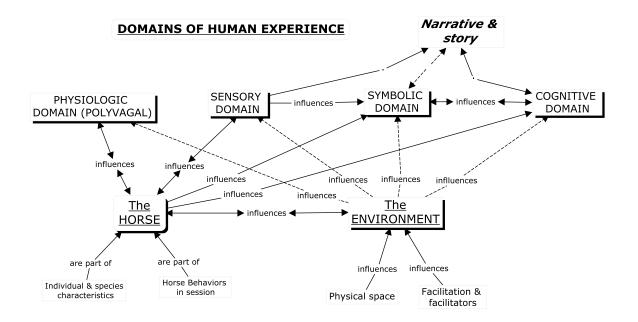
- Environment/context
- Domains of experience (body & mind)
- The humans
- The Horses (another species)
- The facilitator
- Events





#### Theories that are used in EAST

- During a session
  - Polyvagal theory
  - Sensory theory
  - Conceptual Metaphor theory
  - Narrative theory
  - Horse theory (we made this one up)
- What also happens during and after a session
  - Transformational learning theory
  - Experiential learning theory



#### THE EQUINE INTERVENTION

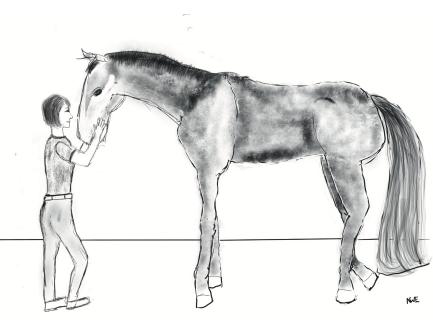
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#### Anxious person, calm horse, offer to connect/coregulate



#### Ideas for Research

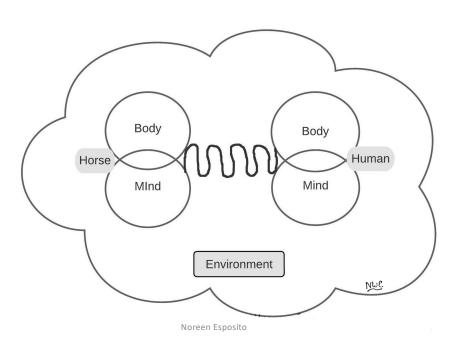
Interventions with multiple interacting components & multiple dimensions of complexity may involve multiple theories

Process evaluations help us understand those interventions.

Process evaluations in complex interventions should examine:

- What is implemented & how
  - What changes to intervention make it fit in different contexts
- What are the mechanisms of impact? how does what is delivered produce change?
- How does the context affect implementation & outcomes
  - Even when an intervention is simple, its interaction with its context may still be highly complex
    - Moore et al (2015), Medical Research Council

# Equine-assisted story transformation- EAST

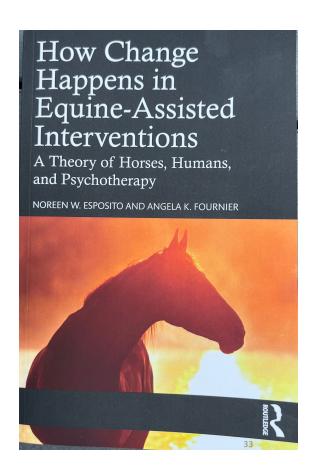


#### For more about EAST...

- Visit our online site for EAST. It is "EAST-Horse-Human Interaction Theory" located on mighty networks (mn.co). You can find it at EAST-Horse-Human Interaction Theory
  - · Conversations about EAST
  - Live, interactive discussions, chapter by chapter for a deeper dive.



- · contact us at
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  - Angela.Fournier@bemidjistate.edu



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