

# Trauma history means...

Change your organizing question from, "What's wrong with you?" to "What's happened to you?"

1<sup>st</sup> step to being trauma **informed** vs. trauma aware

# Now, let's look closer at “what happened”

- When was it done?
  - Age at time of victimization
  - Early experience organizes the brain and is hard to change later
  - Later experience impacts previously laid organization
- Who did it?
  - Speaks to attachment

# Categories of “Adverse Childhood Experience” (ACEs)

1. Emotional Abuse
2. Physical Abuse
3. Sexual Abuse
4. Emotional Neglect
5. Physical Neglect
6. Family Violence
7. Household Substance Abuse
8. Household Mental Illness
9. Parental Separation or Divorce
10. Household Member Incarceration

# A.C.E. Study cont'd.

With an ACE score of 4 or greater:

- 1.Smoking 1.8 fold increase
- 2.Alcoholism 7.2 fold increase
- 3.Illicit drug use 4.5 fold increase
- 4.Injecting drug use 11.1 fold increase
- 5.Impaired memory of childhood 4.4 fold increase
- 6.High perceived stress (2.2 fold), *anger modulation* problems (4 fold), perpetrating Intimate Partner Violence (5.5 fold)

**Six or more traumatic events as a child? Die almost 20 years earlier than patients with none according to a report by the CDC report**

## 2nd step is to understand the impact on the brain and behavior: A.C.E.'s Change Brain Organization & Functioning

### Alterations resulting in high-risk behavior:

- Nucleus accumbens
  - pleasure and reward—dopamine
- **Prefrontal cortex**
  - executive functioning
  - delay of gratification
  - impulsivity, and more
- Amygdala
  - Brain's "smoke detector" emotional/threat detection

### Alterations resulting immune and hormone changes:

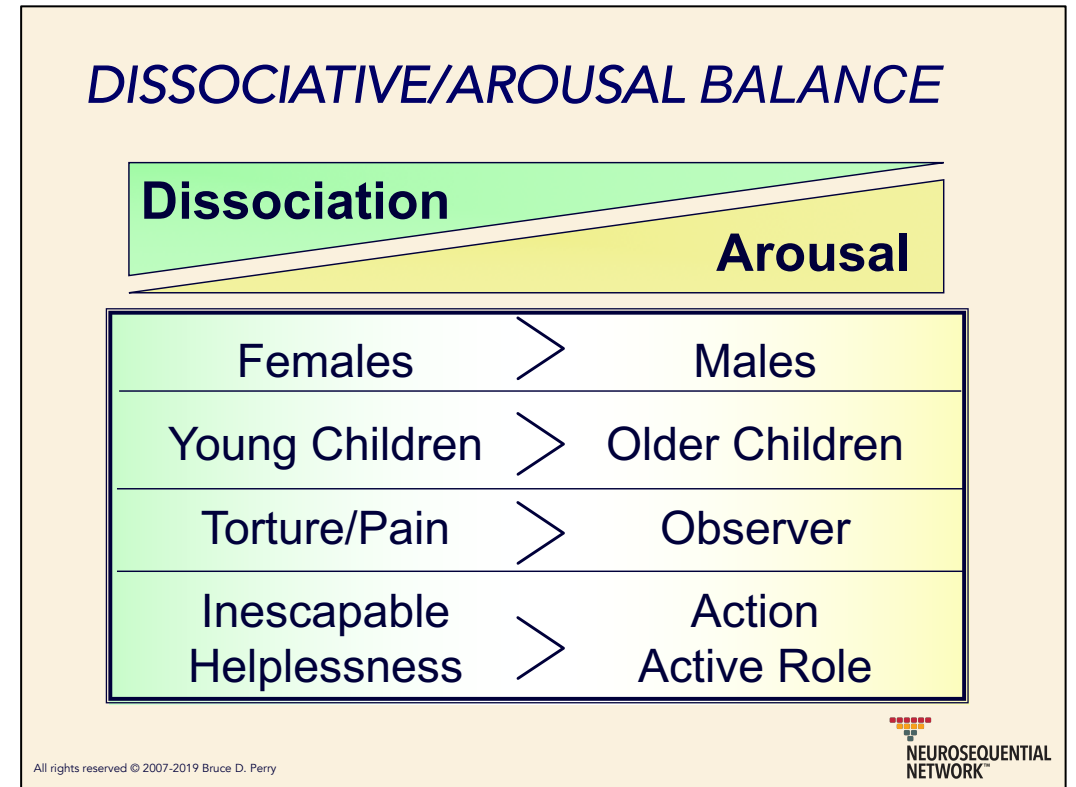
- Over activation of HPA Axis
  - Over-exposure to cortisol
- Epigenetic changes

# “Why won’t you just behave?”

- Experience impacts brain development and organization and genetic expression
- Behavior is activated in and by the brain
- Brains impacted by early developmental trauma that isn’t buffered by healthy relationships respond differently to stimuli than typical brains
- Brain response determines behavior
- Response is often sub-cortical and results in behaviors that are more reactionary than deliberate choice

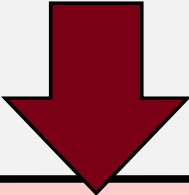
# Responding to perception of trauma

- Pre-cortical
- Often combination of both
- Can vacillate on along continuum



# Arousal Continuum

- Increasing arousal means decreasing regulation
- Brain begins shutting down and functions less efficiently from the top down



|  |                               |                            |                           |                              |                               |
|--|-------------------------------|----------------------------|---------------------------|------------------------------|-------------------------------|
| <b>Hyperarousal Continuum</b>                | Rest<br>( $M > F: A > C$ )    | Vigilance                  | Resistance                | Defiance                     | Aggression                    |
| <b>Dissociative Continuum</b>                | Rest<br>( $F > M: C > A$ )    | Avoidance                  | Compliance                | Dissociation                 | Fainting                      |
| <b>Primary<br/>secondary<br/>Brain Areas</b> | NEOCORTEX<br><i>Subcortex</i> | SUBCORTEX<br><i>Limbic</i> | LIMBIC<br><i>Midbrain</i> | MIDBRAIN<br><i>Brainstem</i> | BRAINSTEM<br><i>Autonomic</i> |
| <b>Cognition</b>                             | Abstract                      | Concrete                   | Emotional                 | Reactive                     | Reflexive                     |
| <b>Mental State</b>                          | CALM                          | ALERT                      | ALARM                     | FEAR                         | TERROR                        |

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# *The Power Differential*

*Friend or foe, hurt or help, ally or enemy?*

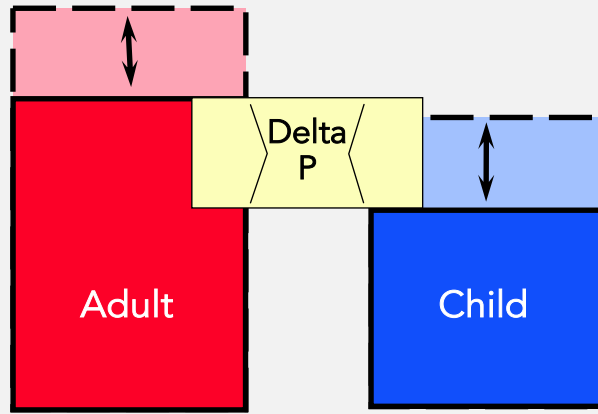
Our brain has networks that continuously assess our status in any social interaction; our position in a social 'milieu' - *"Do I belong?"*

Key in this are cues that determine 'safety' within the social interaction; am I safe, vulnerable? Dominant?

Many include neural mechanisms that function independently, outside of 'consciousness' (e.g., upward gaze, size, status)

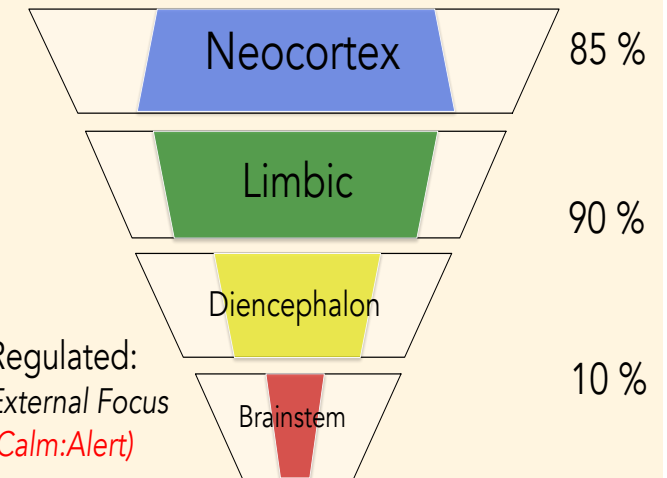
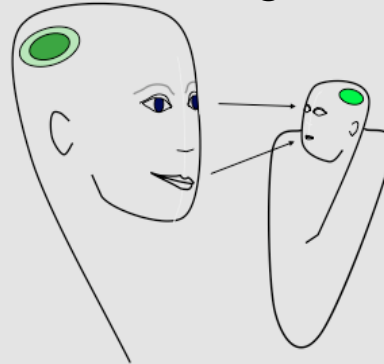
*A power differential is created during this process; the power differential is yoked to our stress response.*

## The Power Differential



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## Relational Regulation

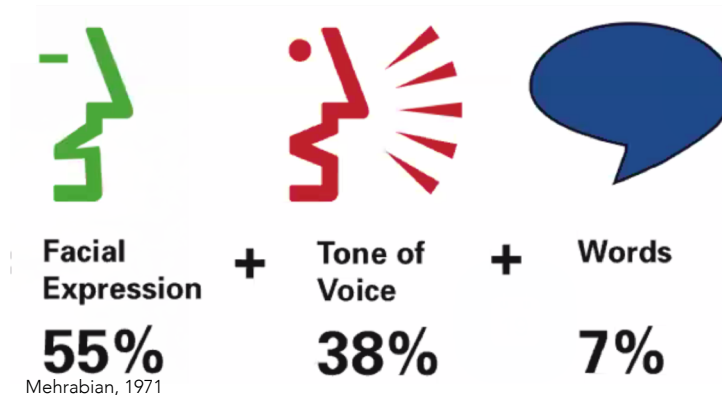
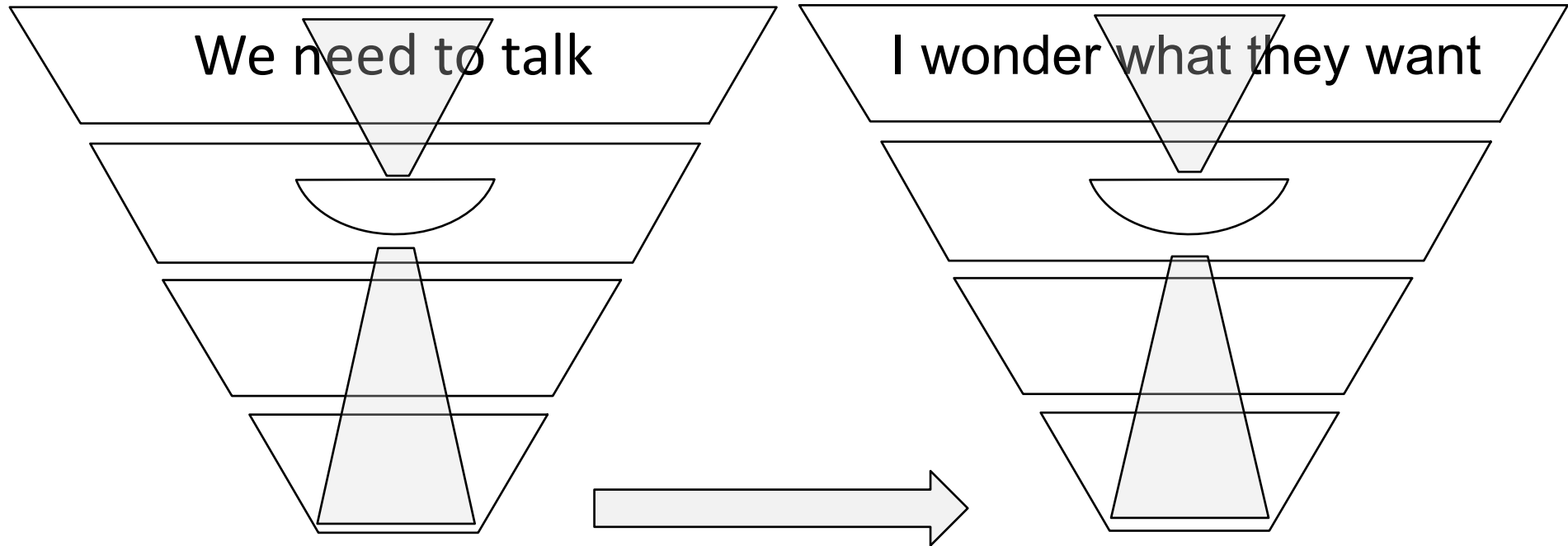


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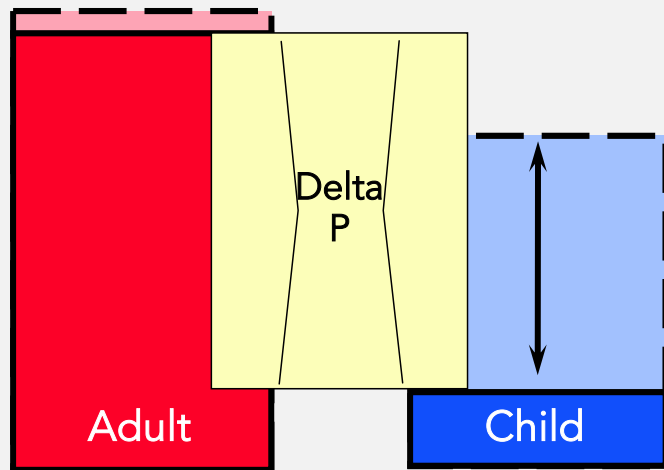
# Complexities of Communication

## From Cortex to Cortex



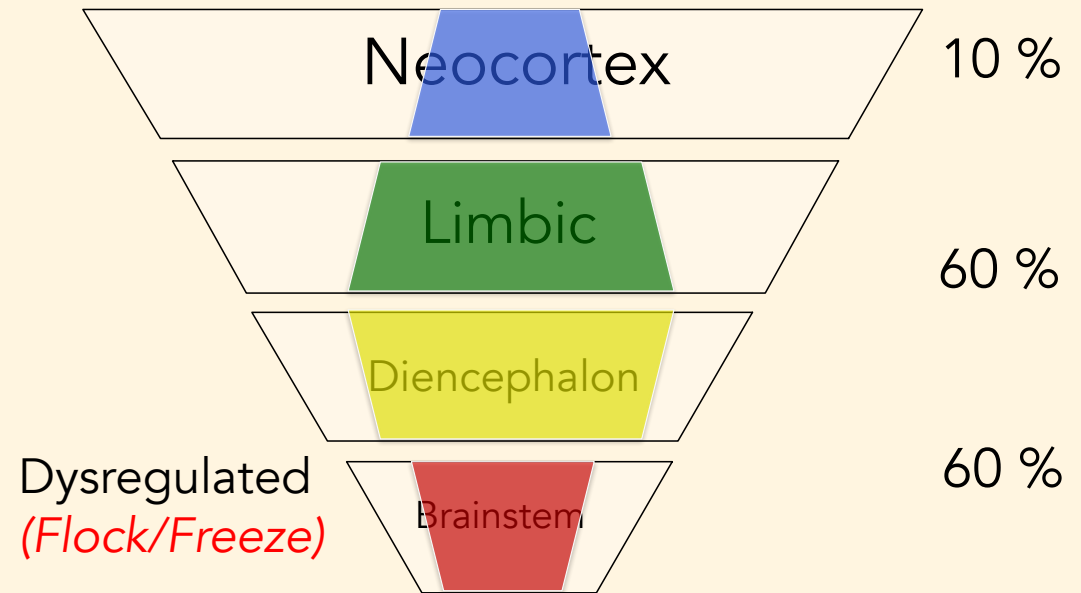
# Power differential and regulation

*The Power Differential*



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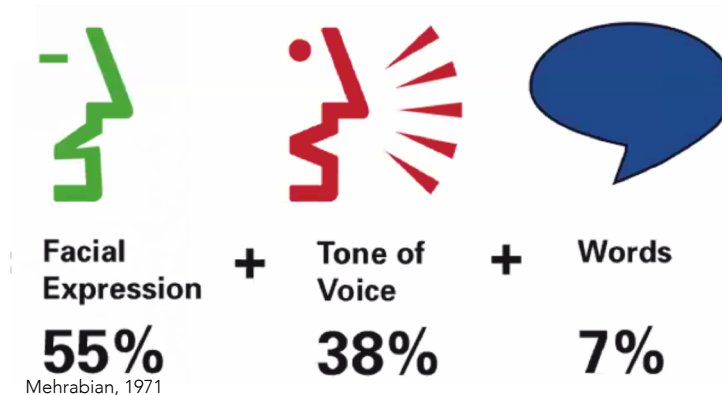
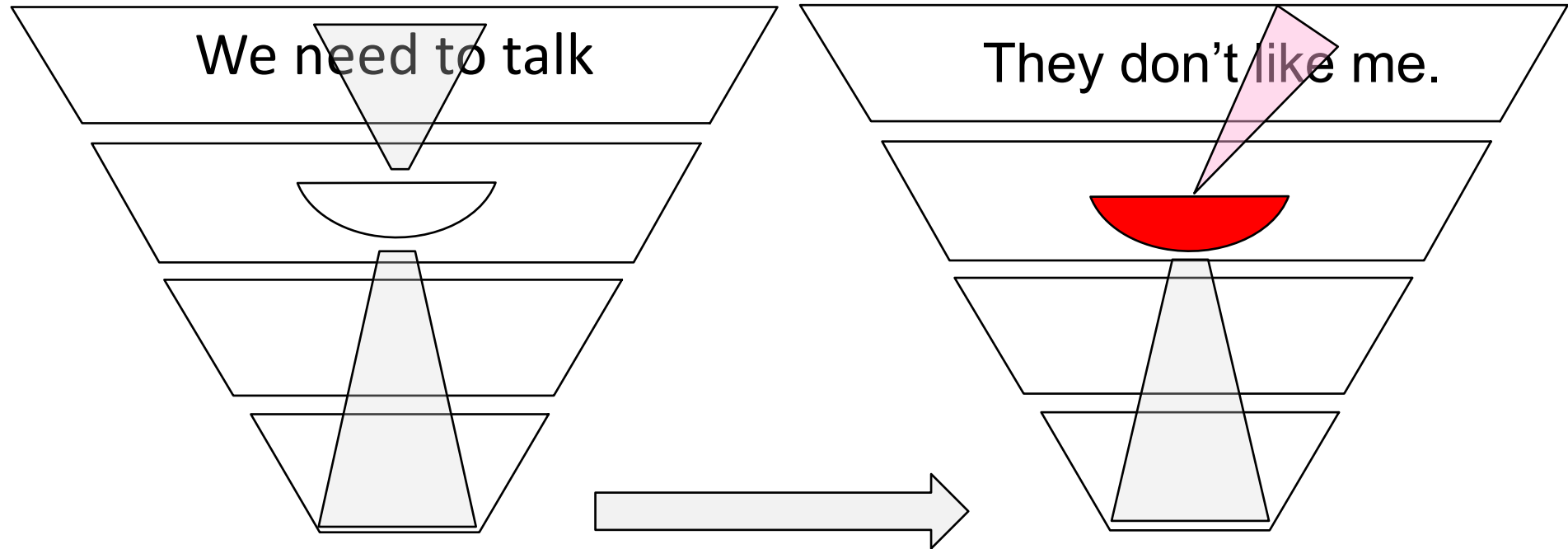


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# Distorted Perceptions

Child with history of relational rejection



# Mirror Neurons

- When you know the intention behind an action, a different system in your brain is activated that involves mirror neurons and other brain areas.
- You follow a sequence of action, and when you can predict that sequence you can determine the implication of the sequence is.
- Understanding the sensory implications of the motor actions you're perceiving allows you to create a map in the mind correlated with neural firing patterns in the mirror neuron/superior temporal complex that creates a neural representation of my intention in your head.
- Beyond just seeing an action, you see the intention beneath the behavior from the very beginning.

*--Dan Siegel, M.D.*

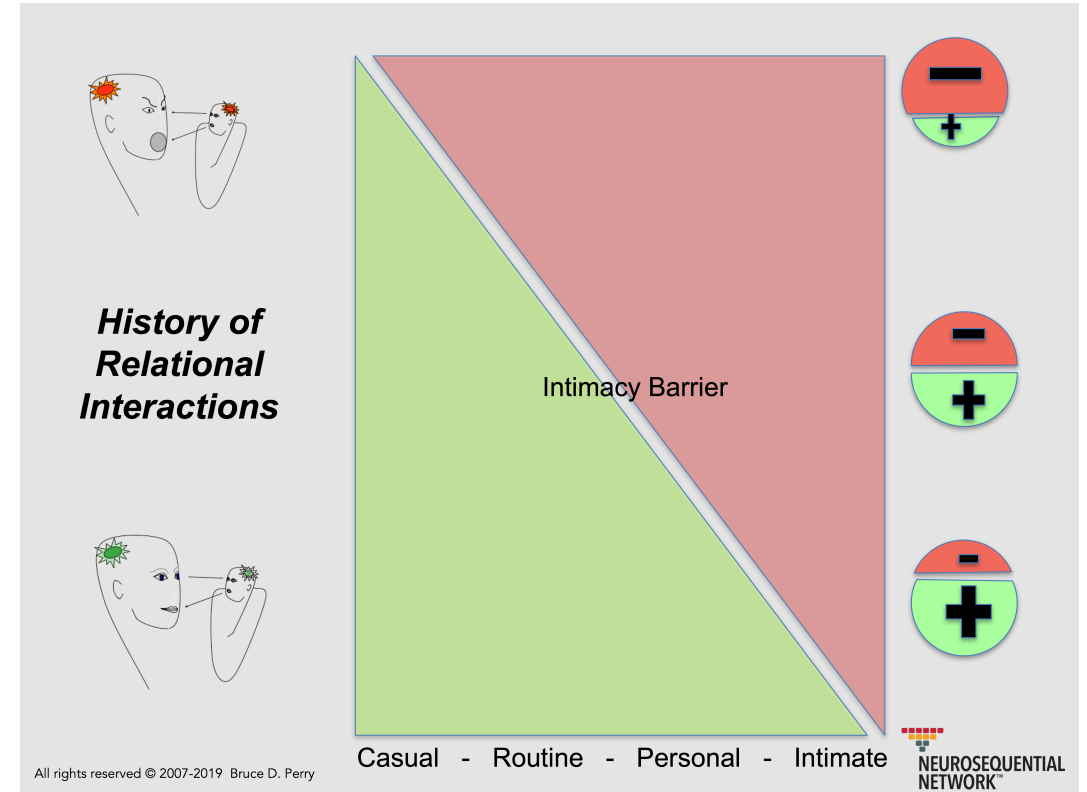
<https://www.youtube.com/watch?v=Tq1-ZxV9Dc4>

# What if early trauma experiences lead to misperception?

- You may not accurately predict the intention behind other's actions.
- You may misread social cues (usually skewed toward the negative)
- You will respond to what you expect rather than what was intended
- This may lead you to get into conflict with others easily
- Your relationships may struggle, and you may learn to be defensive (perceived by others as offensive, weird)

# Intimacy Barrier

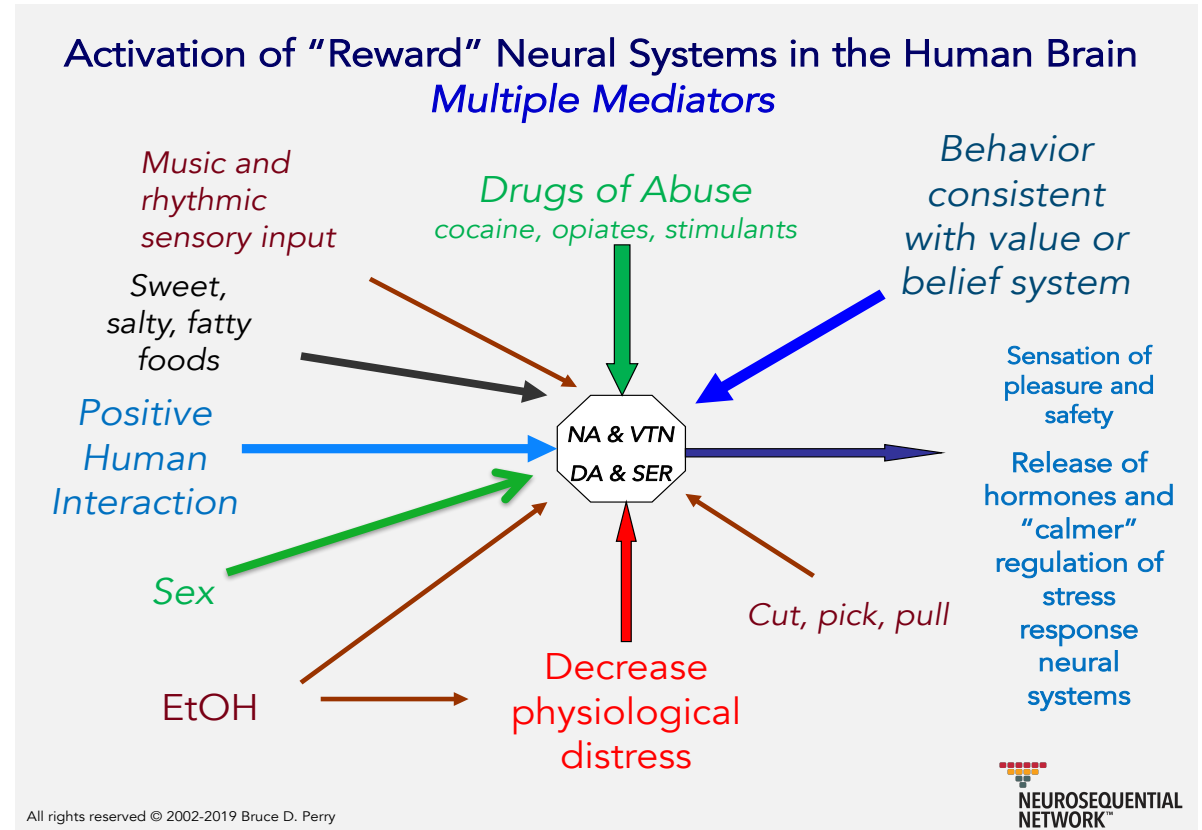
- Influenced by quality of early life relationships and experiences
- Early experiences form template for later experiences





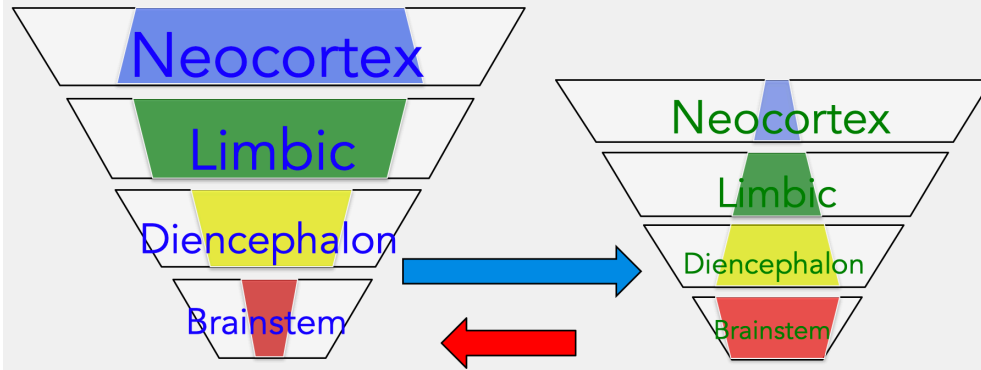
# Trauma, attachment style, and abuse/neglect

- Positive human interaction if history of relationships has been positive
- Intimacy barrier issues for hx of poor human interactions
- Reward pathway activate by other means



## Relational Contagion

A regulated, calm adult can regulate a dysregulated, anxious child



**BUT**

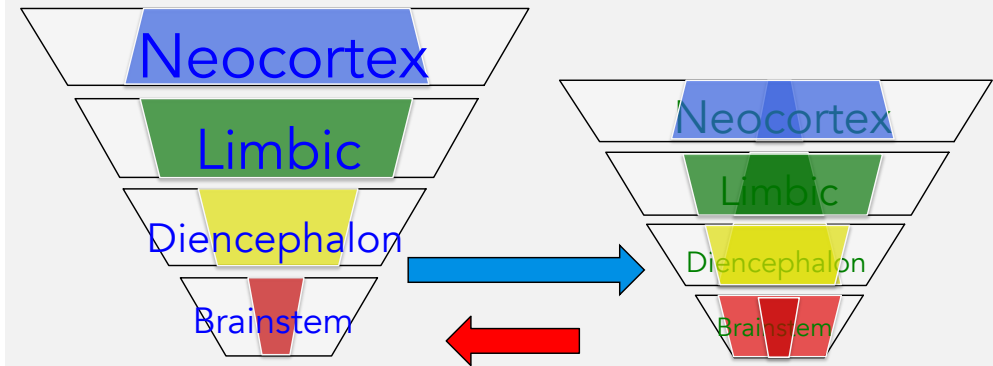
A dysregulated adult can never regulate a dysregulated child

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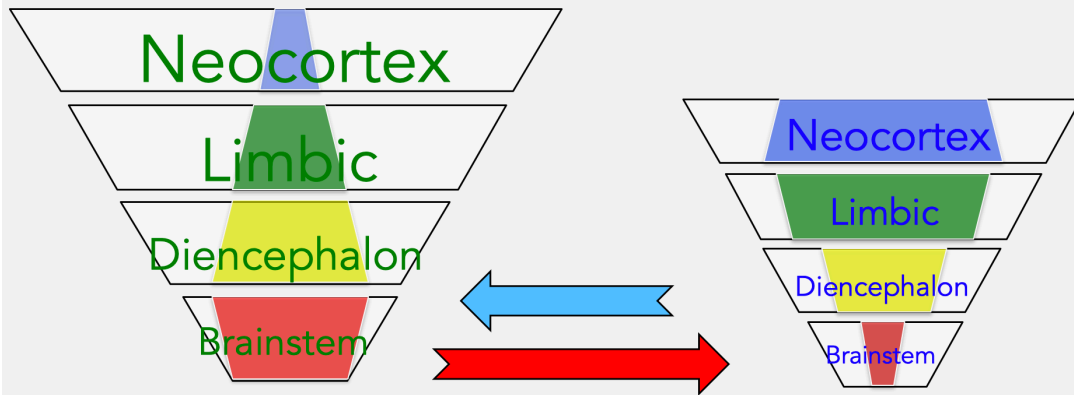
A dysregulated adult can never regulate a dysregulated child

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## Relational Contagion

A dysregulated adult will dysregulate a calm, regulated child



This will increased the probability of....

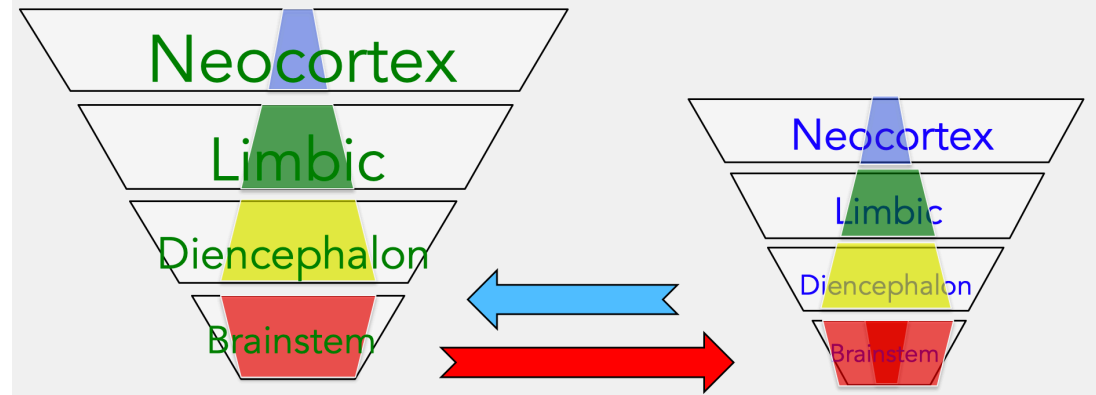
A mutually co-dysregulating escalation between the adult and the child



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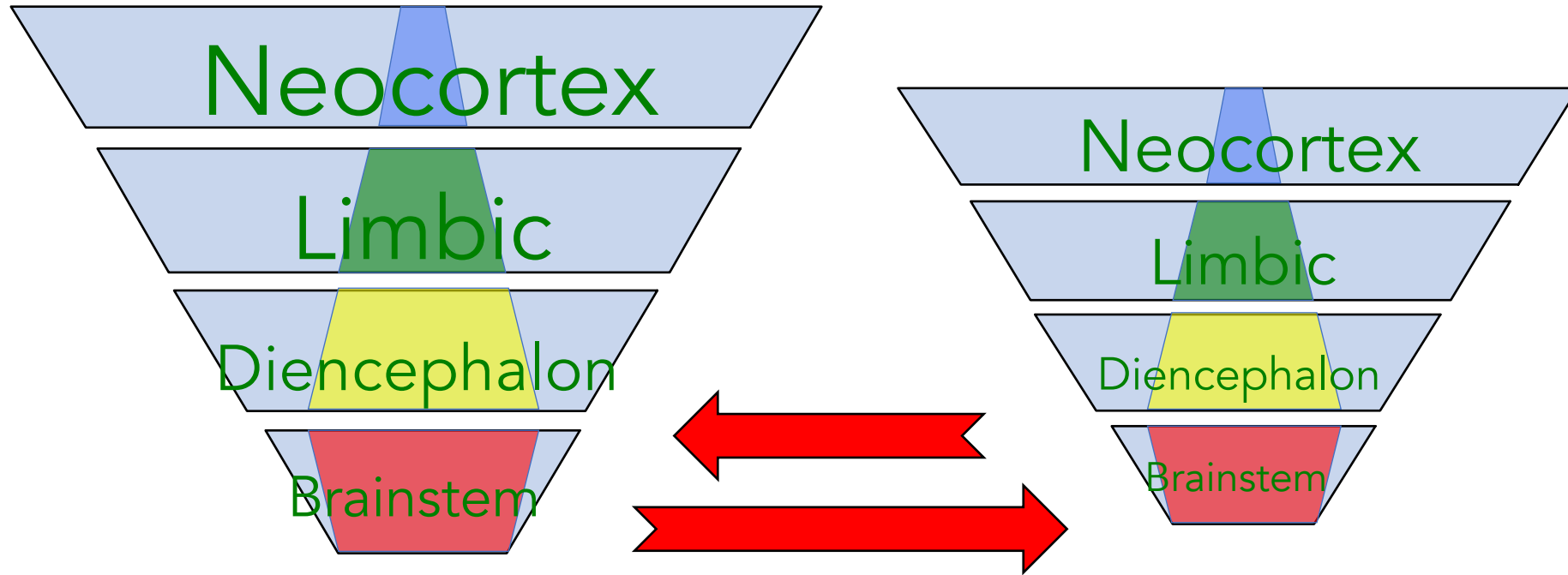
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# Relational Contagion

*A dysregulated adult can never regulate a dysregulated child*

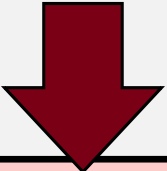


**AND**

*A mutually co-dysregulating escalation will further dysregulate both the adult and the child*

# Working and Living with Traumatized People

# Know the stage, watch the state!



|                                      |                               |                            |                           |                              |                               |
|--------------------------------------|-------------------------------|----------------------------|---------------------------|------------------------------|-------------------------------|
| <b>Hyperarousal Continuum</b>        | Rest<br>( $M > F: A > C$ )    | Vigilance                  | Resistance                | Defiance                     | Aggression                    |
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| <b>Primary secondary Brain Areas</b> | NEOCORTEX<br><i>Subcortex</i> | SUBCORTEX<br><i>Limbic</i> | LIMBIC<br><i>Midbrain</i> | MIDBRAIN<br><i>Brainstem</i> | BRAINSTEM<br><i>Autonomic</i> |
| <b>Cognition</b>                     | Abstract                      | Concrete                   | Emotional                 | Reactive                     | Reflexive                     |
| <b>Mental State</b>                  | CALM                          | ALERT                      | ALARM                     | FEAR                         | TERROR                        |

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| State Dependence of Cognition |                            |                         |                               |                                  |
|-------------------------------|----------------------------|-------------------------|-------------------------------|----------------------------------|
| Functional IQ                 | 120-100                    | 110-80                  | 90-60                         | 70-50                            |
| PRIMARY Secondary Brain Area  | NEOCORTEX<br><i>Cortex</i> | CORTEX<br><i>Limbic</i> | LIMBIC<br><i>Diencephalon</i> | DIENCEPHALON<br><i>Brainstem</i> |
| Cognition                     | Abstract<br>Reflective     | Concrete<br>Routine     | Emotional<br>Reactive         | Reactive<br>Reflexive            |
| Mental State                  | CALM                       | ALERT                   | ALARM                         | FEAR                             |

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# Manage your expectations with them (can't vs. won't)

## *Know the Stage & Watch the State*

- Effective relational interactions to communicate, teach, enrich or heal come when the developmental stage and present state of the child/adult are respected
- *Attunement becomes the key*
- Exposure to the core principles of development should be mandatory training for caregivers, educators and therapists

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# Connection...

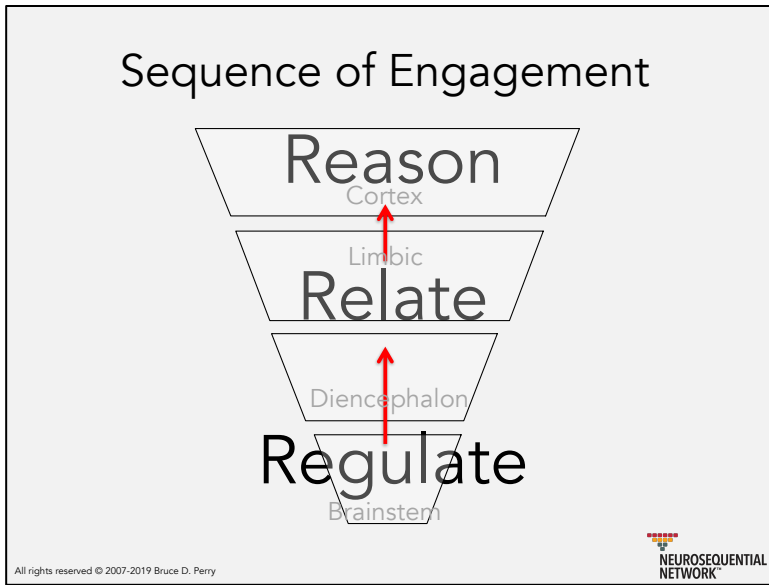
- Necessary for optimal health
- Can have up to 4 ACEs with no ill effects if close, nurturing supportive, relationships are also present
- Remember: humans are social!



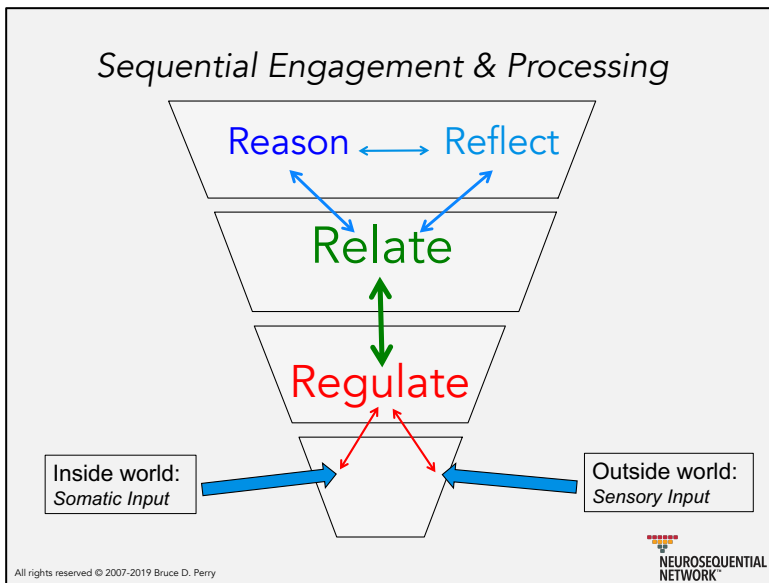
# But these children (people) struggle with:

- Affect regulation
- Reward
- Impulse control
- Intimacy and relationships

Their trauma triggers/history and attachment style exacerbate these challenges.



- Children are not born with the ability to calm themselves
- That skill is learned through consistent and repetitive positive early caregiving experiences
- You will have to help them with this because it's not that they won't behave better, they can't consistently behave better.
- Think: "Skill, not will".



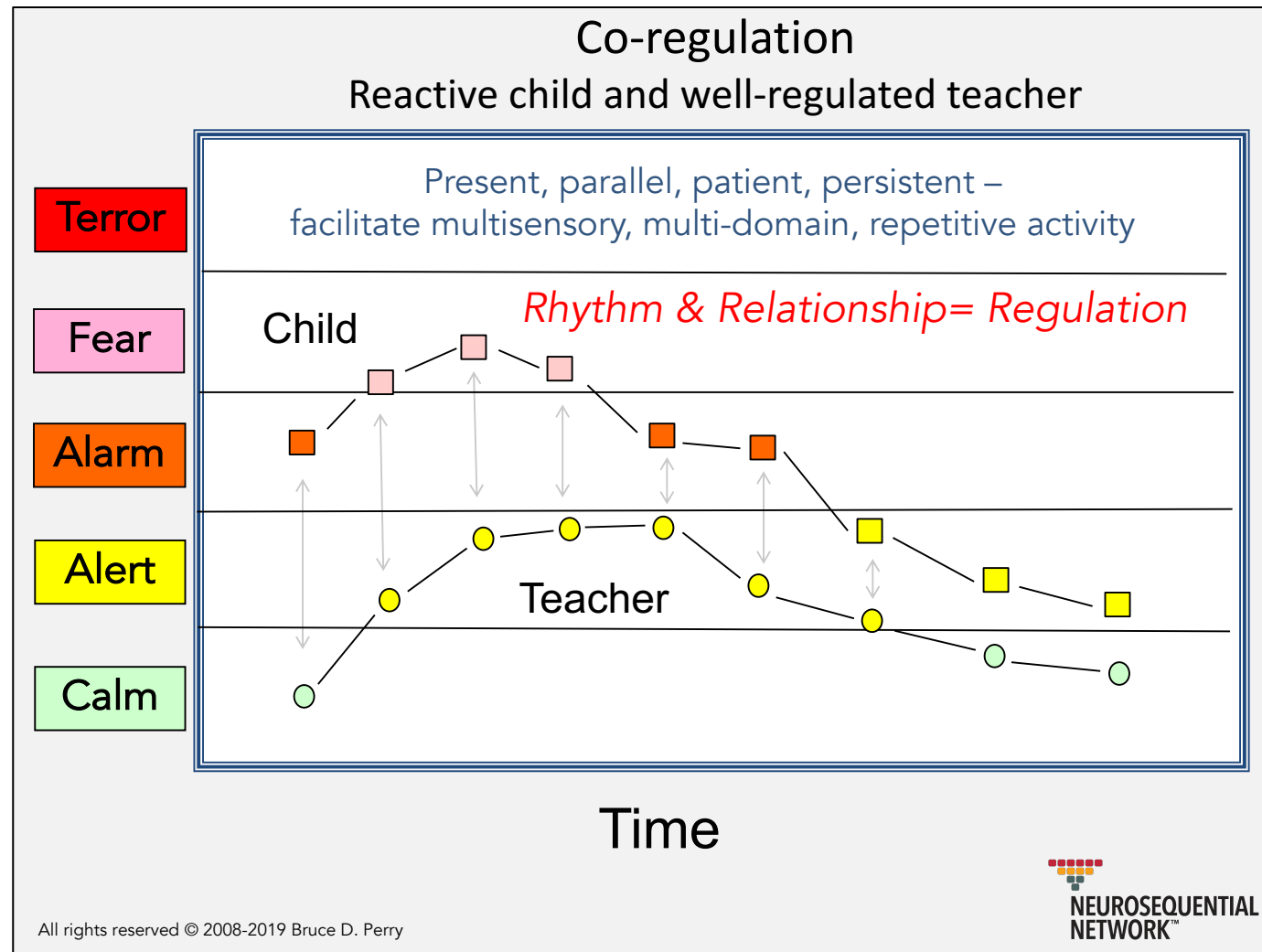
# Relational supports and buffers

Relational support is crucial in recovering from traumatic events

Intimacy barrier challenges may make being in relationship feel confusing, threatening, accepting supporters difficult, and progress slow (but not impossible)

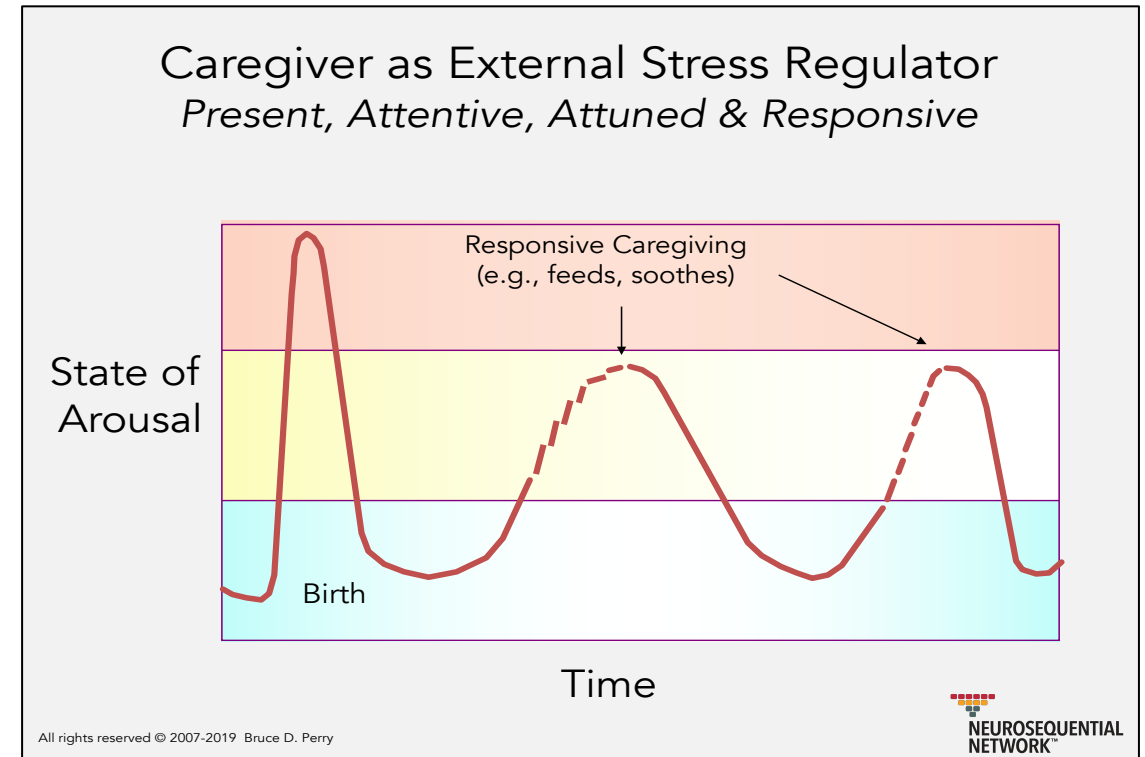
| <b>Adaptive Response</b>  | REFLECT   | FLOCK  | FREEZE   | FLIGHT   | FIGHT   |
|---|---|--|--|--|---|
| Predictable<br><b><u>De-escalating</u></b><br>Behavior<br><i>(behaviors of the teacher when the child or classroom is in various states of arousal)</i> | <ul style="list-style-type: none"> <li>• Calm sounds</li> <li>• Personal space</li> <li>• Predictable touch</li> <li>• Predictable routine</li> </ul>                               | <ul style="list-style-type: none"> <li>• Quiet voices</li> <li>• Eye contact</li> <li>• Confidence</li> <li>• Rhythmic movement</li> <li>• Clear directions</li> <li>• Somatosensory activities</li> </ul> | <ul style="list-style-type: none"> <li>• Comforting and predictable voice; invited therapeutic touch</li> <li>• Singing, humming, music</li> <li>• Reflective listening</li> <li>• Reassurance</li> </ul>        | <ul style="list-style-type: none"> <li>• Calm, quiet, presence</li> <li>• Disengage</li> <li>• Turn off lights, white noise</li> <li>• Reduce sensory input</li> </ul> | <ul style="list-style-type: none"> <li>• Calm affect</li> <li>• Disengage but don't disappear</li> <li>• Adult support</li> <li>• Individual attention</li> </ul> |
| Predictable<br><b><u>Escalating</u></b><br>Behavior<br><i>(behaviors of the teacher when the child or classroom is in various states of arousal)</i>    | <ul style="list-style-type: none"> <li>• Loud Noises</li> <li>• Close uninvited proximity</li> <li>• Unpredictable touch</li> <li>• Changes in daily routine or schedule</li> </ul> | <ul style="list-style-type: none"> <li>• Frustration or anxiety</li> <li>• Communication from a distance (like yelling)</li> <li>• Complex directions</li> <li>• Ultimatums</li> </ul>                     | <ul style="list-style-type: none"> <li>• Raised voices</li> <li>• Raising hands/point finger, sudden movement</li> <li>• Threatening tone</li> <li>• Chaos in classroom, disorganization of materials</li> </ul> | <ul style="list-style-type: none"> <li>• Frustration of teacher</li> <li>• Yelling, chaos</li> <li>• Collective dysregulation of peers</li> </ul>                      | <ul style="list-style-type: none"> <li>• Physical restraint, grabbing, shaking</li> <li>• Screaming</li> <li>• Intimidating stance</li> </ul>                     |
| <b>"Mediating"</b><br>Brain Region  | NEOCORTEX<br>Cortex   | CORTEX<br>Limbic   | LIMBIC<br>Midbrain   | MIDBRAIN<br>Brainstem  | BRAINSTEM<br>Autonomic  |
| <b>Cognition</b>  | ABSTRACT  | CONCRETE   | EMOTIONAL  | REACTIVE   | REFLEXIVE   |
| <b>CLASSROOM "STATE"</b>  | <b>CALM</b>   | <b>ALERT</b>   | <b>ALARM</b>   | <b>FEAR</b>  | <b>TERROR</b>   |
| <b>CLASSROOM CHARACTERISTICS</b>  | Reflection and consolidation of new information is actively taking place; or while testing, efficient retrieval of content is possible.   | Active teaching can take place; students are internalizing new content and, 'mind wandering' to efficiently store new content.   | Learning new content is difficult; students are either disengaging or acting out. Increases in individual self-regulatory behavior seen.   | Learning is impossible. Engaging students difficult. Many demonstrate 'freeze' responses that appear oppositional/defiant. Increased acting out.                       | Aggression, reckless behavior, openly defying rules and authority. Full 'fight/flight' or "shut down."  |

# Relationships & Developing Self-Regulation

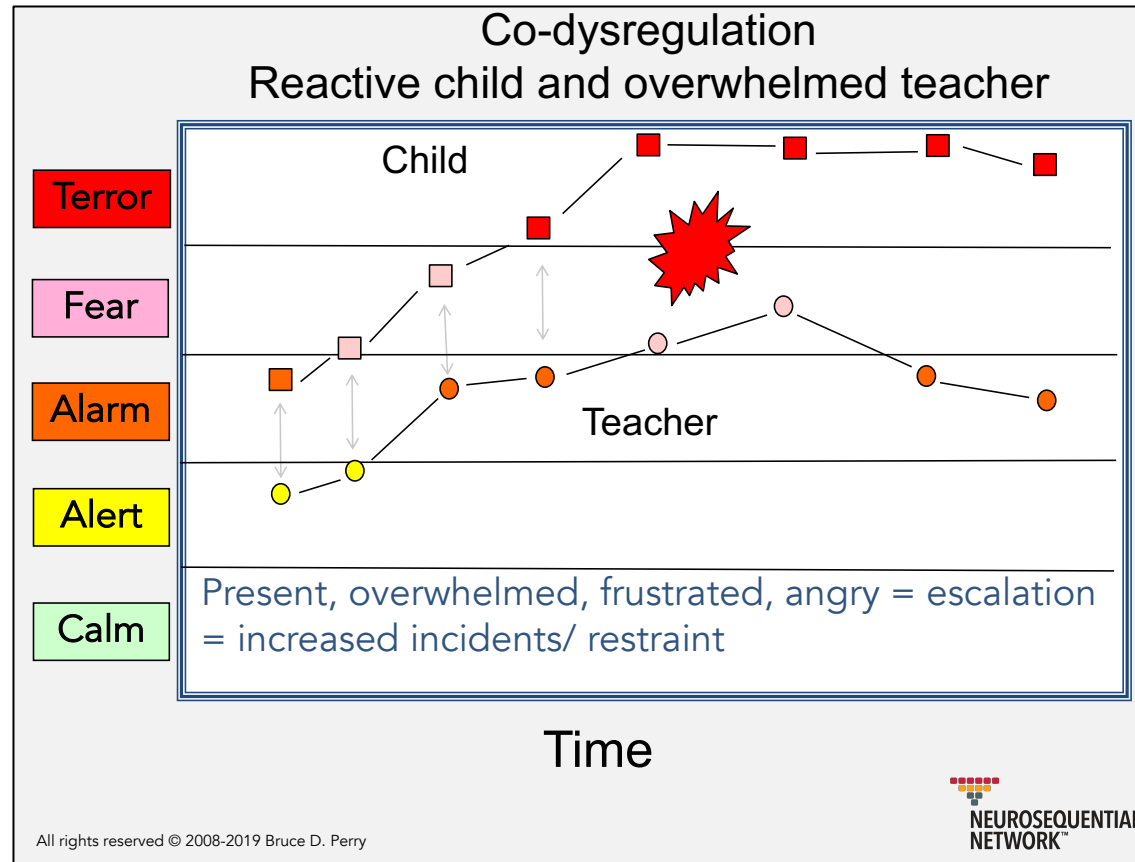


# Arousal & Regulation

| "Classic" Adaptive Response   | Rest (M>F)          | Flock            | Freeze          | Flight             | Fight               |
|-------------------------------|---------------------|------------------|-----------------|--------------------|---------------------|
| Arousal Continuum             | Rest (M > F: A>C)   | Vigilance        | Resistance      | Defiance           | Aggression          |
| Dissociative Continuum        | Rest (F > M: C>A)   | Avoidance        | Compliance      | Dissociation       | Fainting            |
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| Cognition                     | Abstract            | Concrete         | Emotional       | Reactive           | Reflexive           |
| Mental State                  | CALM                | ALERT            | ALARM           | FEAR               | TERROR              |

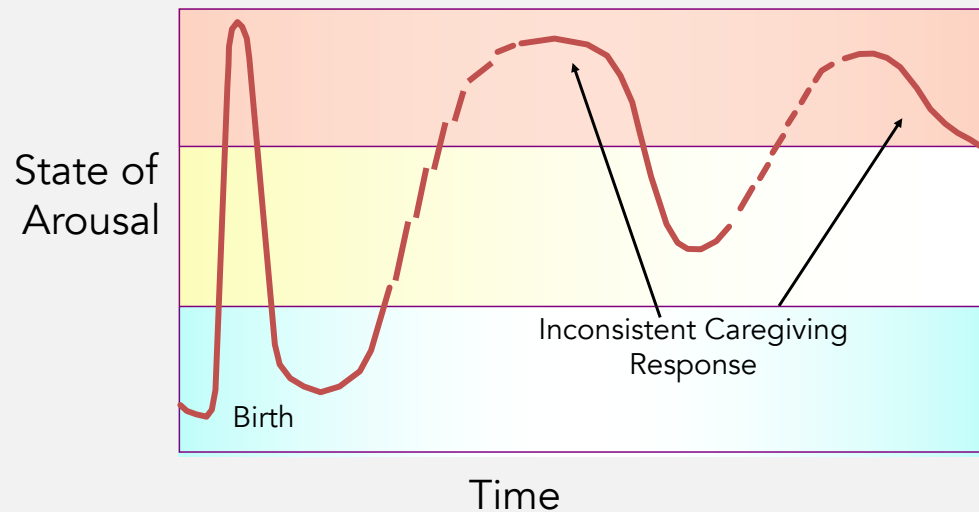


# Maladaptive



# Maladaptive caregiving

## Caregiver as a Disorganized Stress Regulator *Absent, Overwhelmed, Disengaged, Anxious, Angry*



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|-------------------------------|------------------------|---------------------|--------------------|-----------------------|------------------------|
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| Mental State                  | CALM                   | ALERT               | ALARM              | FEAR                  | TERROR                 |

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| <i>Family Group Pressures</i>       | <i>Resource-surplus<br/>Predictable<br/>Stable/Safe</i> | <i>Resource-limited<br/>Unpredictable<br/>Novel</i> | <i>Resource-poor<br/>Inconsistent<br/>Threatening</i> |
|-------------------------------------|---|---|---|
| Prevailing cognitive capacities     | Abstract Creative (IQ = 120)                            | Concrete Superstitious/Defensive (IQ = 100)         | Reactive Regressive (IQ = 80)                         |
| Prevailing affective 'tone'         | CALM  | ANXIETY   | FEAR  |
| Problem-solving approach            | Reflective INNOVATIVE                                   | Concrete SIMPLISTIC                                 | Fear-based REACTIONARY                                |
| Focus of solution                   | FUTURE Intentional Inflection                           | SHORT-TERM Serendipitous Inflection                 | PRESENT Forced Inflection                             |
| Family rules and structures         | Abstract Conceptual                                     | Concrete Superstitious Intrusive                    | Restrictive Punitive                                  |
| Caregiving and relational practices | Nurturing Flexible Enriching                            | Ambivalent Obsessive Controlling                    | Apathetic Oppressive Harsh                            |

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# Create healthier environments

- Reparative experiences
- Repetition
- Spacing and dosing

## The Six R's

### *Key Elements of Positive Developmental and Educational Settings*

Relevant (developmentally-matched)

Rhythmic (resonant with neural patterns)

Repetitive (patterned)

Relational (safe)

Rewarding (pleasurable)

Respectful (child, family, culture)

# Create the optimal therapeutic environment

*How do you create an optimal therapeutic environment?*

The Six "R's"

The Five-second moment

The Four "P's"

The Three-minute conversation

The Two-minute touch

The One-minute repair

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*The Six R's*  
*Key Elements of Positive Developmental and  
Educational Settings*

Relevant (developmentally-matched)  
Rhythmic (resonant with neural patterns)  
Repetitive (patterned)  
Relational (safe)  
Rewarding (pleasurable)  
Respectful (child, family, culture)

# The two-minute touch & one minute repair

## *Structuring regulating & bonding interactions*

*Healthy touch is a fundamentally enriching and regulating experience. Invited, intentional, non-sexualized touch has a range of positive physiological, emotional and social effects. A brief, 2-minute interaction with a hand-massage, hug, gentle touch to a shoulder is an adequate and physiologically-meaningful “dose”.*

And a one-minute repair is equally regulating and bonding. Re-engage when there is rupture. Apologize when appropriate; use reflective listening & perspective-taking - make an effort to correct missteps. Admit mistakes, ask for feedback. Listen. The one-minute repair is a powerful way to convey good intention, model mature behavior and re-connect with others.

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# Overriding the template experience

- Creating new neural pathway strong enough to override template is HARD WORK, but real progress can be made
- Progress will NOT be linear—"backsliding" during consolidation periods

Creating the Relational 'Space' for Optimal  
Development, Learning & Healing  
*(or How do you like those P's?)*

Present,  
Parallel,  
Patient &  
Persistent *in Providing*  
*Patterned, Predictable, Positive doses of*  
*Protected (safe) experience*

# *USE-DEPENDENT DEVELOPMENT*

The more a neural network is  
“activated” the more that  
network changes as a reflection  
of the pattern of stimulation

*This is the basis for development,  
memory and learning*

# Dosing

## The Right "Dose" of Stress

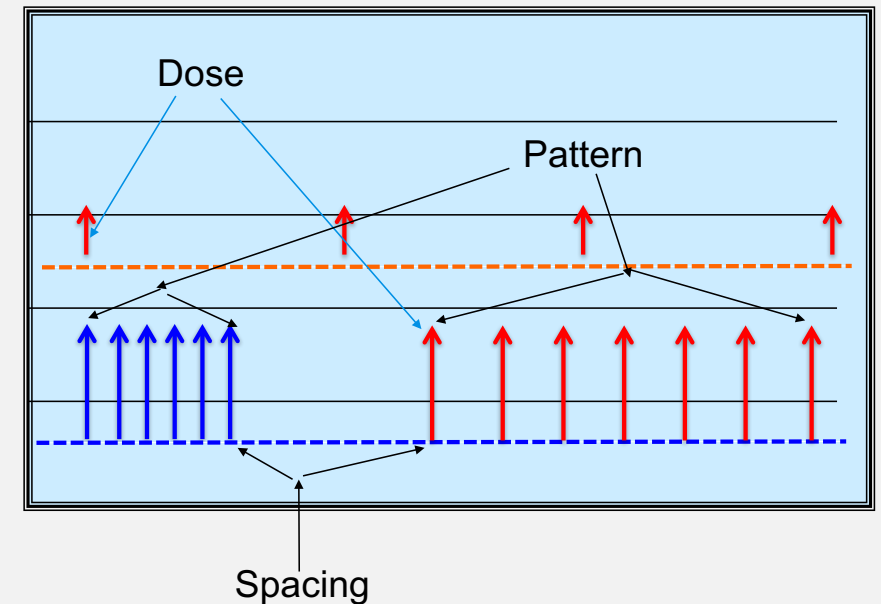
A resilience-building, "moderate" and predictable dose will vary by developmental age and by the reactivity and sensitivity of the individual's stress response systems

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## Dose, Pattern & Spacing

Terror  
Fear  
Alarm  
Alert  
Calm



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# Contact Information

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[www.childtrauma.org](http://www.childtrauma.org)