

The Interface of the Brain and the Mind on Resiliency:

How to Use Biological and Psychological Principles to Help Children Strive for Success

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Presentation Overview

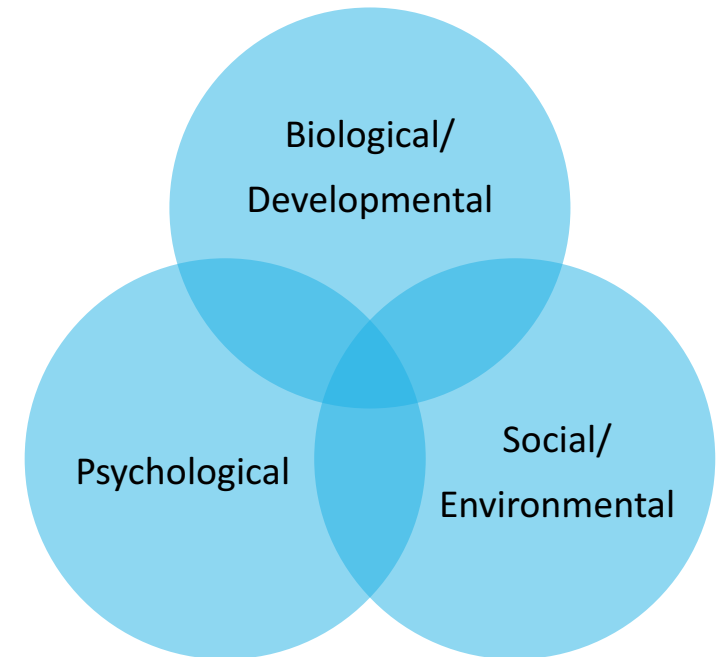
- What is Resiliency?
- Biology of Resiliency
- How the Brain Develops
- The Role of Parental Modeling in Skills Acquisition and Resiliency
- How We Can Optimize Strengthening of Resiliency

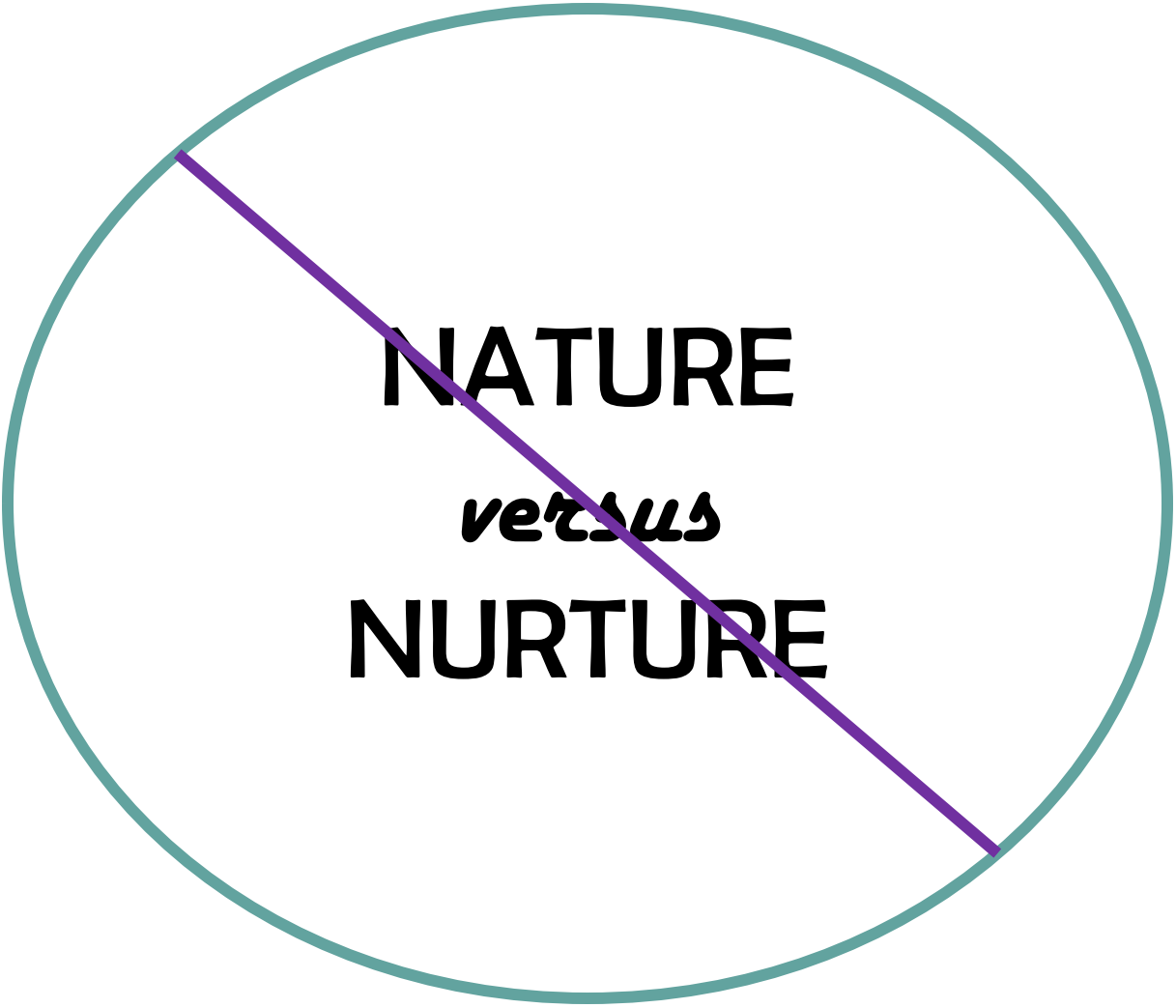
What is Resiliency?

Definition: Construct defining an individual's capacity to successfully adapt in the context of adversity and stress.

Dynamic, not static, trait!

Factors: Biological / Developmental
 Psychological / Internal
 Social / Environmental





Biological/Developmental

INTRINSIC AND EMERGING FACTORS AFFECTING RESILIENCE

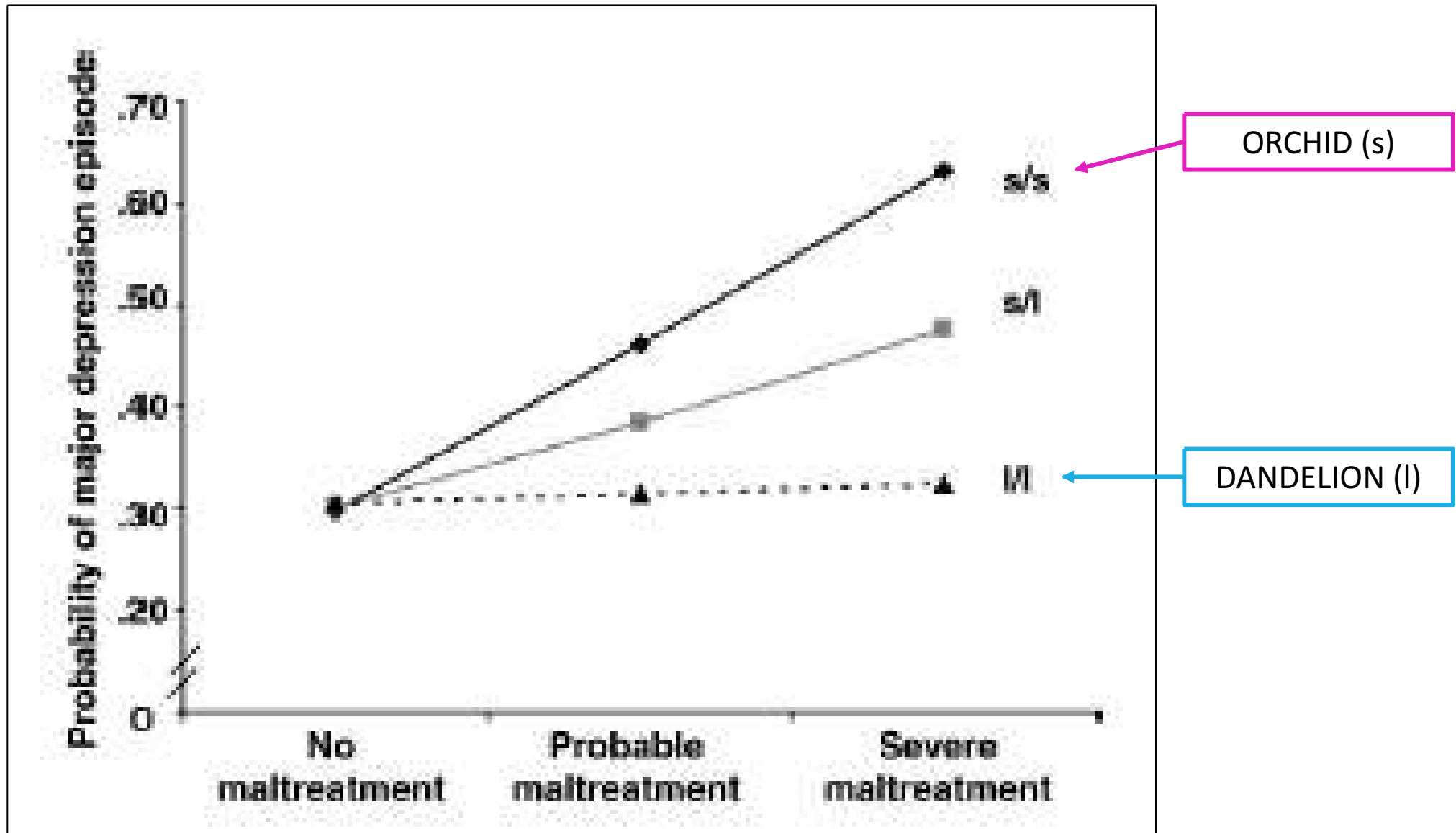
Biological Sensitivity to Context Model

DANDELIONS

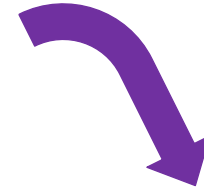
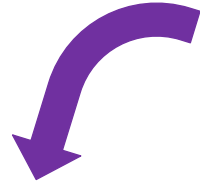


ORCHIDS





Caspi, Avshalom, et al. "Influence of life stress on depression: moderation by a polymorphism in the 5-HTT gene." *Science* 301.5631 (2003): 386-389.



Think about how the
brain develops.



THOUGHTS/MIND

TOP DOWN
Interpretation of Stimuli



**PROCESSING – HOW YOU EXPERIENCE
WHAT HAPPENS AROUND YOU**



BRAIN/BODY

BOTTOM UP
Sensory Input / Stimuli Driven



Looking at how the brain processes triggers...

E.G. HOW THE BRAIN CAUSES SOMEONE TO FEEL “ANXIOUS”

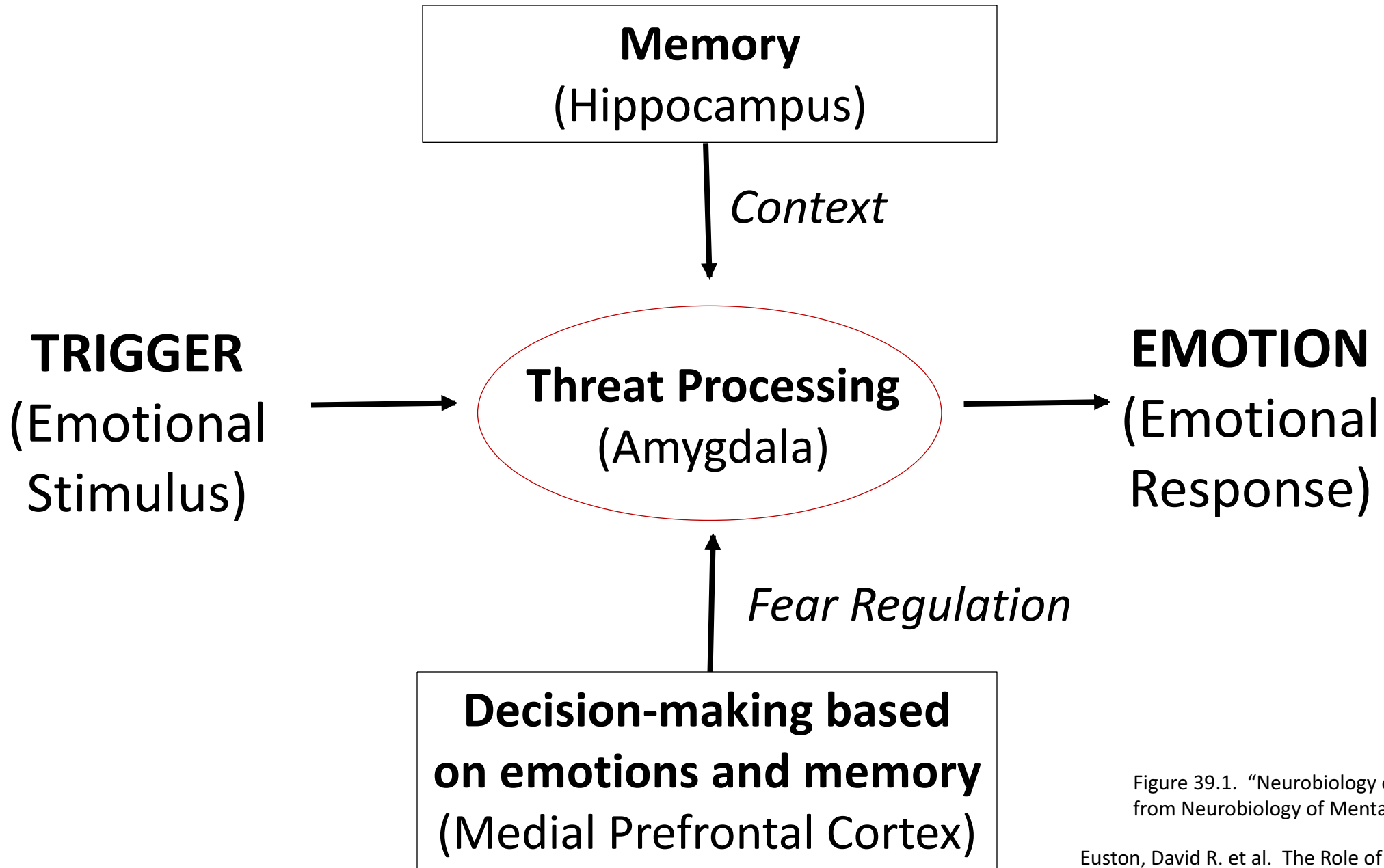
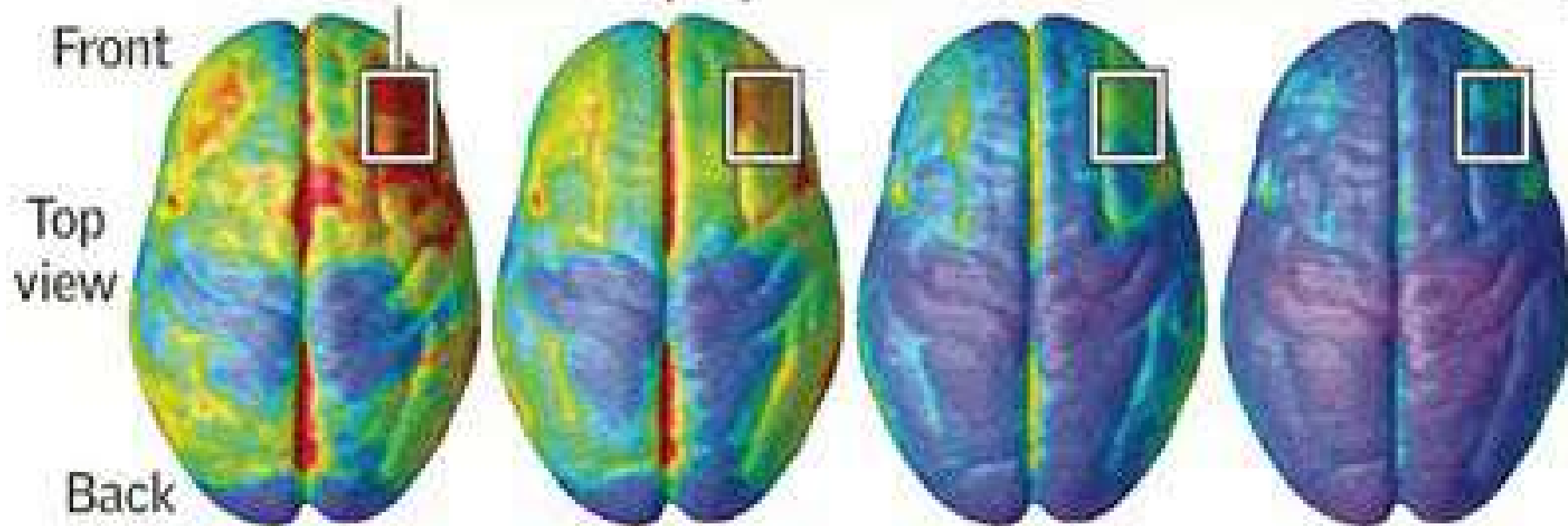


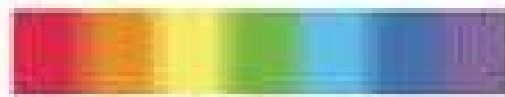
Figure 39.1. "Neurobiology of Fear and Anxiety" from Neurobiology of Mental Illness 3rd ed, 2009.

5-year-old brain Preteen brain Teen brain 20-year-old brain

Dorsal lateral prefrontal cortex ("executive functions")



Red/yellow: Parts of brain less fully mature



Blue/purple: Parts of brain more fully matured

Sources: National Institute of Mental Health; Paul Thompson, Ph.D., UCLA Laboratory of Neuro Imaging

Thomas McKay | The Denver Post

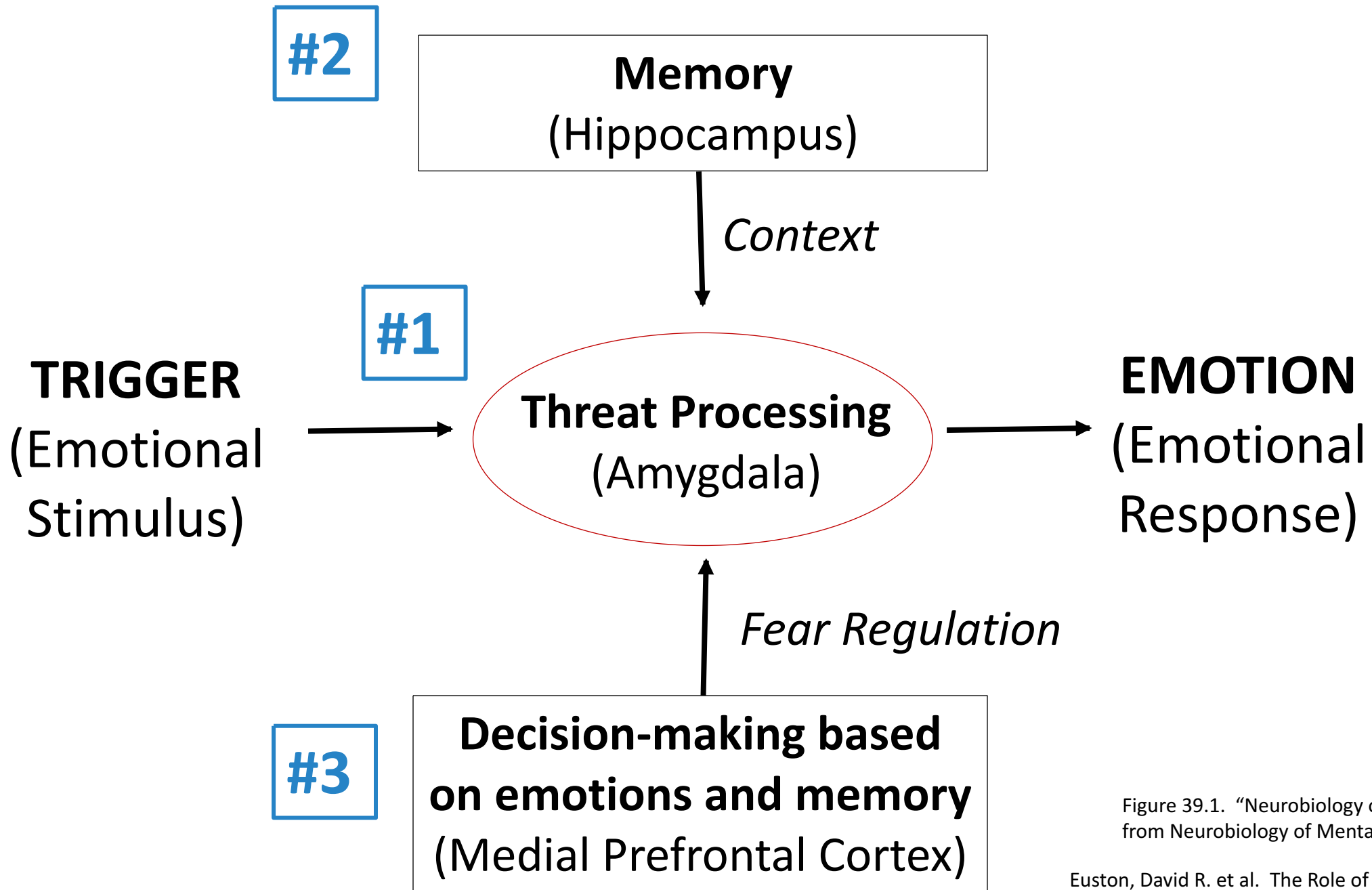
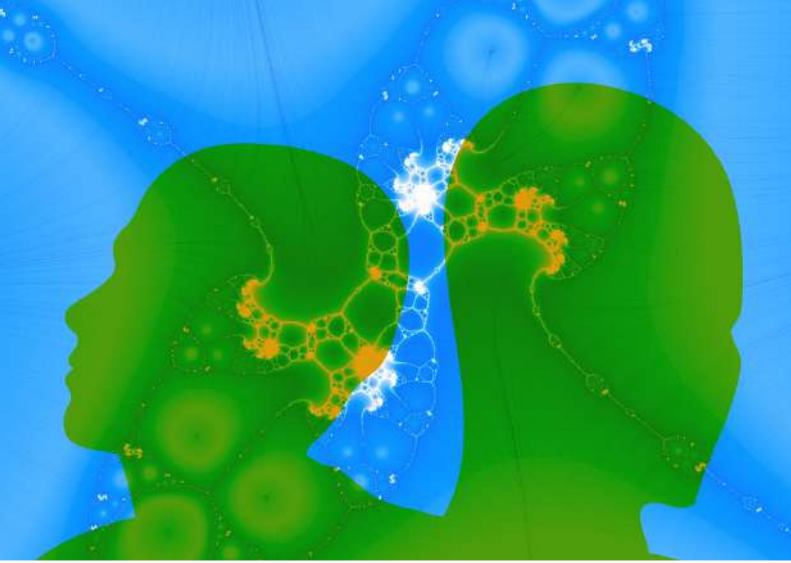


Figure 39.1. "Neurobiology of Fear and Anxiety" from Neurobiology of Mental Illness 3rd ed, 2009.

Euston, David R. et al. The Role of Medial Prefrontal Cortex in Memory and Decision Making. 2012. Neuron 76:6.

TAKE HOME: Kid brains are not little adult brains!!!

THEY ARE WIRED DIFFERENTLY, AND WE CAN'T EXPECT A RESPONSE THAT THEY ARE NOT CAPABLE OF AND WITHOUT TEACHING THROUGH OUR MODELING.



Mirror Neurons

Biological Factors: Anatomical, structural and molecular factors and their effects on individual's biological functioning.

Age	Learning disabilities	Allergies
Gender	<i>In utero</i> exposures	Metabolic status
Ethnicity	Toxic exposures	Endocrine status
Genetic profile	Nutritional status	Puberty (+/- menstrual cycles)
Epigenetic profile	Sleep	Temperament
Family history	Medications	Biological effects of trauma on neural wiring
Medical history	Substance use	Arousal bias (including overly developed fight/flight/freeze response)
Acute illness	Traumatic brain injury	...etc.
Chronic illness	Seizure history	
Developmental stages	Psychiatric history	
IQ / cognitive capacities	Psychopathology	

Examples:

Taking Biological Factors Into Account

- Are expectations developmentally appropriate for age?
- Developmentally, do they have any academic, social or emotional learning delays and/or disabilities?
- Could they be accessing information better if it were presented in a different way or through different means?
- Are they well fed, well rested, physically comfortable, and healthy?
- Are they getting a healthy diet, exercise, and regular sun exposure?
- Is the environment overstimulating?
- Are we modeling the response we want to see?

Psychological Factors

OUR INTERNAL EXPERIENCE – HOW WE SEE AND PERCEIVE THE WORLD, AND THE SKILLS WE HAVE TO COPE WITH OUR THOUGHTS AND FEELINGS.

Psychological Factors: Effects of psychodynamic factors, motivation and personality on experience and reaction.

Coping skills

Defense structure

Adaptability

Personality structure

Cognitive/emotional development (e.g. Erikson, Piaget)

Cognitive biases

Racial identification

Cultural identification

Sexual preference

History of trauma

...etc.

Examples:

Taking Psychological Factors Into Account

- Does child tend to see glasses as half empty or half full? How does s/he see her/himself?
- What is the child's understanding of what factors are getting in the way of meeting the expectation?
- Does the child have the skills to be able to both identify and cope with their feelings, and to be able to communicate their needs effectively?
- Is information being presented in a validating and nonjudgmental way (thereby enhancing a child's ability to hear and process it)?

Social/Environmental

THE WORLD AND CULTURE SURROUNDING THE CHILD – AND
PATHWAYS TO PROMOTING RESILIENCE

MACROSYSTEM

Political, economic, cultural,
societal contexts

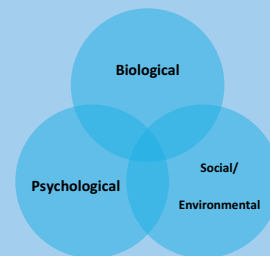
MESOSYSTEM

Family-School Relations
Neighborhood
Communities

MICROSYSTEM

Child – Family Relations
Child – School Relations

CHILD



Social Factors: Cultural, environmental and familial influences on expression and experience.

Family structure	Peers (supports and adversity)	Living situation
Socioeconomic status	Relationship/marital status	Location
School/educational hx	Hobbies/activities	Community exposures
School support plans (e.g. 504, IEP)	Legal hx	Access to risk factors (e.g. guns)
Employment	DCF or other agency involvement	Pets
Culture	Custody/guardianship	...etc.
Religious supports	Access to treatment	
Immigration status		

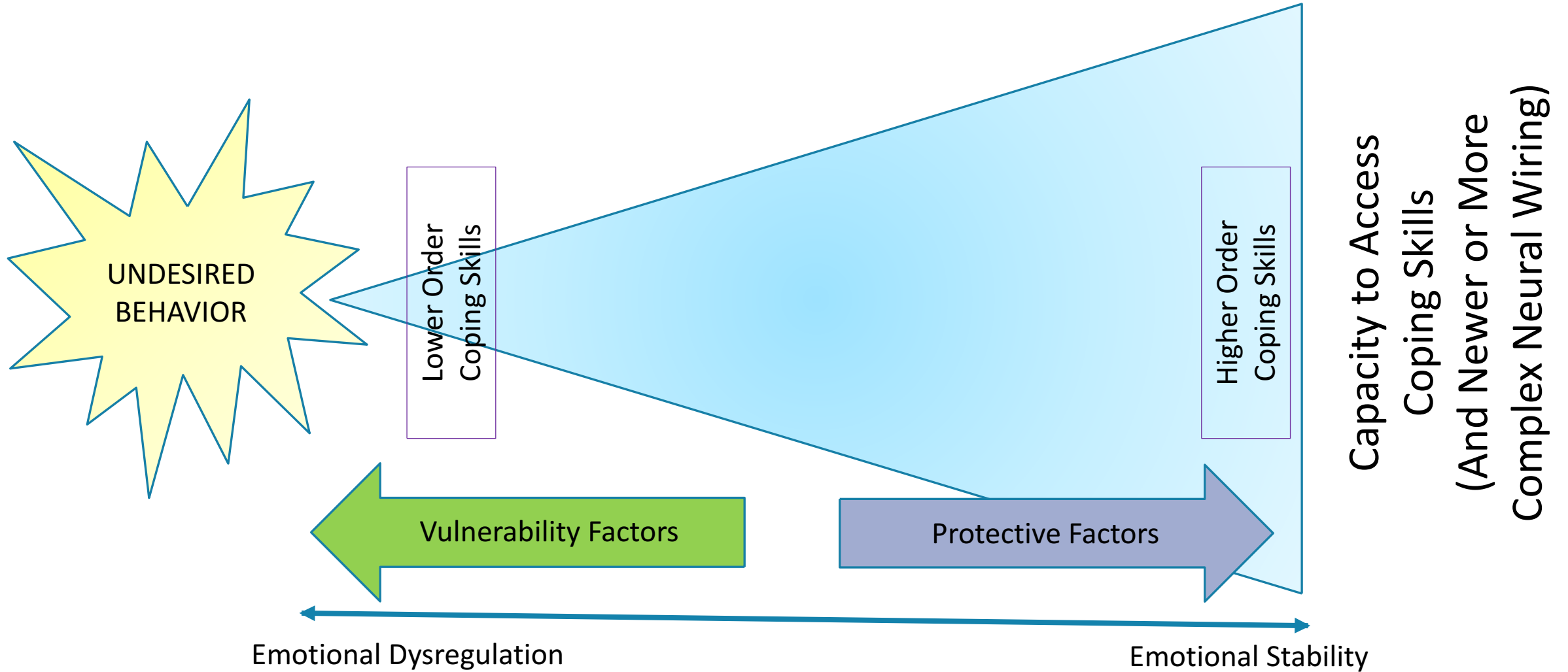
Examples:

Taking Social Factors Into Account

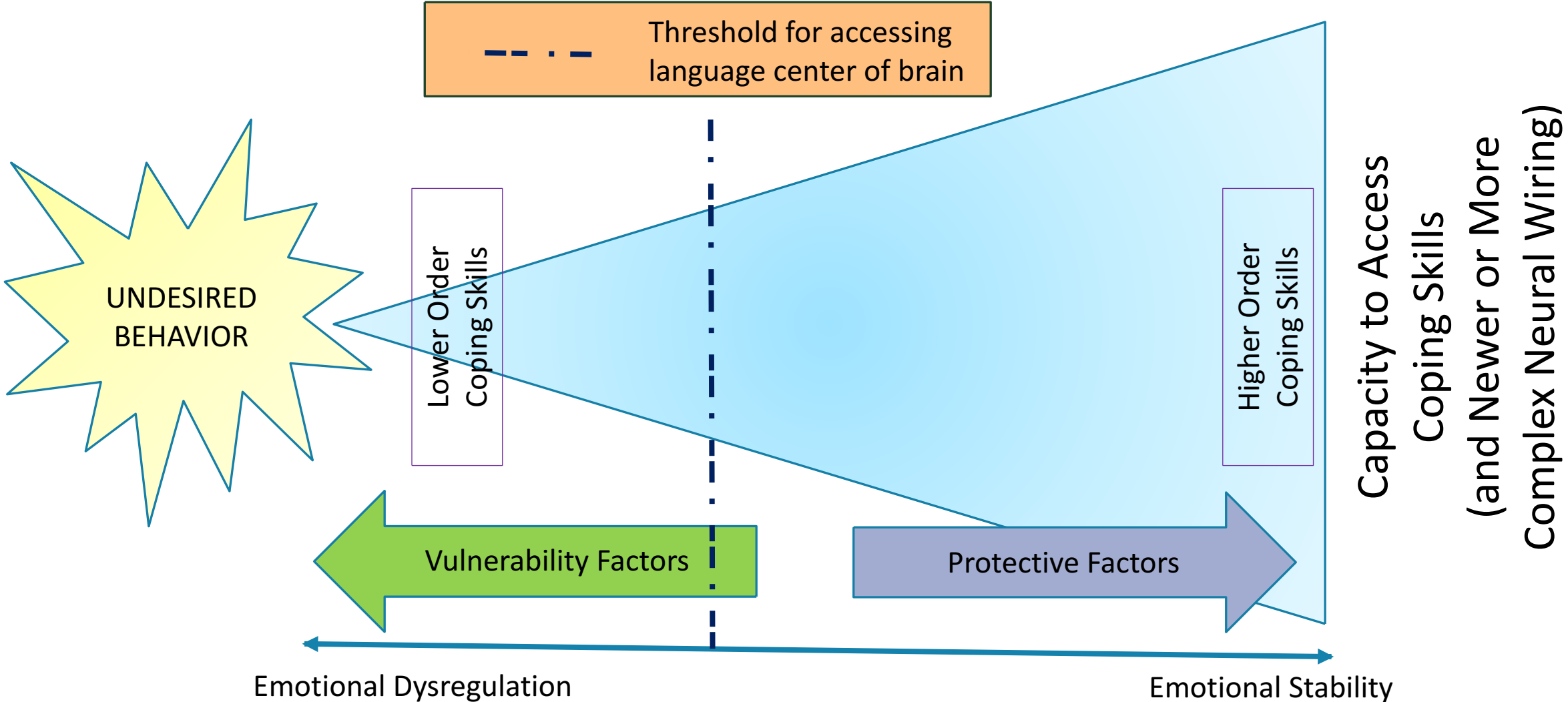
- Is the child a valued and loved or appreciated member of the family and/or community and/or environment, and how is that communicated to the child?
- Does the child feel that people are working together, both inside and outside of the family, to support him/her or get needs met? Is the child being placed in a position of “taking sides”?
- Does the child have an outlet for building on strengths and enjoyable activities?

How can you help
promote resiliency?

Scale of Emotion Regulation



Scale of Emotion Regulation

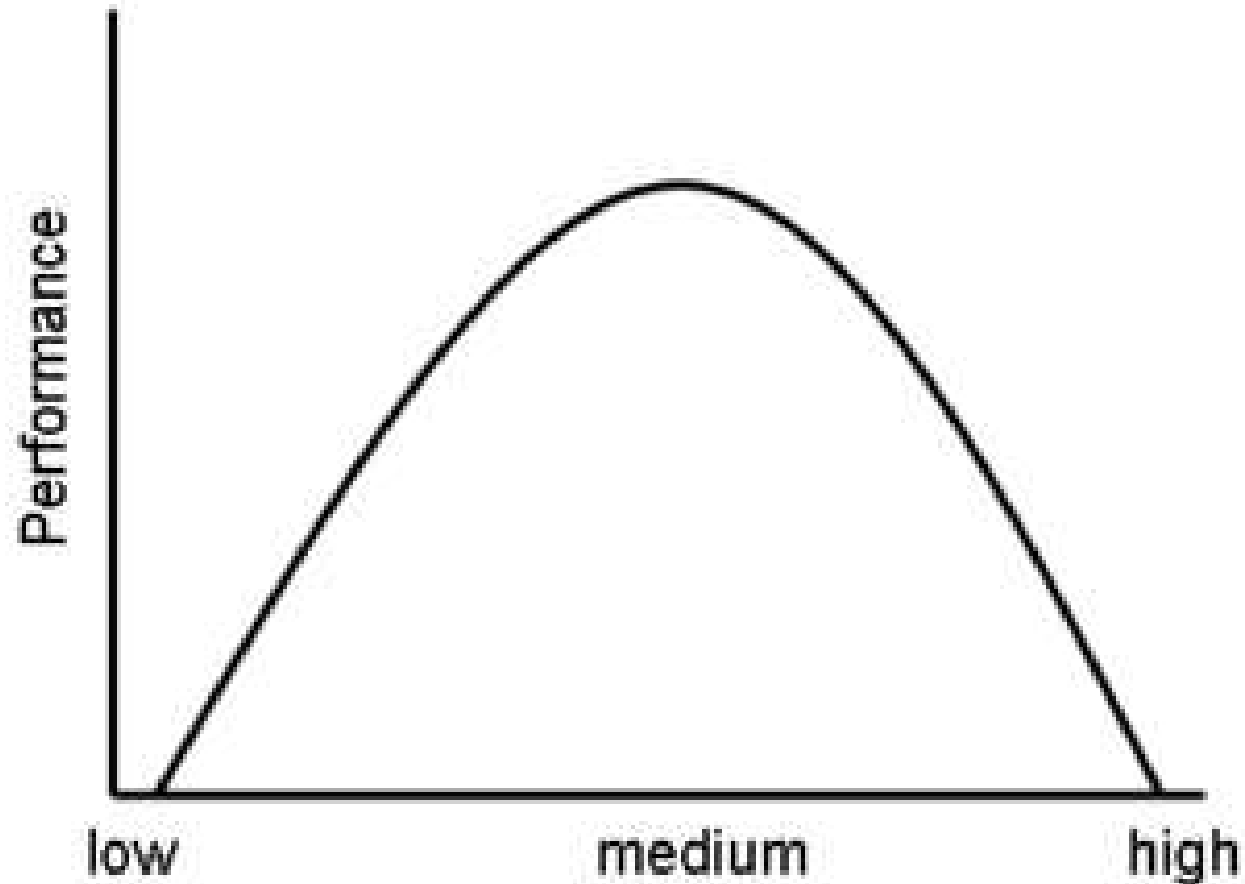


Adult interventions can be
both protective factors and
vulnerability factors!

AS A PARENT: WHAT IS THE GOAL OF YOUR INTERVENTION?

Stress Curve (Yerkes-Dodson Law)

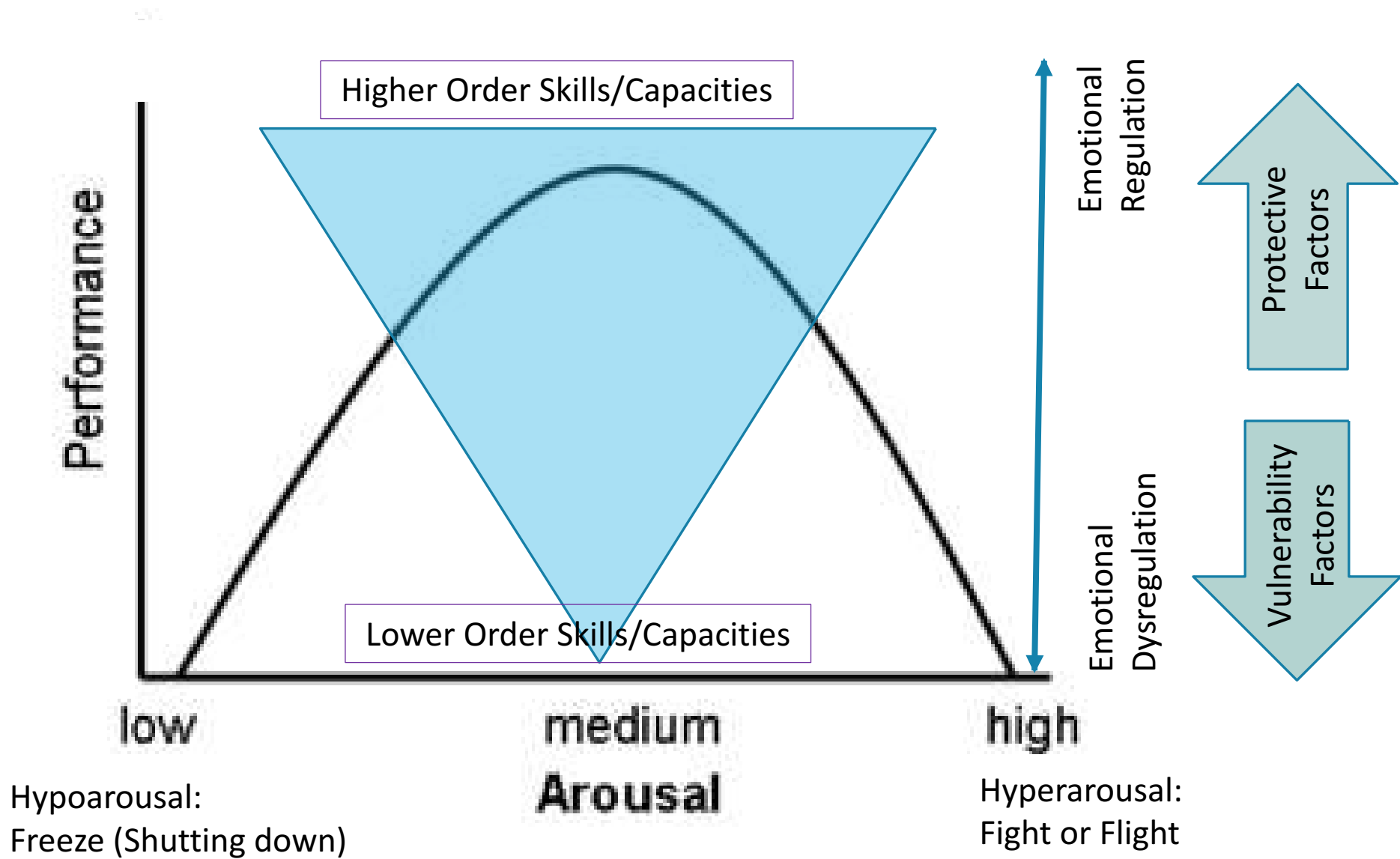
DESIRED
BEHAVIOR =
Ability to both
appreciate what
is going on
around them,
and follow
through with
desired
behavior.



Hypoarousal:
Freeze (Shutting Down)

Stress / Arousal

Hyperarousal:
Fight or Flight



Performance

Higher Order Skills/Capacities

Lower Order Skills/Capacities

Emotional Regulation

Emotional Dysregulation

Protective Factors

Vulnerability Factors

low

medium

high

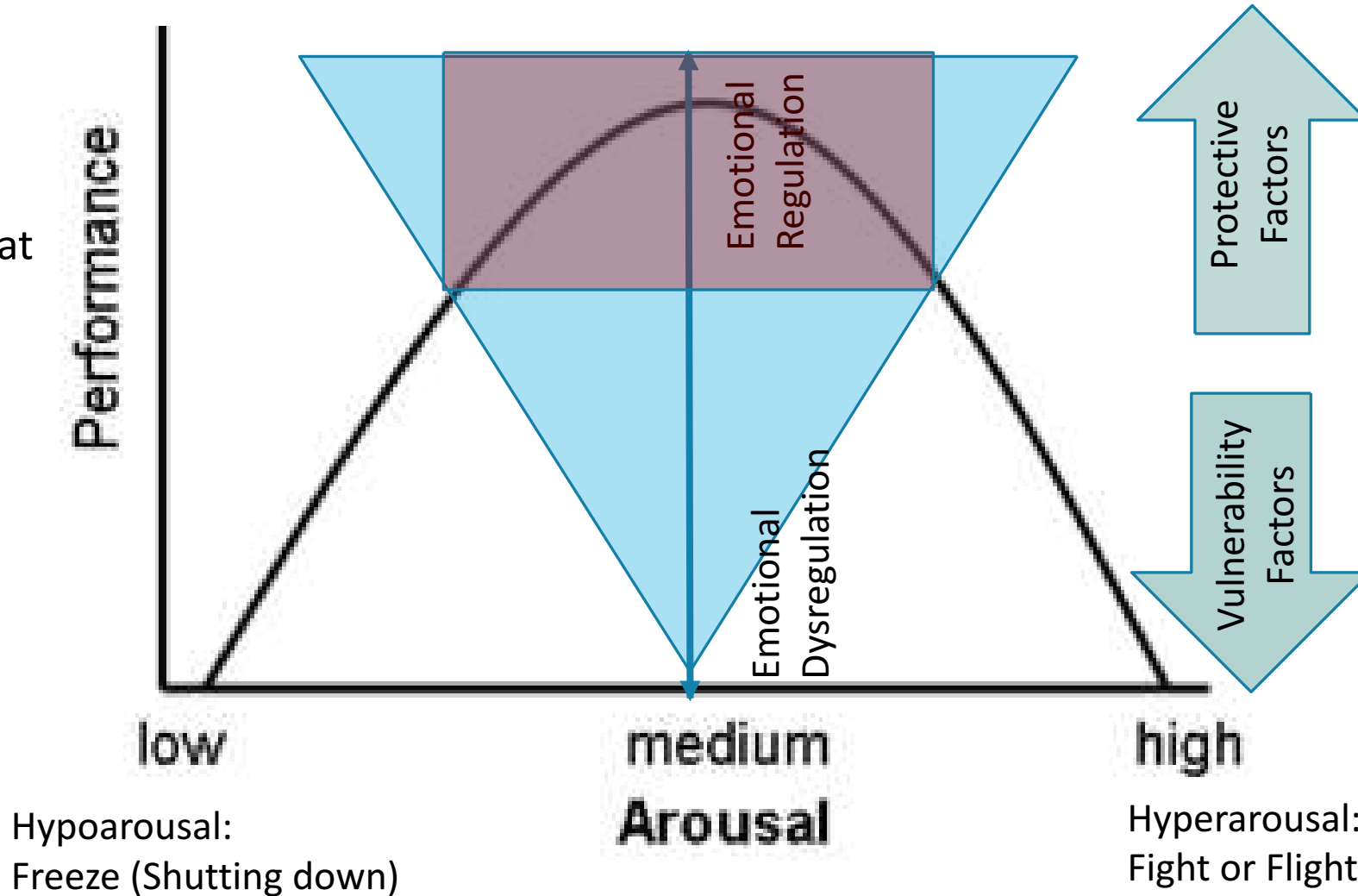
Arousal

Hypoarousal:
Freeze (Shutting down)

Hyperarousal:
Fight or Flight

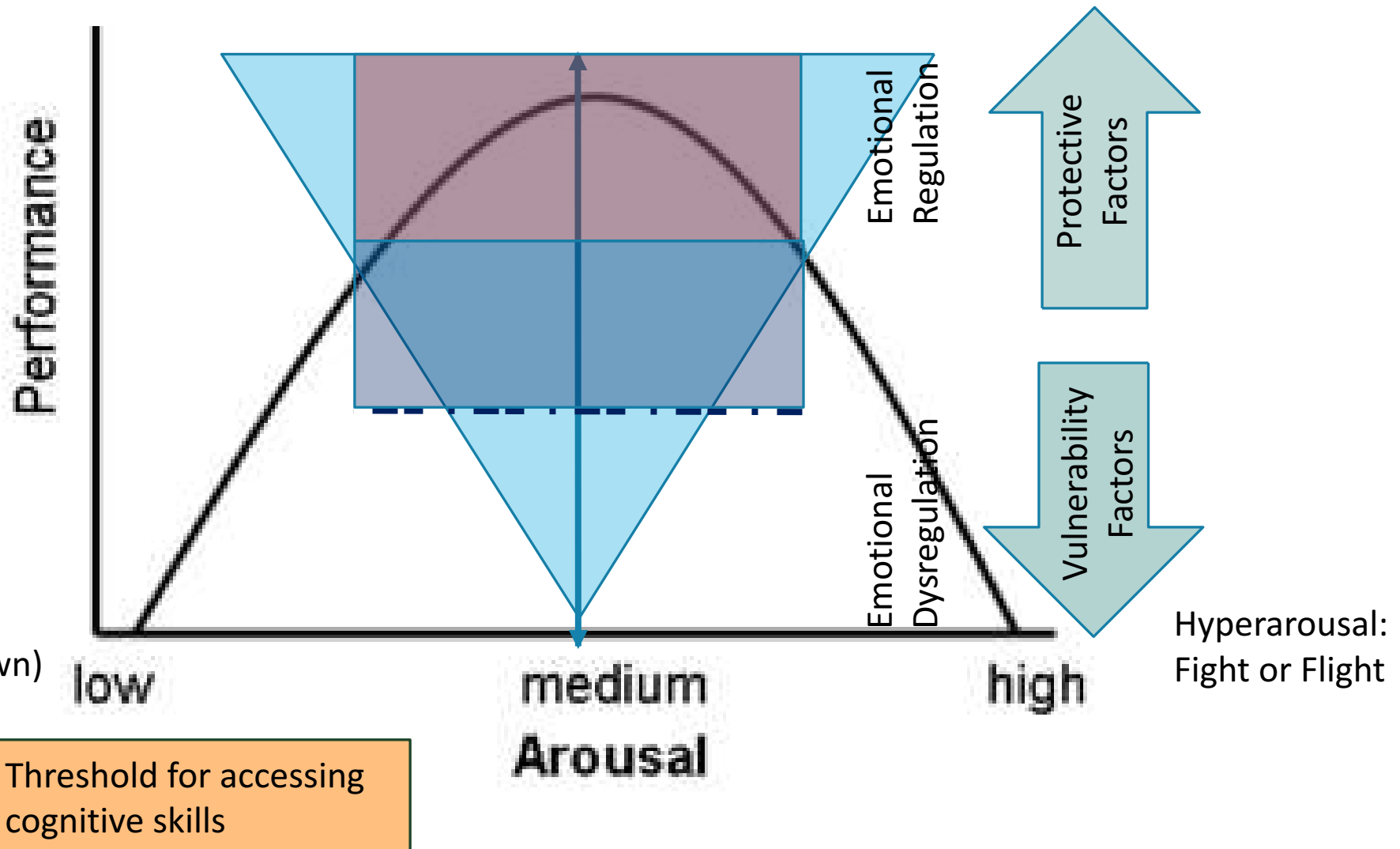
You have to be regulated “enough” to meet an expectation!

DESIRED
BEHAVIOR =
Ability to both
appreciate what
is going on
around them,
and follow
through with
desired
behavior.



Even when the child can't **act calm**, they may still be able to **take in information!**

DESIRED BEHAVIOR = Ability to both appreciate what is going on around them, and follow through with desired behavior.



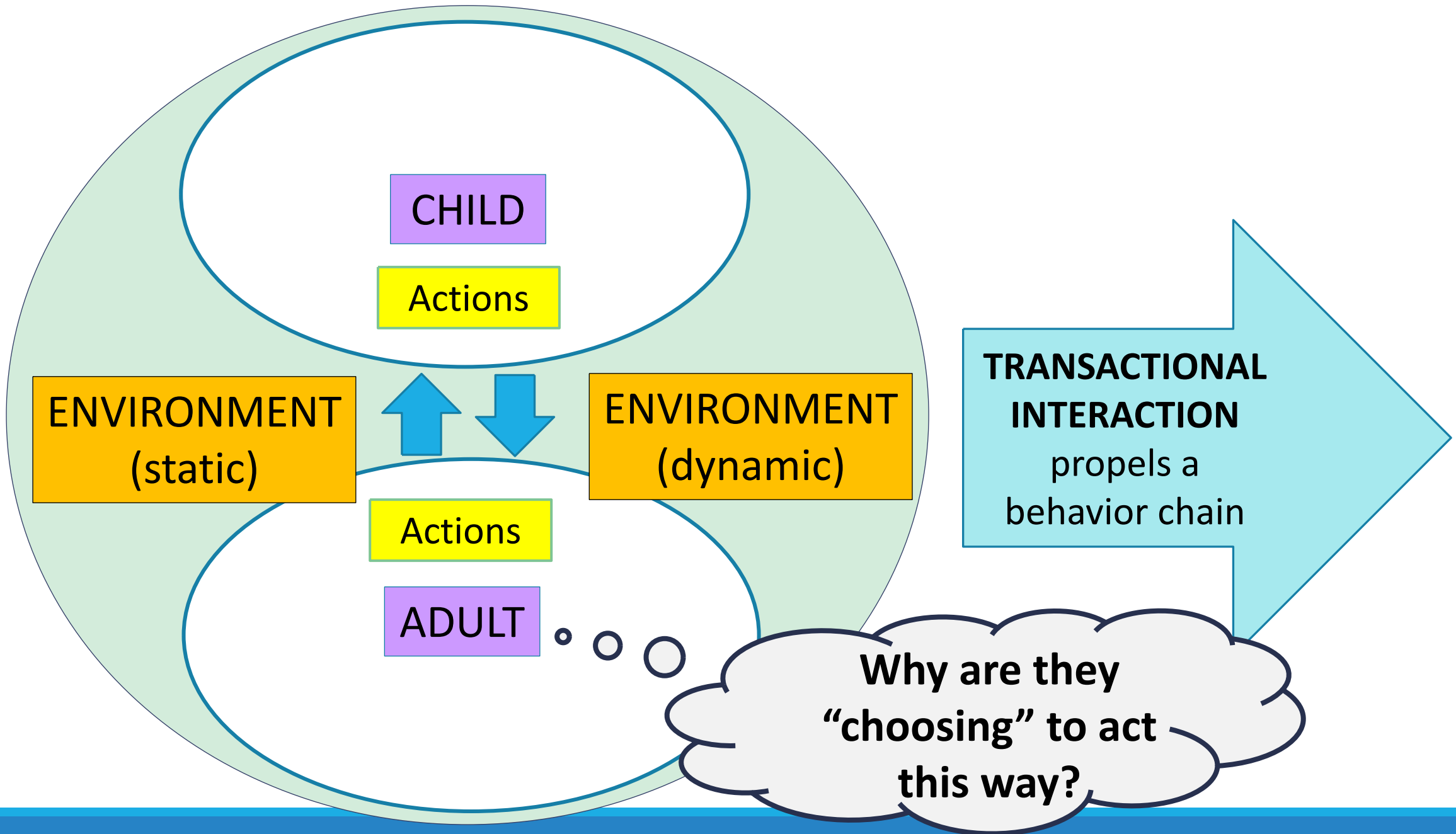
Thus – If your intervention is able to help regulate (i.e. calm them down)...

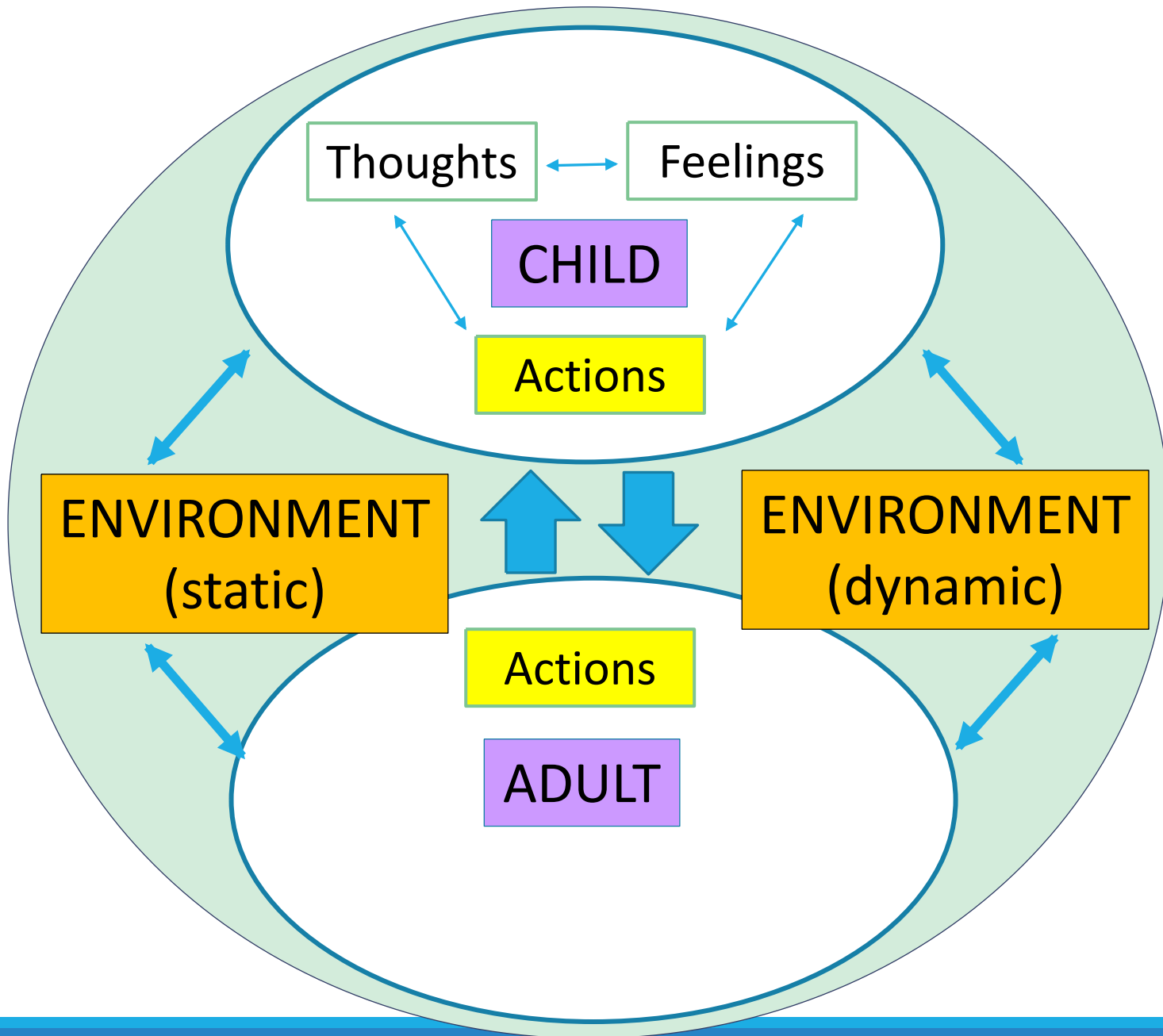
It also helps the child hear you (and listen & understand/process)...

And ultimately engage in desired behavior (such as communicating & problem-solving).

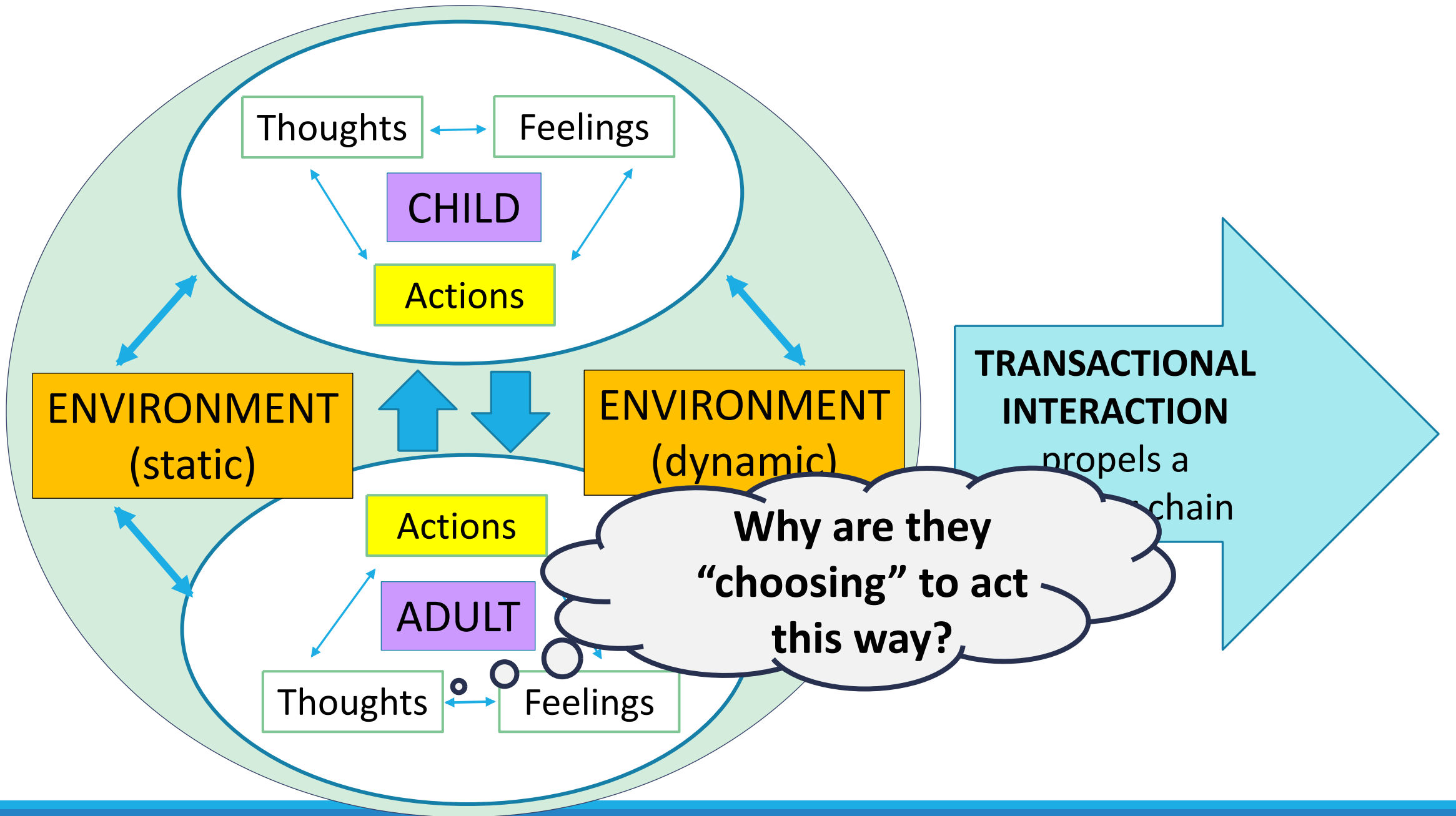
Overcoming Discomfort = RESILIENCY

IT'S OKAY TO BE UNCOMFORTABLE! TO BE RESILIENT, YOU HAVE TO BE ABLE TO TOLERATE DISCOMFORT!





TRANSACTIONAL INTERACTION
propels a
behavior chain



Thoughts

Feelings

CHILD

Actions

ENVIRONMENT (static)

ENVIRONMENT (dynamic)

Actions

ADULT

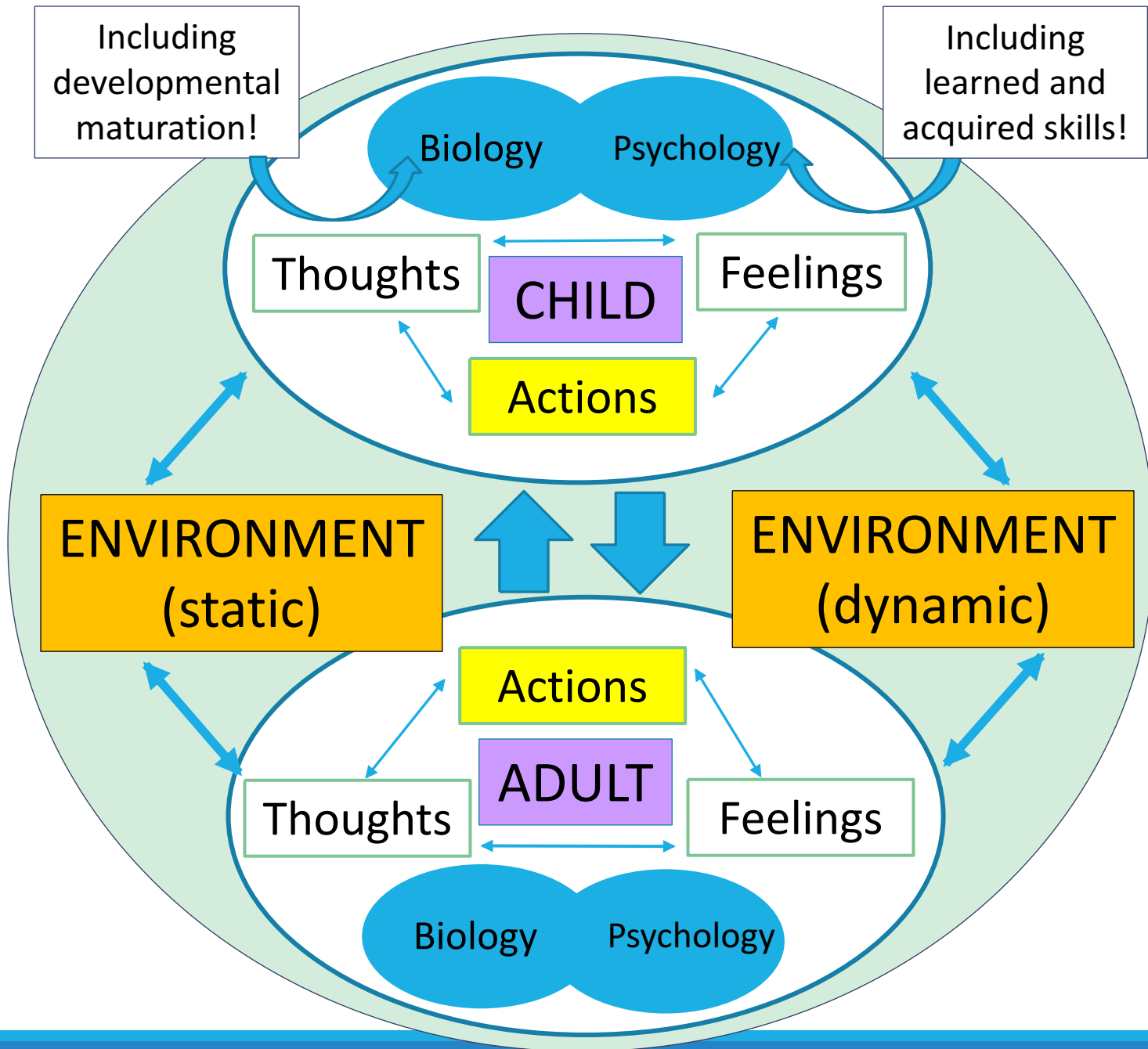
Thoughts

Feelings

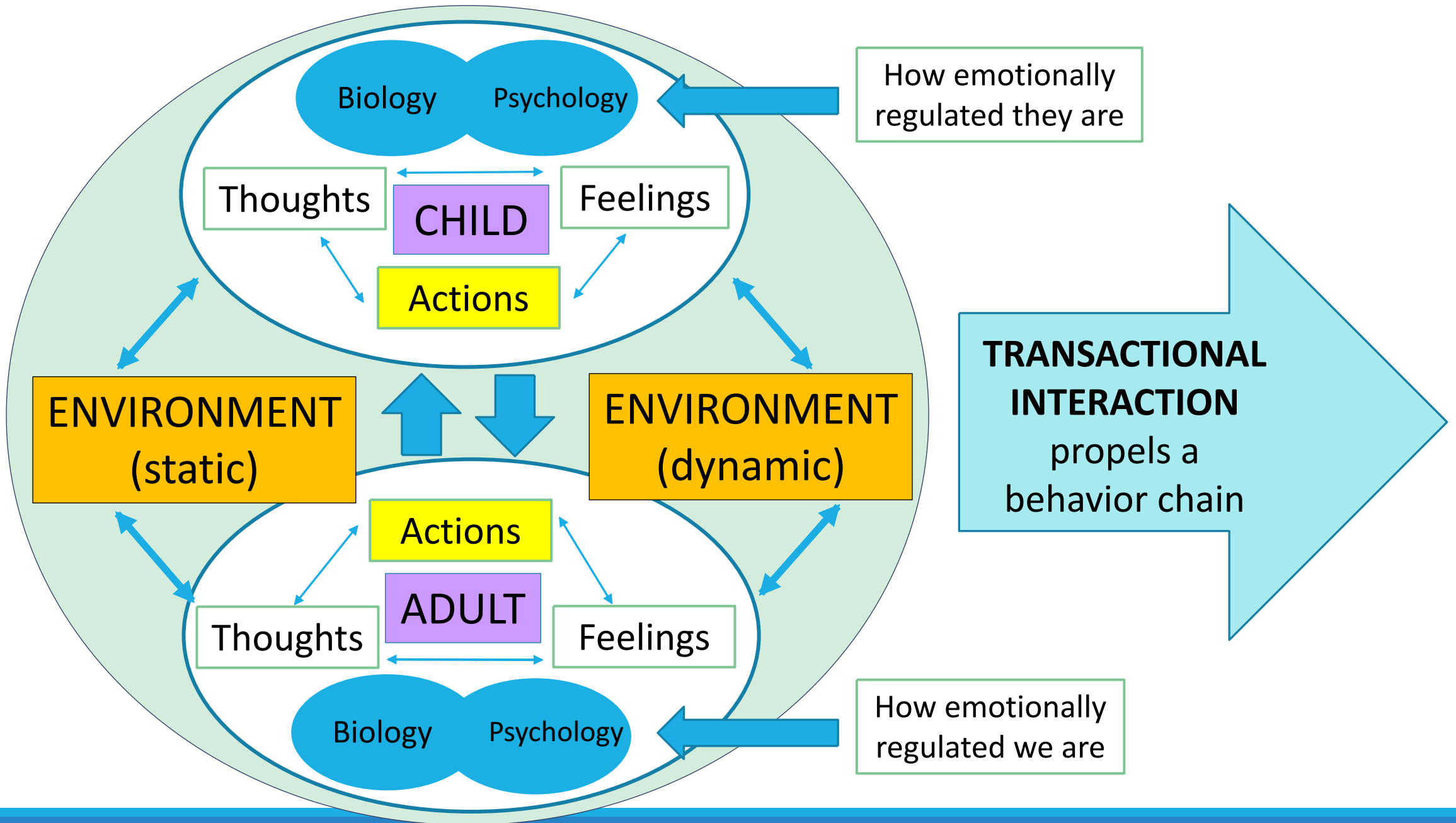
TRANSACTIONAL INTERACTION

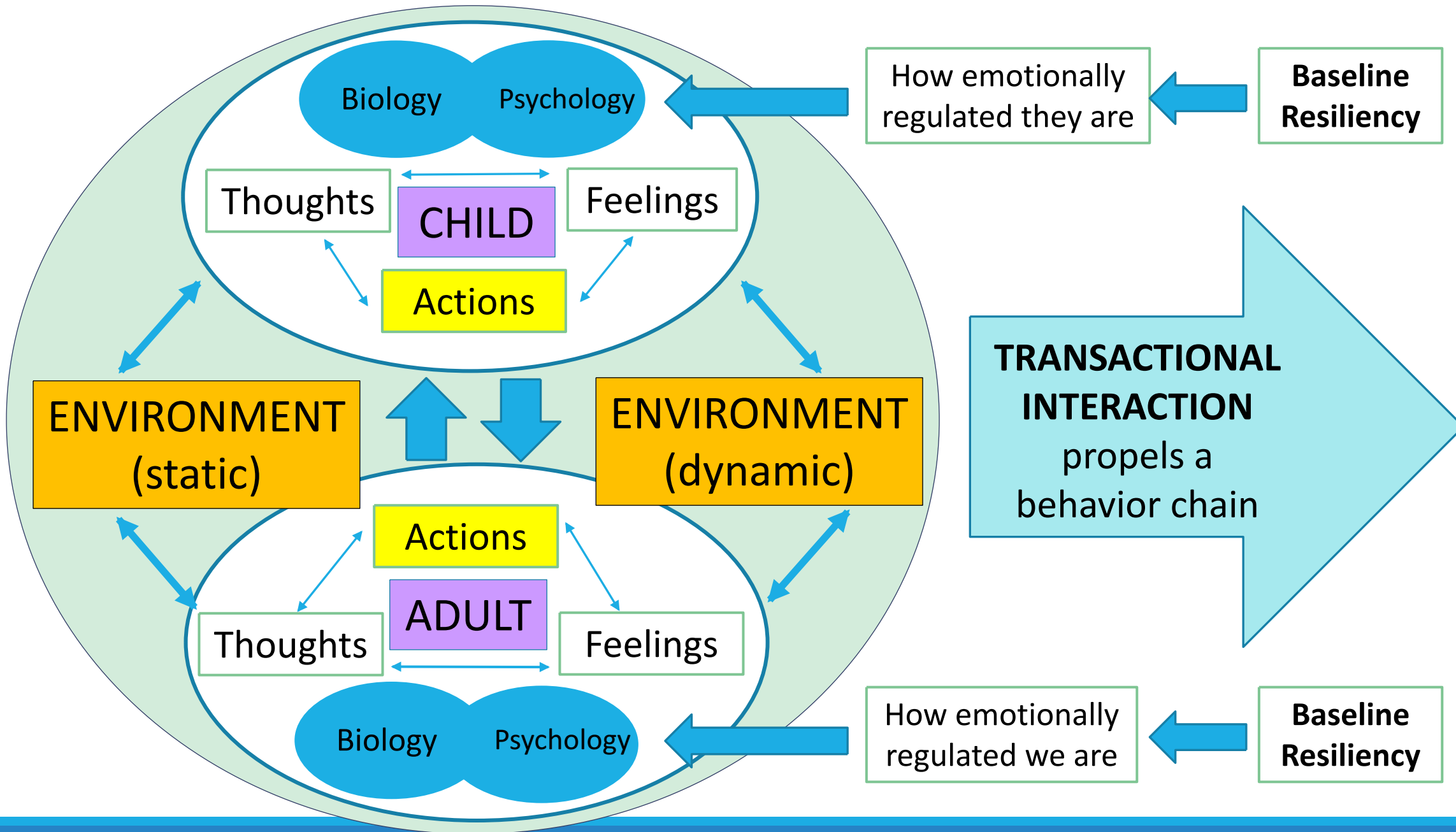
propels a chain

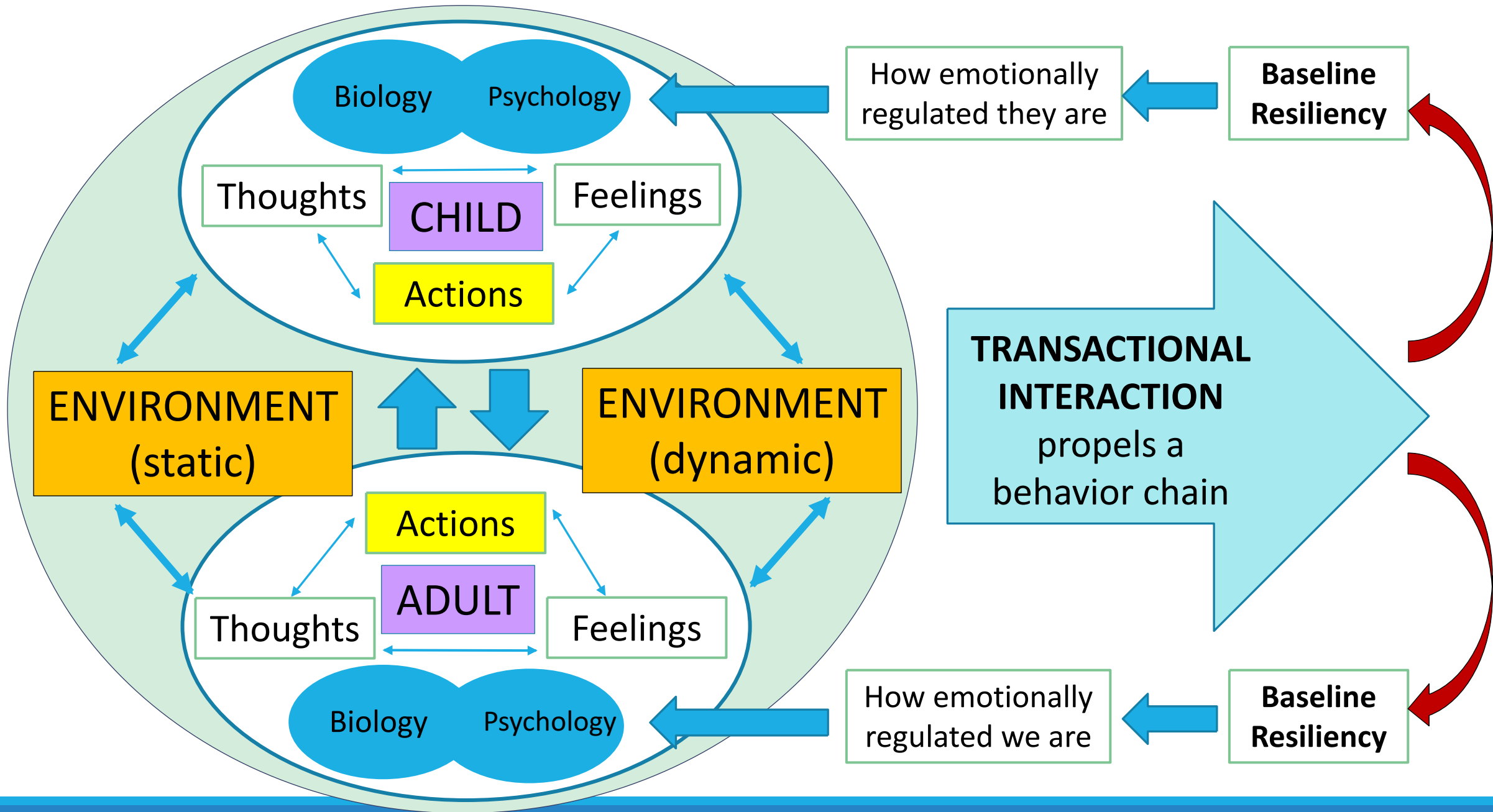
Why are they "choosing" to act this way?



TRANSACTIONAL INTERACTION
propels a
behavior chain







Resilience =
Transactional (evolving), rather
than inherent (the way it is).

BASELINE STATE AFFECTED BY BOTH STATIC AND DYNAMIC FACTORS!

TAKE HOME –

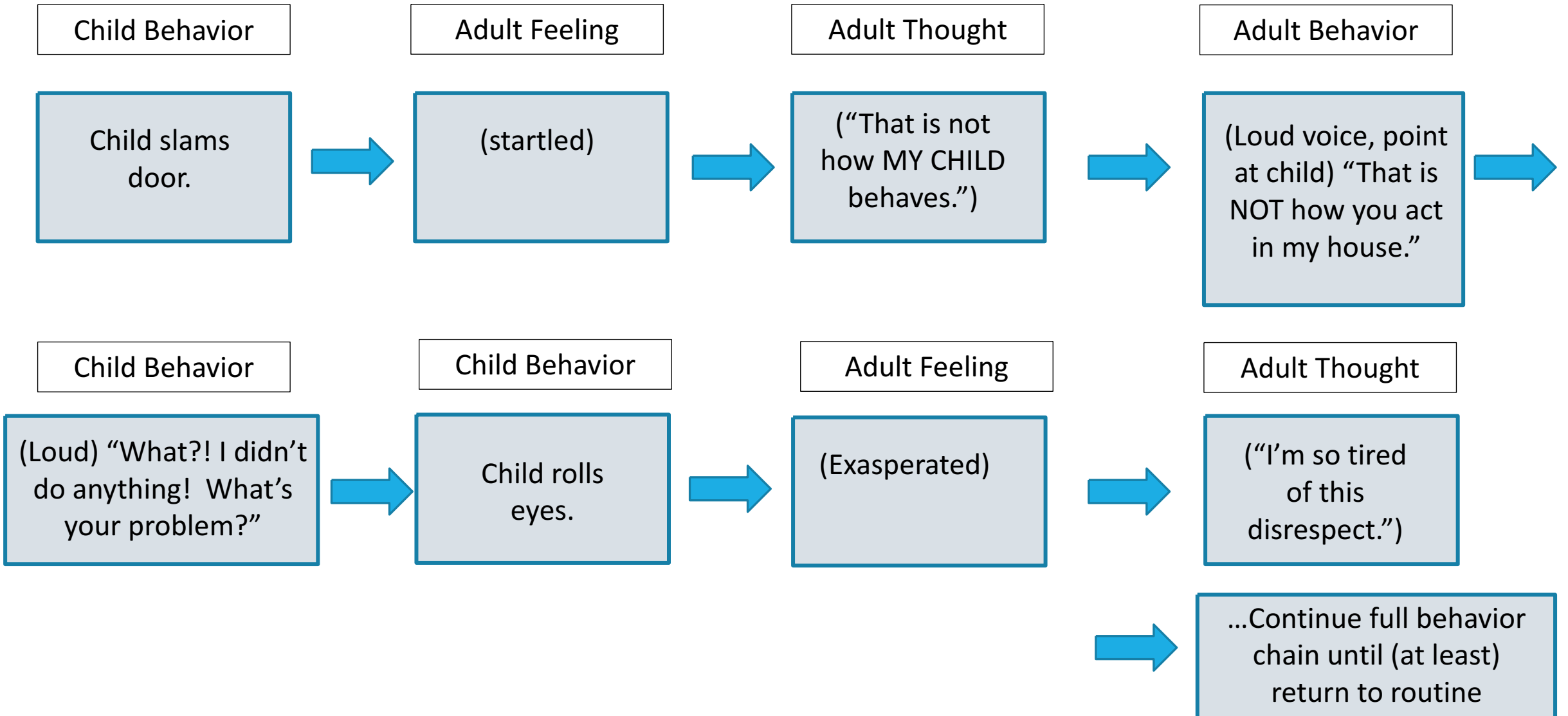
Children tend to learn best by:
(1) what they see modeled, and
(2) what they experience.

TO CHANGE A CHILD'S RESPONSE, WE MUST FIRST CHANGE
OURSELVES.

Changing our Responses

Adult-only behavior chains can help us become aware of what drives our interventions and change our behavior if needed.

Example of Adult-Perceived Behavior Chain

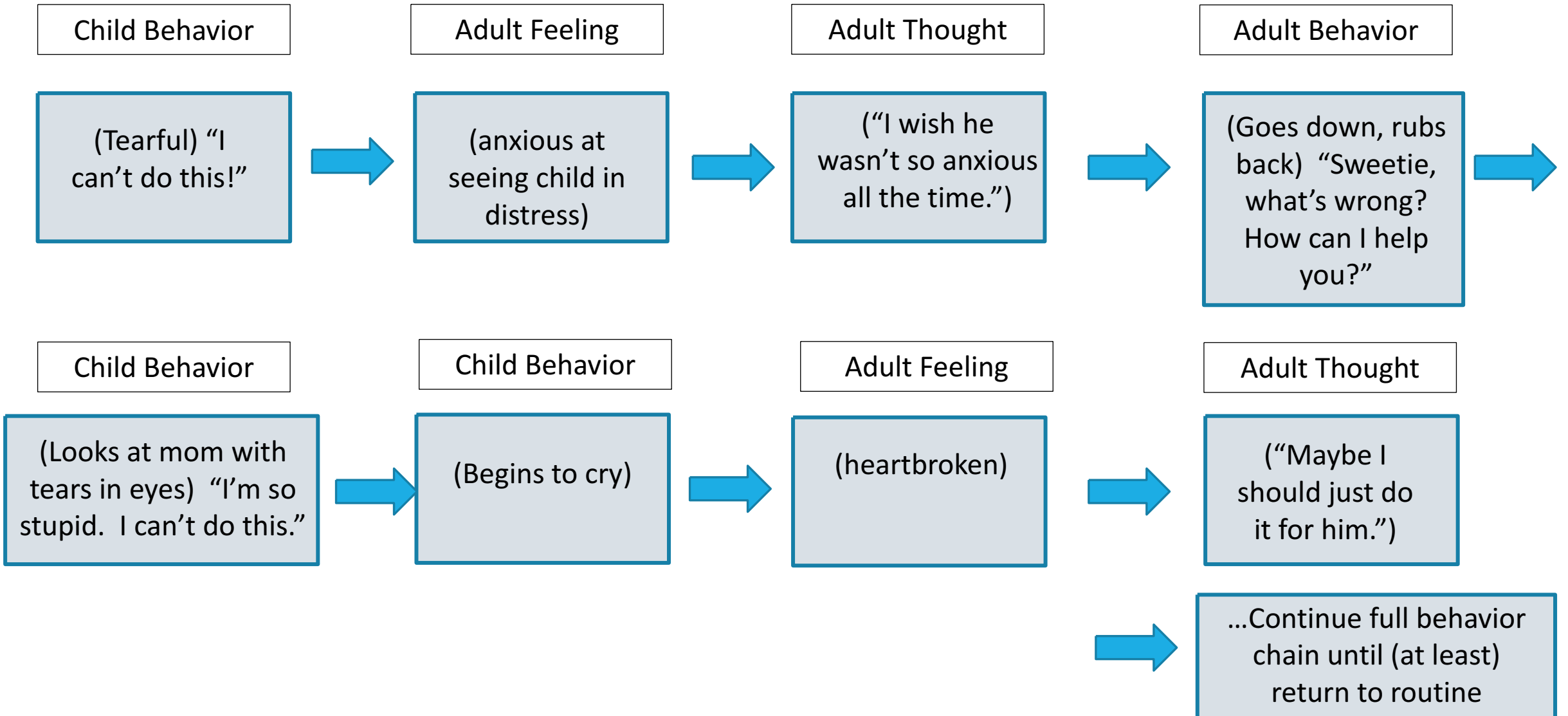




CAREFUL...

**DON'T MISS THE ANXIETY!!!
CHECK IN ON THE EMOTION AND VALIDATE
BEFORE YOU INTERVENE.**

Example of Adult-Perceived Behavior Chain

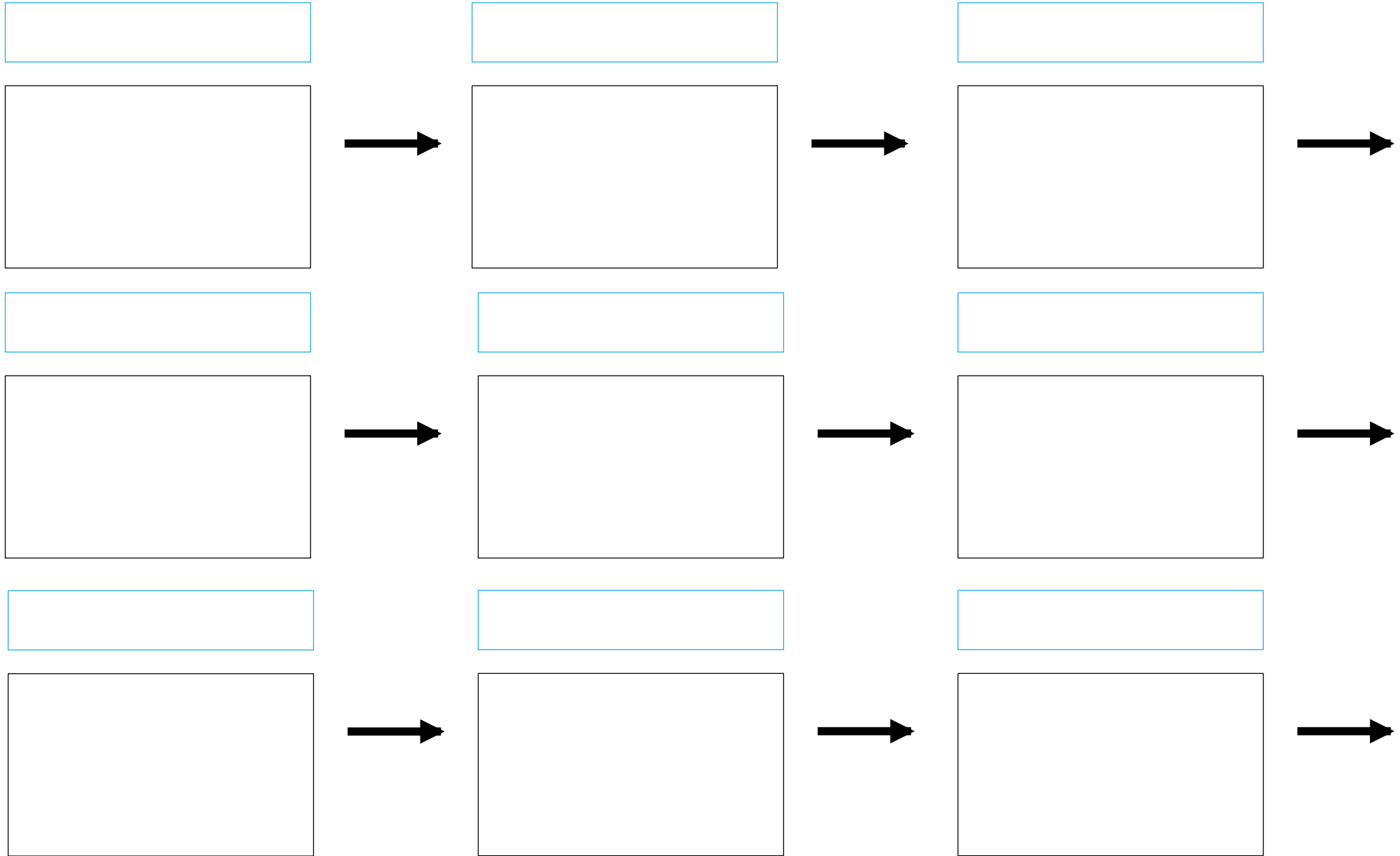




CAREFUL...

**DON'T REINFORCE THE ANXIETY!!!
YOU WANT TO STRENGTHEN RESILIENCY.**

BEHAVIOR CHAIN



Behavior Chain Blue Box Key

FULL BEHAVIOR CHAIN

- Environmental Factor (static or dynamic)
- Child Thought
- Child Feeling
- Child Behavior
- Adult Thought
- Adult Feeling
- Adult Behavior

ADULT-ONLY BEHAVIOR CHAIN

- Environmental Factor (static or dynamic)
- Child Behavior
- Adult Thought
- Adult Feeling
- Adult Behavior

Note: Boxes can repeat, and they are in no prescribed order.
Ex: Child behavior – Adult thought – Adult thought – Adult behavior – Adult feeling – Dynamic environmental factor – etc.

Intervention Strategies: Adult Delivery

Paraverbals/Nonverbals in Adult Delivery

- Kids who are anxious are unconsciously more attentive to nonverbal cues and will respond accordingly.
 - If you are dysregulated or anxious, they will pick up on it.
 - Monitor yourself.
- Kids with negative attention biases (e.g. anxiety) or significant social skills delays (e.g. autism) often make assumptions based on benign stimuli which can be interpreted as negative (e.g. tapping = impatient).

Tips with Paraverbal/Nonverbal Skills

- Think about the skills you are modeling – PARTICULARLY when dysregulated!
- Take a minute – breathe, smile, take a moment to find empathy.
- Relax your arms and body.
- Come down to their level.
- Approach slowly so as to be nonthreatening.
- Talk slowly and calmly with few words to enhance processing.
- Lengthen pauses. Give time to process words and to respond.

Trust-Building with Your Children

- Acknowledge communicative attempts (even when maladaptive!).
- Always validate before you intervene!
- Acknowledge child's emotional state – a form of validation.
- Celebrate successes! (Even small successes!)
- Connect with each child individually.
- Support child's strengths & interests.
- Be dependable and reliable.
- Provide choices and strengthen child's autonomy.

General Guidance for Adult Interventions

- Teach core skills – both proactively and in the moment.
- Model the skills you want to see – particularly when dysregulated.
- Strengthen relationships – connect with and strengthen child interests, model empathy, validate, support communication attempts, re-frame, and problem-solve together.
- Always be mindful of our words and actions at all times, because they become the child's inner voice and habits.
- Don't reinforce a child's negative scripts – believe in them, even when they are having difficulties believing in themselves.
- It's okay for a child to be uncomfortable! Help them overcome it.
- Enjoy the child at all times – even (especially!) on the hard days.



Resiliency Mindset

RESILIENT CHILDREN ARE HOPEFUL AND HAVE A HIGH SENSE OF SELF-WORTH THAT THEY ARE ABLE TO TRANSLATE INTO EFFECTIVE ACTION.

Resiliency Factors

- Feel special and appreciated.
- Have learned to set realistic goals and expectations for themselves.
- Developed ability to solve problems and make decisions; more likely to view mistakes and obstacles as challenges to confront, instead of stressors to avoid.
- Learned productive coping strategies (growth-fostering, not self-defeating).
- Aware of weaknesses/vulnerabilities AND strengths/talents.
- Self-concept - strength and competence.
- Developed effective interpersonal skills with adults AND peers.
- Able to seek out mutual regulation (support/nurturance) effectively from appropriate adults when needed.
- Recognize which life factors are within their control (“sphere of influence”) and are able to focus their energy and attention on these

Summary of Skills Influencing Resiliency

1. **Self-concept:** Self-confidence
2. **Self-concept:** Self-worth
3. **Self-concept:** Feels recognized and valued by adults and peers.
4. **Self-concept:** Recognizes and accepts sphere of influence
5. **Executive functioning:** Recognizes own strengths and weaknesses (including emotional state).
6. **Executive functioning:** Able to accommodate for relative vulnerabilities and problem-solve effectively.
7. **Emotion regulation** – Self
8. **Emotion regulation** – Mutual
9. **Social communication** – Receptive (including social pragmatics)
10. **Social communication** – Expressive



How to Optimize Resiliency Factors?

SKILLS DEFICITS AND/OR DELAYS AFFECT BASELINE RESILIENCY – SO ADULTS MUST MAINTAIN EMPATHY AND TEACH/MODEL SKILLS.

Self-Concept

- Recognize and emphasize a child's strengths and skills, especially baseline capacities that help them accommodate for their vulnerabilities (persistence, optimism, trying multiple strategies, etc).
- Build relationships and conversations with every child (deposits).
- Facilitate social skills acquisition with both peers and adults.
- Develop a family culture of inclusion, recognizing how every person contributes to the family and normalizing supports.
- Celebrate the little victories!

Executive Functioning

- Provide executive functioning supports (e.g. visual schedules, clock, written steps of expectations, cell phone alarms, reminders, etc).
- Model child-led problem solving, and honor child-driven solutions.
- Model use of monitoring of emotional state.
- Model mistakes and neutral or positive corrections/self-accommodations.
- Provide transactional supports (visual schedules, verbalization of thought process when brainstorming solutions, etc).

Emotion regulation

- Normalize emotion regulation strategies (coping skills) by modeling and enhancing access.
- Build breaks, calming activities, and time for family connection into the day – DON'T OVERSCHEDULE.
- Give your child a way to communicate how they are feeling to respect without pushing too hard for more information – a communication tool.
- Always keep in mind – what is the goal of the adult intervention? To help them succeed, you must first regulate. And the child must be taught the skills to identify and compensate for their anxiety!

Social communication

- Recognize communication attempts, validate them, and honor self-advocacy when possible.
- Both model and reinforce the skills you want to see (both verbal and nonverbal).
- Facilitate communication, particularly when you are aware that the child is struggling to stay regulated.
- Maintain neutrality around the information that is communicated!

Systemic Principles in Enhancing Resiliency

Schools and Resilience

- Among 1st generation immigrants, youth engagement was highest with:
 - Relationship with an adult at school,
 - Respectful treatment by teachers,
 - Friend to help with homework,
 - Teachers who cared about the child's success,
 - School being perceived as a place where children felt they belonged and where they experienced no conflict with others.

Family and Schools: Guiding Principles

- #1 – Parents and Teachers are Partners
- #2 – Maintain Regular Contact Throughout the School Year
- #3 – Practice Empathy, Empathy, Empathy
- #4 – Parent-Teacher Collaboration Should be Guided by the Goal of Developing a Resilient Mindset in Our Children
- #5 – Parents and Teachers Must be Proactive

A Few Take-Home Points

- It's okay, and in fact necessary, to be uncomfortable and to confront adversity, with modeled confident expectations!
- Help a child develop an internal locus of control.
- Strengthen self worth and islands of competence.

FOSTERING STRENGTH, HOPE, AND
OPTIMISM IN YOUR CHILD

RAISING *Resilient* CHILDREN



ROBERT BROOKS, PH.D., AND
SAM GOLDSTEIN, PH.D.

"Thoughtful and sound in its approach, practical and clear in its suggestions, direct and supportive in its tone, *Raising Resilient Children* is the perfect book for parents searching for a caring method to help their children grow into healthy, happy, loving, and mature adults."
—WILLIAM POLLACK, PH.D., author of *Real Boys*

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RAISING HUMAN BEINGS



.....
CREATING A
COLLABORATIVE
PARTNERSHIP
with YOUR CHILD
.....

Ross W. Greene, PhD

NEW YORK TIMES BESTSELLING AUTHOR OF *LOST AT SCHOOL*

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UNIQUELY HUMAN

A DIFFERENT WAY
OF SEEING AUTISM

BARRY M. PRIZANT, PHD
WITH TOM FIELDS-MEYER



DON'T SHOOT THE DOG!

THE NEW ART
OF TEACHING
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Karen Pryor

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Includes a new chapter
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Questions? Comments?

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