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Attachments and Neurobiology: Helping Children with Anxiety Disorders and Severe Mood Dysregulation

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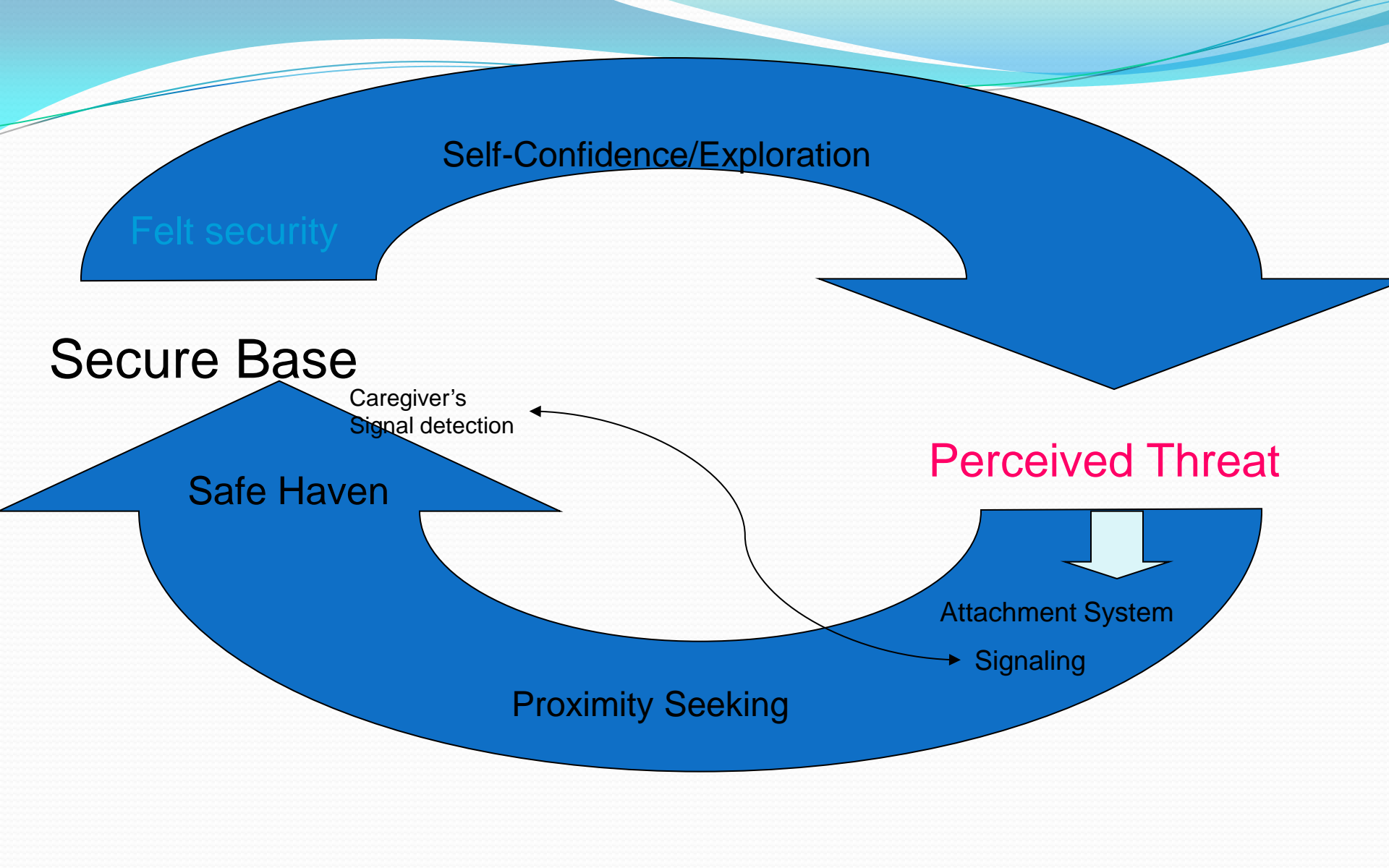# Attachments and Neurobiology: Helping Children with Anxiety Disorders and Severe Mood Dysregulation

John Kuhnley, MD

Gary A. Sibcy, PhD

Attachment and the Secure Base System

The Effects of Secure Base

- Repeated Secure-base interactions create **internalized models of relationships** that are carried forward to new relationship experience experiences
  - What to expect
  - How to behave

Secure Base Effects

- Powerful influence on Neurobiology
  - Emotion-Regulation and Sensory Integration
  - Language Development
  - Executive skills—
    - Shifting
    - Monitoring
    - Labeling
    - Problem-solving

The Pyramid Skills: Neurocognitive Skills Required for Self-Control
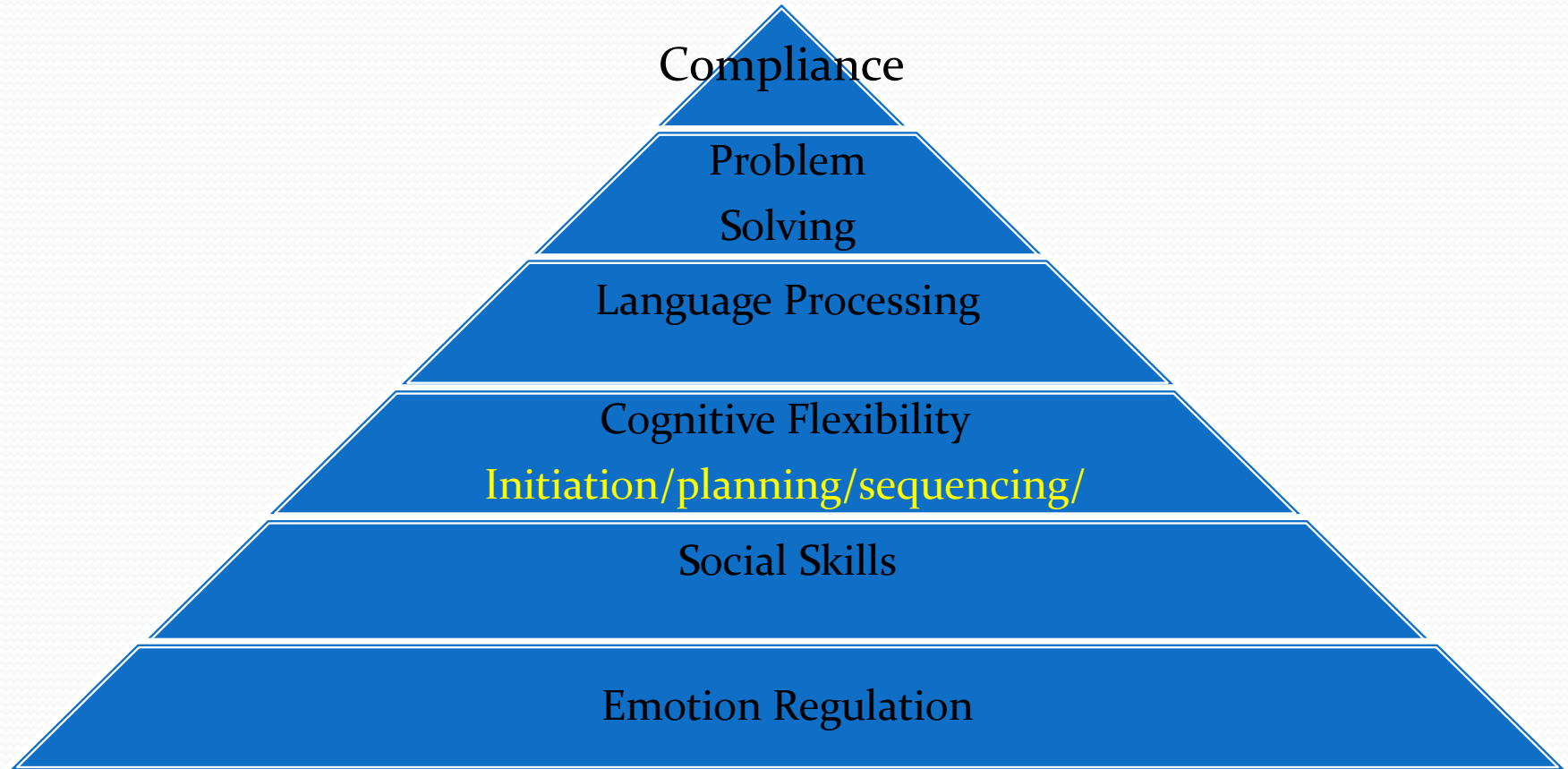
Healthy Neurobiology

- Three interrelated systems
  - Thinking
  - Feeling
  - Relating/communicating
- Working together in an integrated, goal-directed, collaborative fashion

Attachment Problems

- Attachment Problems—failures in the secure base system result:
  - Defensive, maladaptive relationship models
  - Neurobiological failure
  - Neurocognitive deficits—>lagging skills in:
    - Thinking
    - Feeling
    - Relating/communicating
    - Problem-Solving

formulation model
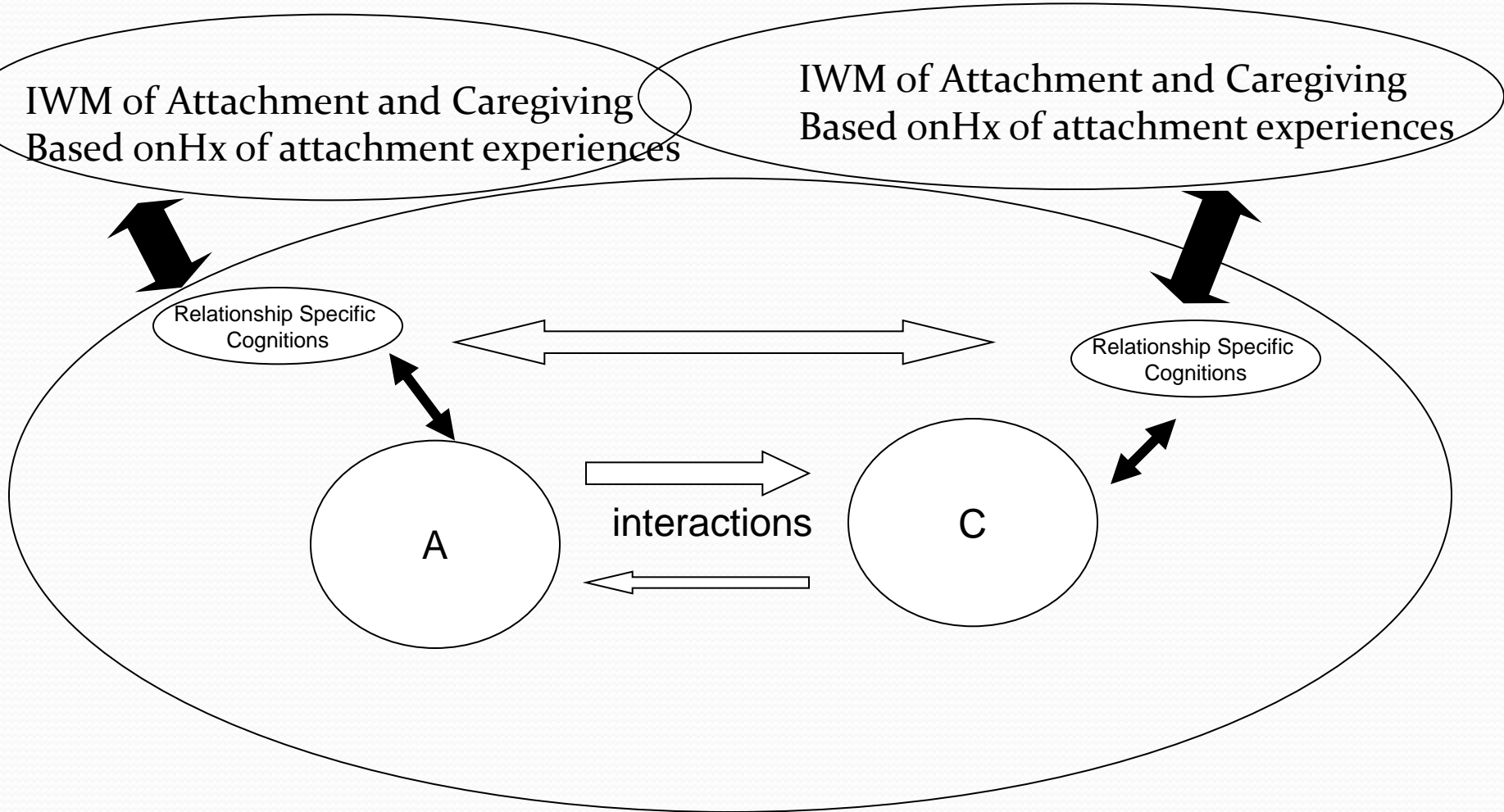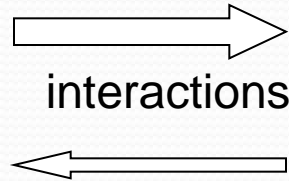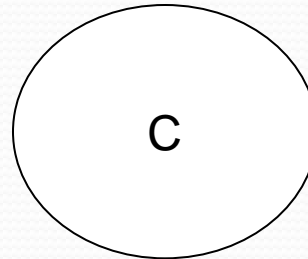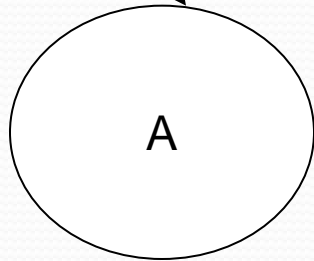
Relationship Components:

- Individual factors of both adult and child
  - Temperament
  - Neurobiology
  - Personality
  - relationship history
  - assumptions about emotions and behavior
  - Internal Working Models

The Effects of Child Emotion Dysregulation on Caregivers

- Brain Stem Parenting
  - emotional flooding/contagion effect
  - Perceptual disengagement/inability to articulate coherent narrative
  - Distorted representations about child
    - Negatively biased
    - Global
    - Rigid
    - Reactive/unreflective/inflexible

Sameroff's three R's of intervention

- Re-education
- Redefine
- Remediate
  - Parents
    - Collaborative problem solving skills
    - Relationship Enhancement—Banking Time
  - Child
    - Emotion Regulation Skills—Southam Gerow—VCU
    - Problem-Solving Skills Training

The Pyramid Self-Control

Compliance

Problem
Solving

Language Processing

Cognitive Flexibility

Social Skills

Emotion Regulation
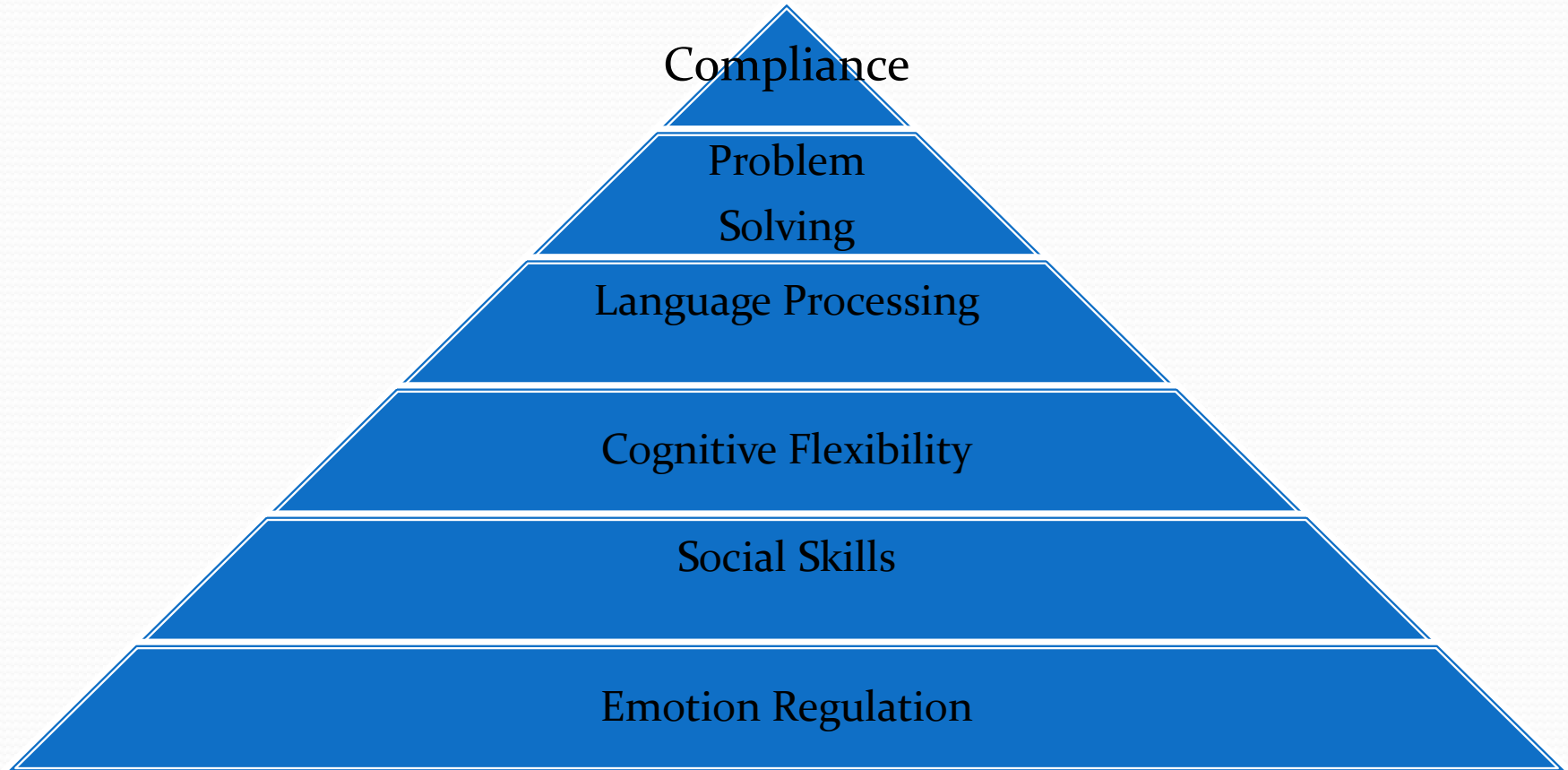
Motivation and Skills
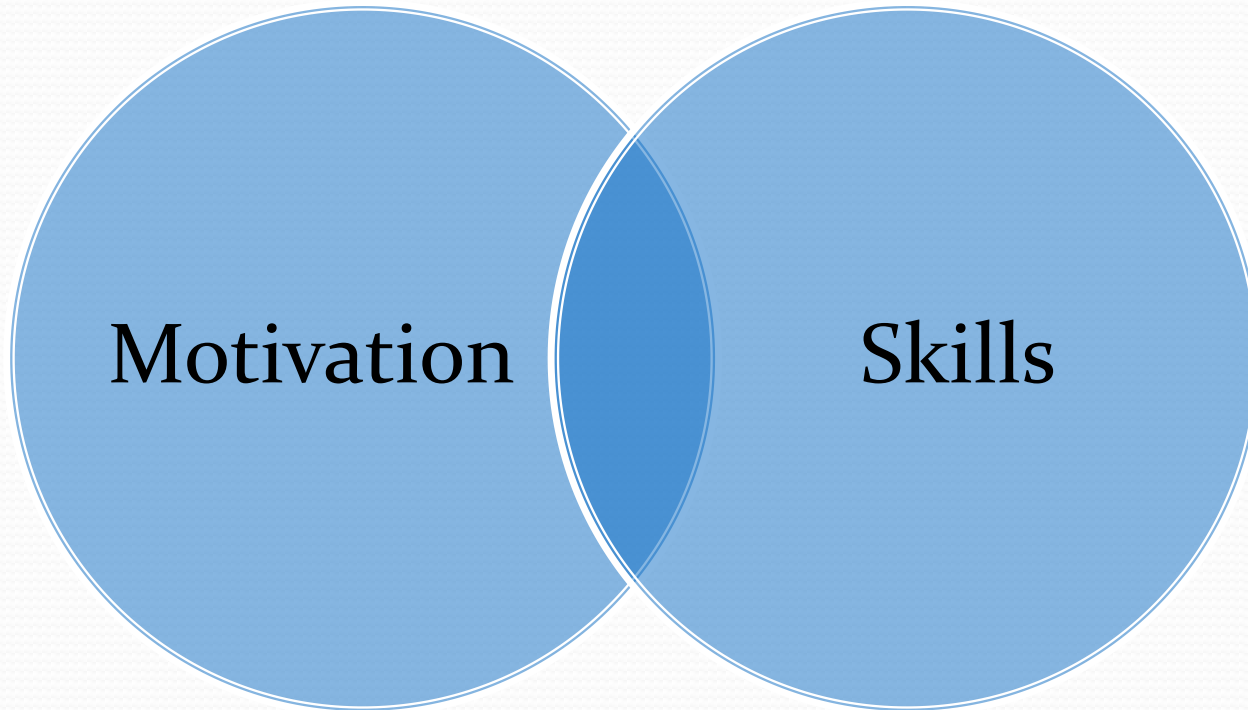
A Compliance Interaction

- A situation where adult wants child to do something that child doesn't want to do. Or a situation where a child wants adult to do something that adult doesn't want to do

Goals:

1. Pursue adults unmet expectations
2. Address child's concerns.
3. Reduce Challenging Behaviors, especially Reduce Melt-Downs
   - Destructive child's nervous system
   - Conditioned Emotional Responses
   - Reinforces insecure relationship models
4. Work on Pyramid Skills
5. Improve Secure Base Use—establish a helping relationships—the root of containment beliefs

Three Pathways
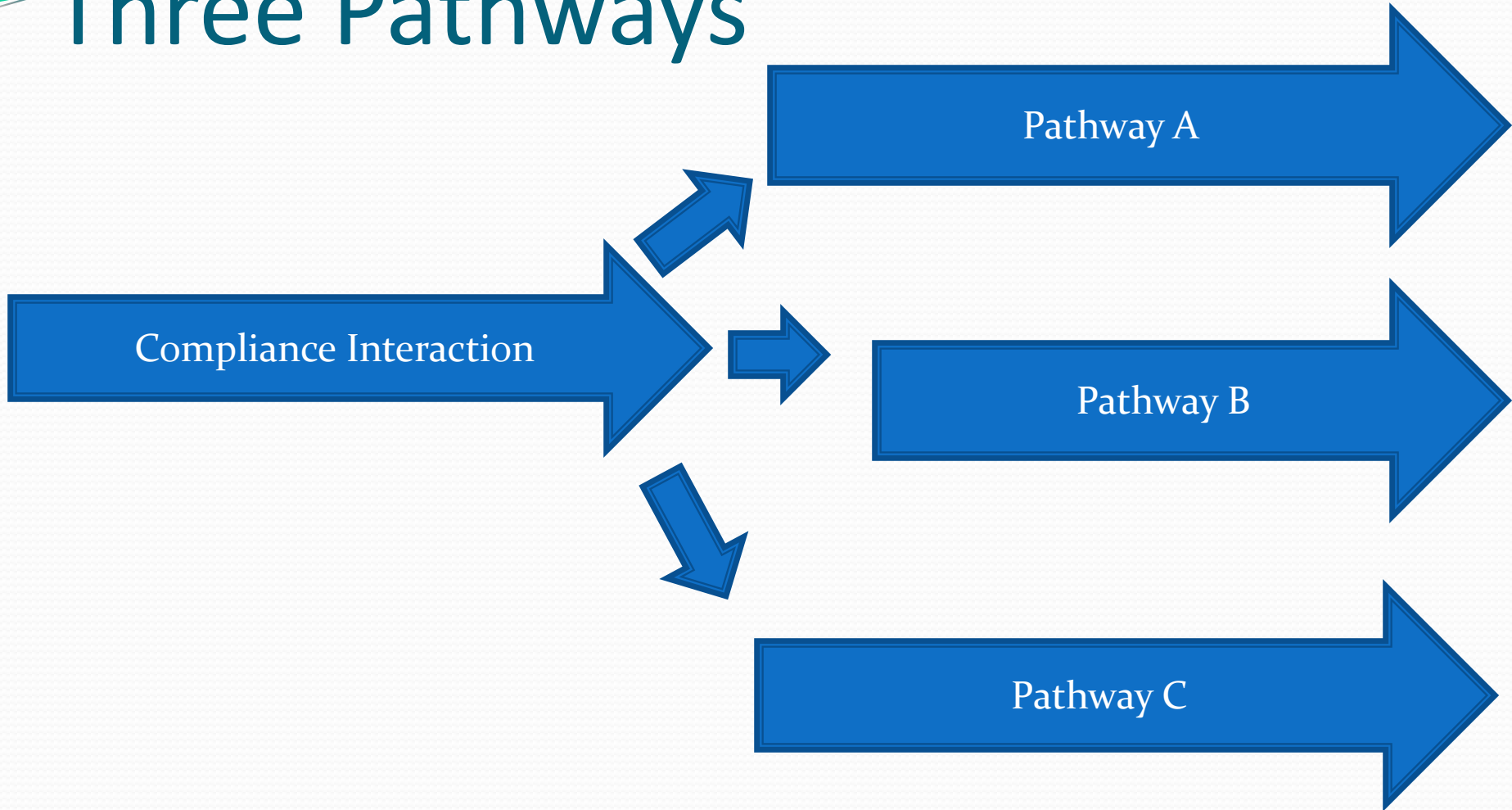
Collaborative Problem Solving:

- E—empathy—acknowledging and validating concerns
- A—Assert— defining boundaries; setting stage
- R—Regulation—maintaining self regulation

- I—Invite—child to problem solving
- C—Collaboration—anticipating problems

The Power of Situation Analysis

- Designed to specifically address each of these effects
- Two Phases
  - Elicitation
  - Remediation

Additional Modular Interventions

- Banking-Time Intervention to improve quality of attachment relationship—specifically targets globally negative, rigid, trans-situational schema
- Child-Problem-Focused CBT
  - Anxiety Disorder==Kendall's Coping Cat Protocol
    - Chorpita's Modular CBT for Anxiety Disorders in Children
  - Anger-Rage-Aggression—Southam-Gerow's Emotion Regulation Skills Moduls//Kazdin's Problem Solving Skills Training

The Room Wrecker

Working on a school project in kitchen. I had drawn an outline of almost everything but said that if you want to use this for credit you're going to need to do the rest. But he talked me into helping him with the coloring some and I agreed. He soon got side-tracked, playing with the dog.

The Room Wrecker (cont.)

I said, "I'm finished, I'm going into the other room. You are on your own." After about two minutes, he got angry because he made a mistake and threw the marker on the table. It rolled onto the floor and I picked it up but ignored his little tantrum. He started coloring again and soon he did the same thing, throwing the marker. I stuck my head in the room and said, "This is your project." As I walked away he mocked me by mumbling what I said under his breath. I told him if he doesn't straighten up he's going to be put into time out. He started cursing out loud and throwing markers across the room.

Room Wrecker (cont.)

I went back into the room and grabbed his arm and escorted him to the stairs and told him to go to his room. As he marched up the stairs he was cursing and name-calling. After each burst, I took more and more away, but it did nothing. He melted down, went to his room and wrecked it ...a complete rage

--we now have taken everything out of his room.

Using the Whole Brain

- Left-Right Hemisphere
- Brain Stem
- Limbic System
  - Avoid Amygdala Hijacking
  - Septal Rages
- Prefrontal Cortex

Empathy/validation

- Listening and understanding child concerns
- Helping child articulate concerns
- Taking concerns seriously
- Neuro Target—
  - Activates left-prefrontal cortex to represent negative emotion in higher language centers in brain
  - Helps regulate both brain stem (autonomic nervous system) and limbic system (emotional brain)
  - Activates mirror neuron systems in both

Assert/Containment

- Define Problem
- Don't mistake your solutions for concerns
- Appeal to rules as important principles to follow

Neuro-targets

-activates anterior cingulate cortex and insula, which are resonance circuits

Frontal-prefrontal cortex—pre-problem solving circuits

Respect/Regulate

- Non-contingent respect
- Never use disrespect as a form of punishment
- Avoiding negative attributions
- Remain warm—avoid triggering CER's

Invite

- asking child to generate possible solutions
- Avoid forcing solutions

Neuro-Targets

--middle prefrontal and dorsolateral prefrontal regions for more formal problems solving cortex

Collaboration

- Working with child to come up with workable solutions
- Model flexibility
- Model regulation
- Model respect
- Maintain warmth

Neuro-targets

--all previous circuits are firing simultaneously

Neurons That Fire Together

Wire together

Back to the pathways

- When to use A
- When to use C
- Different kinds of C's, some are better than others
- Two kinds of B's
  - Emergency
  - Proactive—timing is everything

Back to Room Wrecker

Initial Narrative

He's doing horribly. He won't listen. The slightest things make him made. He melts down for no reason. He won't do his homework. We've just given up on trying anymore. He started having a tantrum just the other day and I tried to be reasonable, but it got us to the same place…he wants everything to be his way or he's going to make you miserable. Now we've taken everything from him…and that's not even working.

Situation Analysis format

- Identify a specific slice of time with child (start with compliance interactions). How did it begin, what happened, how did it end?

- Three 1 sentence interpretations about what was happening between you and child

- Identify the earliest hotspot: describe your Behavior: what you said, how you said it. Your nonverbal behavior

- Which Pathway did you take?

- What is its effect?

SA (cont.)

- Goal Analysis
  - What was your core concern? Did you express this?
  - What was child's concern? Did you take it seriously?
  - Did you prevent meltdown?
  - Did you work on Pyramid Skills?
  - Did you provide secure-base?
- Why did you or did you not attain each goal?

Doing SA with Room Wrecker's parent

- Interpretation:
  - Here we go again
  - I'm sick of his laziness
  - He's not going to manipulate me
- Behavior:
  - I said, "that's it, I'm done, you are on your own" in a sharp, gruff way

Doing SA with Room Wrecker's parent

- Which Path?
  - A
- Effects
  - Meltdown
- Goals:
  - NO
  - NO
  - NO
  - NO
  - NO

The use of Role Plays with Corrective feedback

- Explore and role play with parent what each component of skill would look like?
- Continue to reframe and redefine problem
- Empathy? What was your child feeling/wanting/needing→increasing parent mentalization
- Assertiveness? What did you want your child to know?
  - How will he know if you don't tell him?
  - Dealing with Shoulds?
  - Take control of what you actually have control over
  - Keep the 'long-game' in mind

Other important components of the protocol

- The Significant-Other History—Parenting Edition
- Identifying Parenting Transference Hot Sports
- Using videotape feedback of actually parent child interactions
- Using Interpersonal Discrimination Exercises with video tape feedback
- Using Banking-Time Procedure to enhance secure-base attachment quality
- Using MST procedures to connect systemic roadblocks

Using collaborative problem solving skills on inpatient setting

- Taught parents and staff collaborative problem solving skills

- In 9 month prior to training and implementation, the unit had 281 incidents requiring restraint or seclusion lasting more than five minutes

- 15 months after implementation, only one