

TRAUMA INFORMED BEHAVIOR ANALYSIS

GARY DUHON, PHD

OKLAHOMA STATE UNIVERSITY

GOALS FOR THIS PRESENTATION.

- Provide an overview of Trauma and the effects of Trauma
- Provide a theoretical framework rooted in behavioral science for approaching some aspects of Trauma
- Provide a general overview of an empirically based approach to addressing the effects of Trauma

TRAUMA

- Trauma is a widespread, harmful and costly public health problem.
- It occurs as a result of violence abuse, neglect, loss, disaster, war and other emotionally harmful experiences.
- Trauma has no boundaries with regard to age, gender, socioeconomic status, race, ethnicity, geography or sexual orientation. (SAMHSA)
- However Trauma is a broad concept with several different definitions. It cannot be boiled down to one thing or one concept, it is complicated.

WHAT IS TRAUMA?

- Trauma results from an **event**, series of events, or set of circumstances that is **experienced** by an individual as physically or emotionally harmful or life threatening and that has lasting adverse **effects** on the individual's functioning and mental, physical, social, emotional, or spiritual well-being. (SAMHSA)

THE THREE “E’S” OF TRAUMA

- Event:
 - Actual or extreme threat of physical or psychological harm or severe, life-threatening neglect for a child that imperils healthy development. These events and circumstances may occur as a single occurrence or repeatedly over time.
- Experience
 - Individuals interpretation of the traumatic event
- Effect
 - Immediate or delayed impact of the traumatic event
 - Adverse impact on functioning

SO

-
- When an Event is Experienced by an individual and the results have a negative Effect on functioning we say that individual has experience Trauma.

WHAT ARE THE ADVERSE EFFECTS OF TRAUMA?

- Examples of adverse effects include an inability
 - to cope with the normal stresses and strains of daily living
 - to trust and benefit from relationships
 - to manage cognitive processes, such as memory, attention, thinking
 - to regulate behavior
 - to control the expression of emotions.
- Just imagine the life altering impact of trauma!

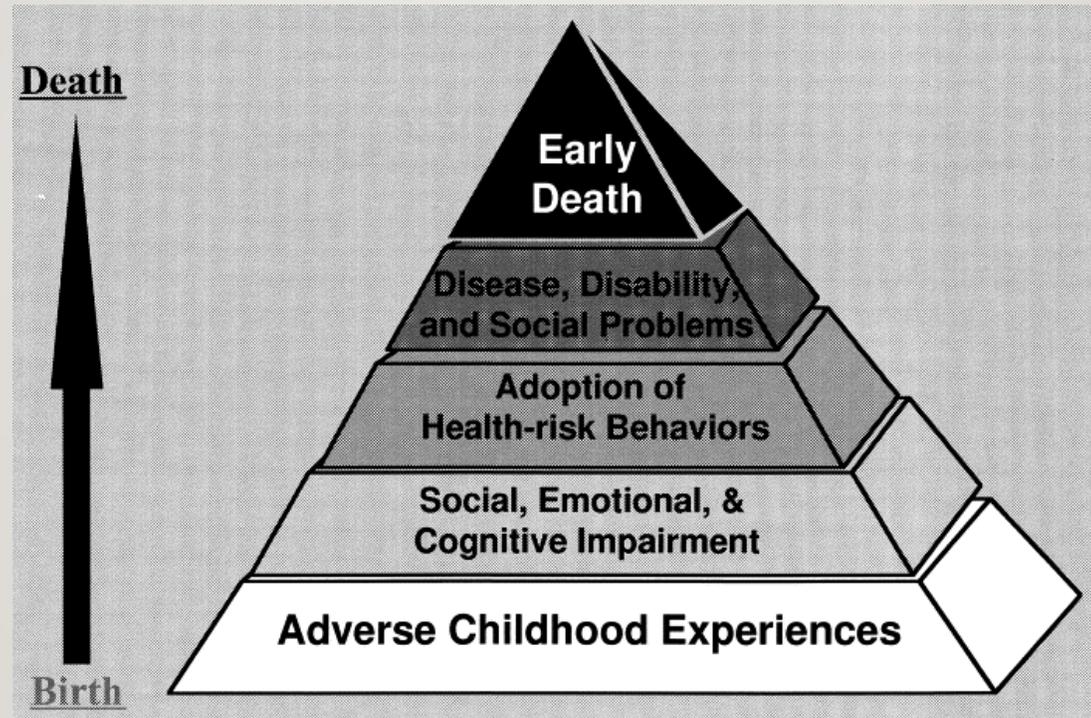
ADVERSE CHILDHOOD EXPERIENCES (ACE) STUDY FELITTI ET AL., 1998

- Surveyed 9,508 adults about their history of traumatic events and health history.
- Correlations were conducted
- Data was interpreted

WHAT DID THEY LEARN?

- Results:
 - Respondents with higher rates of traumatic events in their development also had higher likelihood of negative social, behavioral, and educational outcomes.
 - These traumatic events were directly related to negative physical and mental outcomes

ADVERSE CHILDHOOD EXPERIENCES (ACE) STUDY FELITTI ET AL., 1998



HOWEVER...

- Caution when interpreting the study:
 - Correlational – trauma may set the stage for further damage, but it may not be the sole cause, nor does it guarantee anything will happen (*its likely more complicated than that*)
 - Self Report – rates of trauma may actually be higher or lower due to reporting errors

SO WHEN THINKING ABOUT TRAUMA IT IS CLEAR THAT

- Adverse Childhood Experiences are associated with lots of negative outcomes
 - Both immediate and long term
- Awareness of how to address the possible impact of Trauma is important
 - Especially in a setting where the children effected by trauma spend 1/3 of their lives.



WHAT SHOULD WE DO ABOUT TRAUMA?

- Three things
 - Prevent it from happening
 - Stop it when it is occurring
 - Address the Effects of Trauma

ADDRESSING TRAUMA THROUGH A BEHAVIOR ANALYTIC LENS...

- Look at our three criterion for trauma:
 - Event, Experience, & Effect
- The presence of the Event and Effect infers the Experience.
 - Experience is an internal event that may or may not be reported accurately.
 - So exploration and use of the perceived experience is questionable at best.
- The presence of an Effect assumes a previous Event
 - However, can you be positive the Event you identify is the Event responsible for the Trauma?

SO, WHAT ARE WE LEFT WITH?

- The Effect
 - This is the only thing we can be sure of. Everything else is unknown.
- The Effect is the byproduct of a traumatic event responsible for altering the functioning of the individual in a negative way.
- Or stated in a behavioral frame
 - Trauma is an experience that result in a negative behavioral change
 - or
 - Trauma is a relatively permanent change in behavior that results from experience

TRAUMA IS THE RESULT OF LEARNING

- A Trauma response is a learned response,
 - And the resulting response is not an adaptive one (at least outside of the context of the original Trauma)
- But what type of learning is it?

WHAT TYPE OF LEARNING OCCURS?

- This learning event results in two types of learned responses
 - Visceral/emotional response
 - Overt behavioral response
- Example: if a child is physically abused that child may become scared and fearful of the events that are associated with the abuse and they may actively avoid these events.
 - Fear response = visceral/emotional response
 - Avoidance = overt behavioral response

VISCERAL/EMOTIONAL RESPONSE

- What is it?
 - Reaction of the autonomic nervous system (fight or flight)
- How do you know it is there?
 - Emotions are not observable, but the emotional responses are.
- Where do they come from?
 - Result of classical conditioning

OVERT BEHAVIORAL RESPONSE

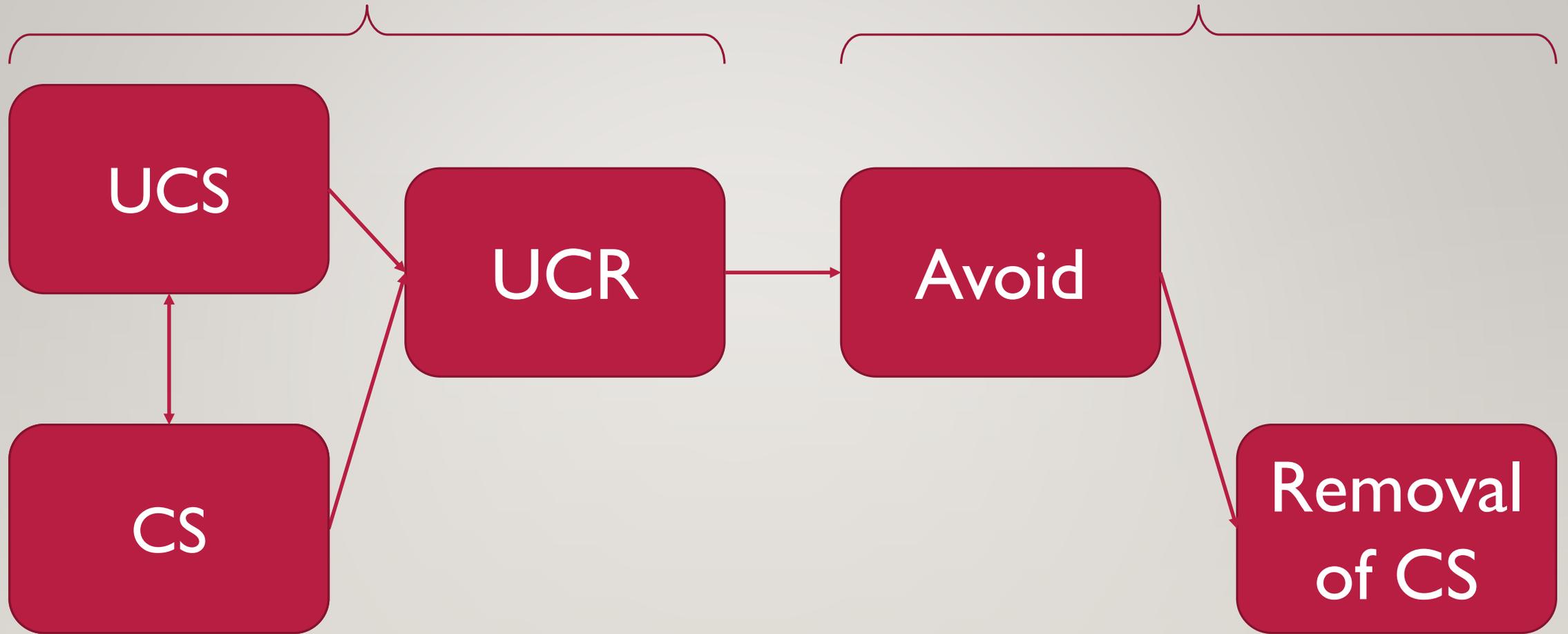
- What is it?
 - Physical interactions in the environment
- How do you know it is there?
 - The behavior itself is evidence of the response
- Where do they come from?
 - Operant conditioning

TWO-STAGE LEARNING MODEL

- Interaction of Classical Conditioning and Operant Conditioning
- Heightened fear response motivates and reinforces avoidance of the Trauma stimulus. Successful avoidance prevents extinction. (Eysenck, 1976, 1979; Eysenck & Rachman, 1965; Miller, 1948; Mowrer, 1947, 1960)
- Strong fear response in the presence of an abuser motivates the child to avoid the abuser (and others similar) to avert conditioned fear elicited by their presence.
 - By so doing, the child is denied the opportunity to extinguish this conditioned response, in their now safe post-deployment environment, through exposure to roadside objects in the absence of dangerous outcomes.

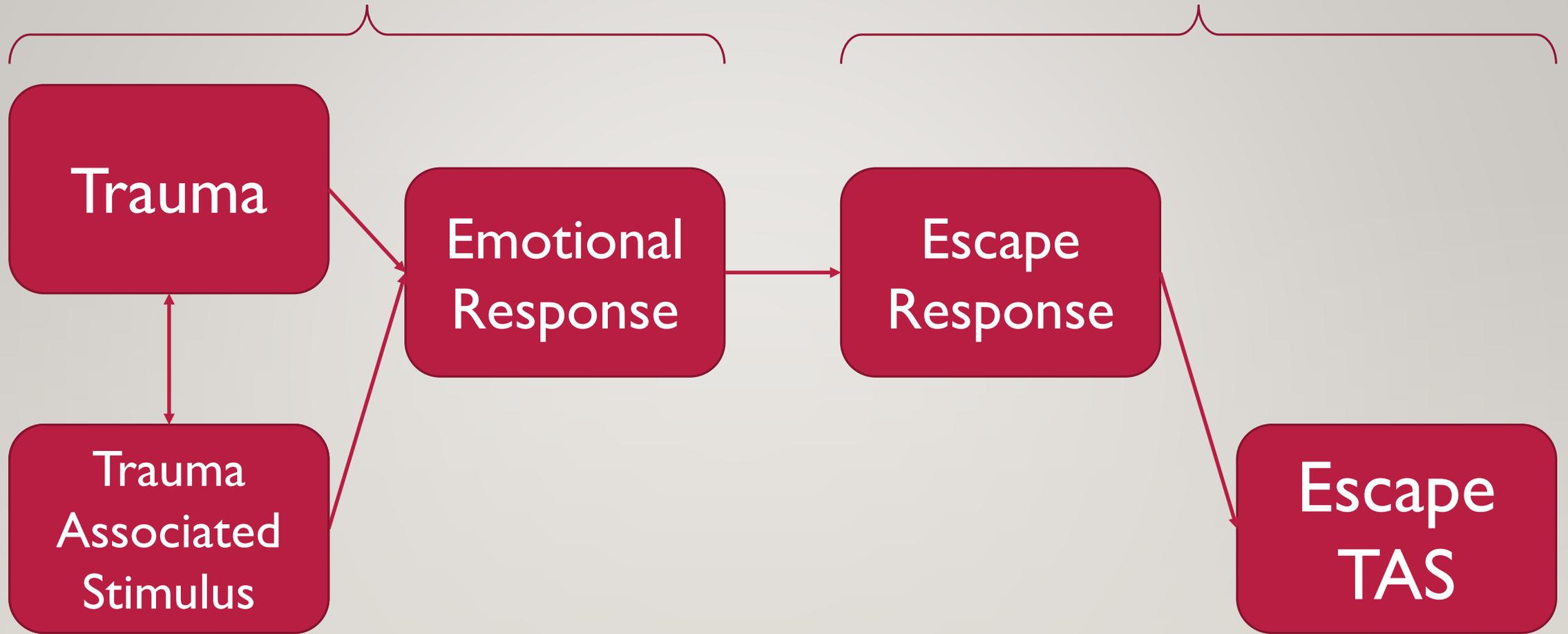
First Factor

Second Factor



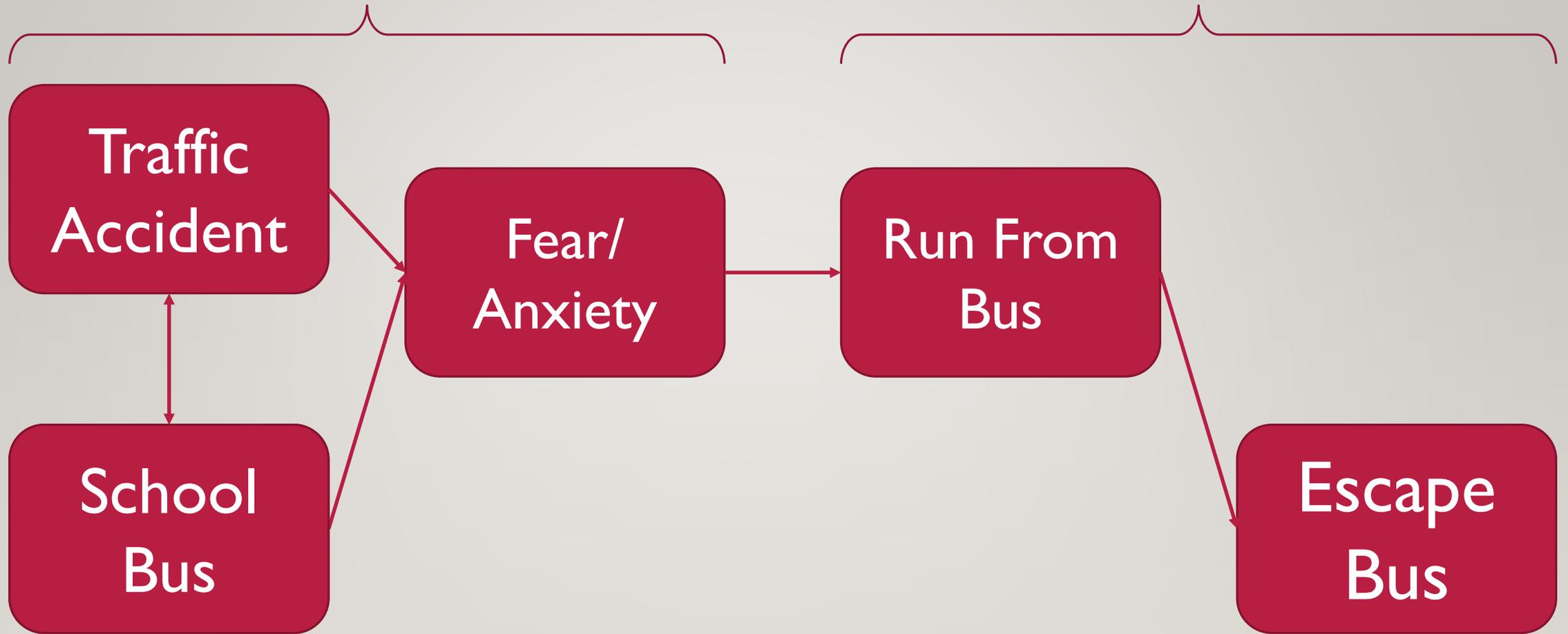
First Factor

Second Factor



First Factor

Second Factor





THE BIG PICTURE...

- An individual is exposed to an event.
- This event naturally causes a visceral/emotional response in that individual
- Other events happen at the same time and become associated with the event.
- The other event now produces the visceral/emotional response
- To escape these events we engage in overt behavioral responses that assist with this goal.
 - **PROBLEM:** These overt behavior reactions can be extreme
 - The other event may be something we don't want to avoid.

HOW DO YOU ADDRESS THIS COMBINATION OF CONDITIONING?

- Traditionally classical conditioned responses can be reduced through extinction
- However
 - Extinction is usually aversive and if the child successfully avoids the therapy setting things can get worse.
- Also
 - Extinction is non-instructive and resurgence of the behavior is common
 - So procedures must promote extinction, instruct, and reduce avoidance
- To accomplish this researchers have combined Extinction with Counterconditioning (Kang et. al. 2018)

WHAT DOES THIS COMBINATION OF TREATMENT LOOK LIKE?

- Extinction involves the repeated exposure of a CS without the aversive UCS it was previously paired with
- Counterconditioning additionally involves pairing the CS with a novel, positive UCS.
- So
 - No UCS is present
 - Child is exposed to the CS
 - The CS is paired with something positive



Approach
Bus

Access
Field Trip

CS



IS IT POSSIBLE THAT THE BEHAVIOR IS NOT A RESULT OF TRAUMA?

- Then it is the result of operant conditioning alone and this process functions identically to what is considered differential reinforcement procedures.



Approach
Bus

Access
Field Trip

LAST BUT NOT LEAST



QUESTIONS?

GARY.DUHON@OKSTATE.EDU

HOW DOES THAT LOOK FROM A BEHAVIOR ANALYTIC PERSPECTIVE?

- First the problem with treating trauma.
 - Trauma is caused by historical events that cannot be definitively linked in a causal way to concerns developed afterwards (either immediate or delayed)
 - Trauma is not predictable so we can never know if developed concerns are the result of trauma or other phenomenon.

WHEN PROBLEMS OCCUR...

- They could be the result of
 - Trauma
 - Learned behavior

WHAT DOES IT MEAN TO PROVIDE TRAUMA INFORMED CARE?

- A program, organization, or system that is trauma-informed **realizes** the widespread impact of trauma and understands potential paths for recovery; **recognizes** the signs and symptoms of trauma in clients, families, staff, and others involved with the system; and **responds** by fully integrating knowledge about trauma into policies, procedures, and practices, and seeks to actively **resist re-traumatization**.