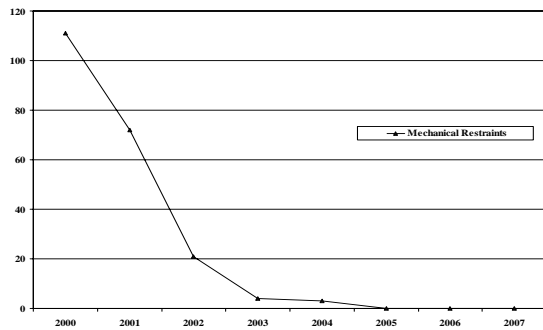


Treating Traumatized Individuals: Neurobiological & Psychological Effects of Trauma

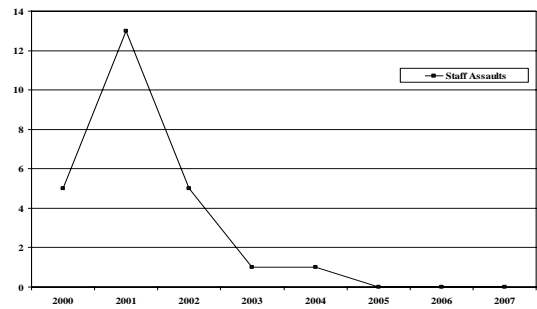
Module created by Glenn Saxe, MD - 2002



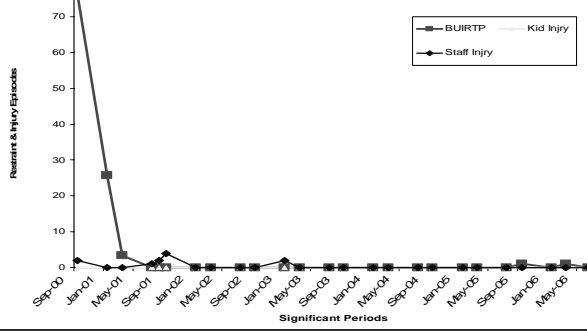
BU IRTP: Mechanical Restraints FY 2000-2007 (YTD)



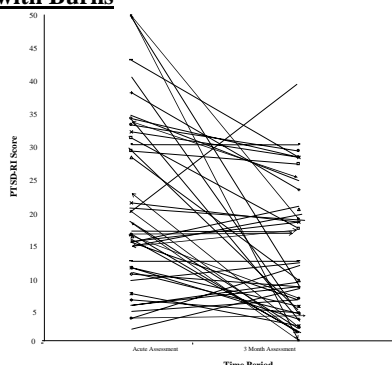
BU IRTP: Assaults on Staff FY 2000-2007 (YTD)



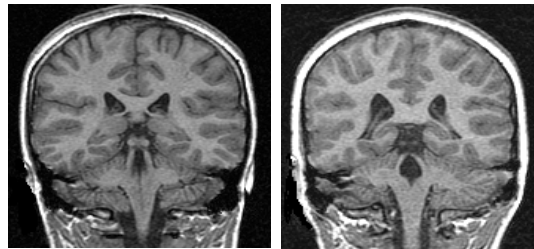
**Boston Medical Center
Intensive Residential Treatment Program
Total Restraint & Injury Episodes
09/00 - 06/06**



Longitudinal Course of PTSD Symptoms in Children with Burns



Lateral Ventricles Measures in an 11 Year Old Maltreated Male with Chronic PTSD, Compared with a Healthy, Non-Maltreated Matched Control



(De Bellis et al, 1999)

From Neurons to Neighborhoods: The Science of Early Child Development

Report from the Institute of Medicine/National Academies
National Research Council

Trauma in U.S.A.

- 3 million children were suspected of being victims of abuse and/or neglect *(Mazelis, 1999)*
- 3.9 million adolescents have been victims of serious physical assault, and almost 9 million have witnessed an act of serious violence *(Kilpatrick et al, 2001)*
- In 1998, 92% of incarcerated girls reported sexual, physical or severe emotional abuse in childhood *(Acoca & Dedel, 1998)*

PTSD in U.S.A.

- Over 50% of U.S. women & 60% of men report experiencing at least 1 traumatic event at some point in their lives. But, only a minority (10% of women & 5% of men) report developing posttraumatic stress disorder, the most prominent psychiatric disorder associated with traumatic events. *(Koenen, 2005; Kessler et al, 1995)*
- More than 80% of those diagnosed with PTSD will suffer from other psychiatric disorders. *(Solomon & Davidson, 1997)*
- For more than 1/3 with PTSD, it will be a persistent condition and experienced for several years *(Solomon & Davidson, 1997)*

Effective Treatment Must Account For:

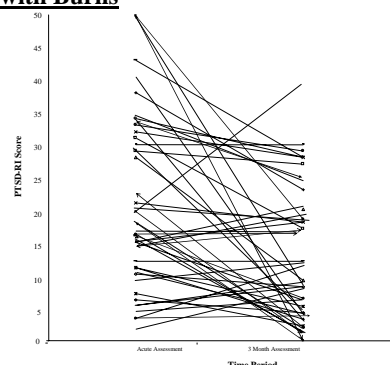
- 1) A dysregulated nervous system
- 2) A social-environment that cannot contain this dysregulation

Core Concepts of Development

1) The development of children unfolds along individual pathways whose trajectories are characterized by continuities and discontinuities, as well as by a series of significant transitions.

(Shonkoff & Phillips, 2000)

Longitudinal Course of PTSD Symptoms in Children with Burns



309.81 PTSD Definition

The development of characteristic symptoms, following exposure to a traumatic stressor involving direct personal experience or witnessing another persons' experience of:

- Actual or threatened death
- Actual or threatened serious injury
- Threat to physical integrity

Post Traumatic Stress Disorder

- Characterized by:
 - Re-experiencing the event
 - Intrusive thoughts, nightmares, or flashbacks that recollect traumatic images and memories
 - Avoidance and emotional numbing
 - Flattening of affect, detachment from others, loss of interest, lack of motivation, and constant avoidance of any activity, place, person, or event associated with the traumatic experience

309.81 PTSD Criterion

- D. Symptoms of increased **arousal**
- D1. Sleep disturbances
 - D2. Outbursts of anger
 - D3. Difficulty concentrating
 - D4. Hypervigilance

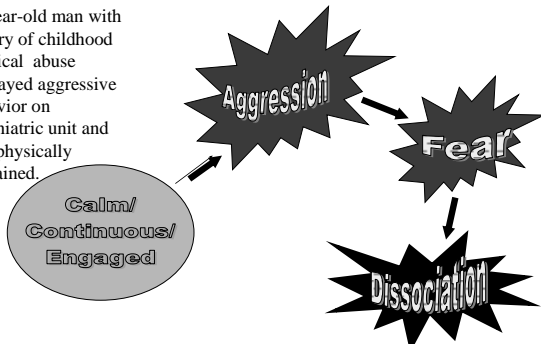
Core Concepts of Development

2) The growth of self regulation is a cornerstone of early development that cuts across all behavioral domains.

(Shonkoff & Phillips, 2000)

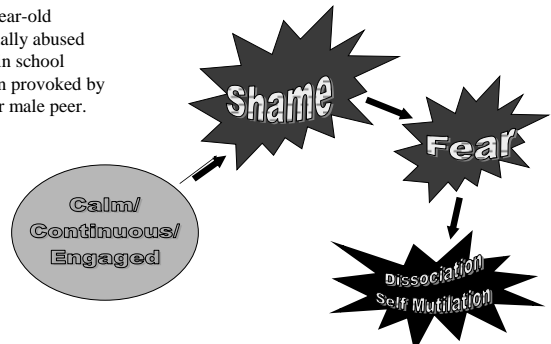
State Change

22 year-old man with history of childhood physical abuse displayed aggressive behavior on psychiatric unit and was physically restrained.



State Change

12 year-old sexually abused girl in school when provoked by older male peer.



Parameters that change between state

- **Affect**
- **Thought**
- **Behavior**
- **Sense-of-self**
- **Consciousness**

Emotional States and Child Development

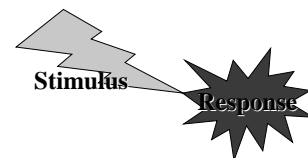
- Discrete behavioral states are a central organizing experience of infancy
- Infants experiential world is divided into separate and definable emotional/behavioral states
- Critical task of early child development is to build smooth transitions/bridges between states
- Regulation of emotion is initially contingent on caregivers facilitating these transitions.

(Wolff, 1987)

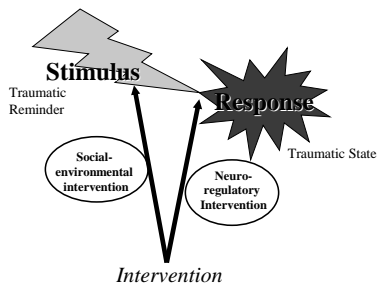
Goal of Treatment

- **Maintain Calm/Continuous/Engaged State**
- **Prevent Discontinuous States**
- **Build Cognitive Structures that allow Choices**

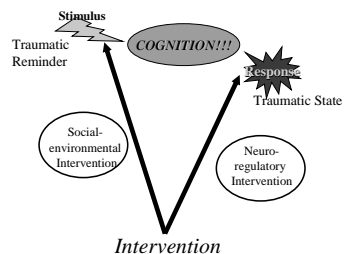
Between Stimulus and Response



Between Stimulus and Response



Between Stimulus and Response

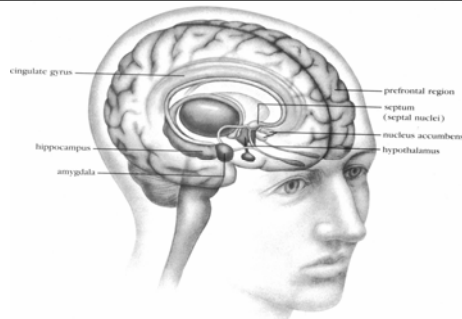


Core Concepts of Development

3) Human development is shaped by a dynamic and continuous interplay between biology and experience.

(Shonkoff & Phillips, 2000)

Emotional Brain



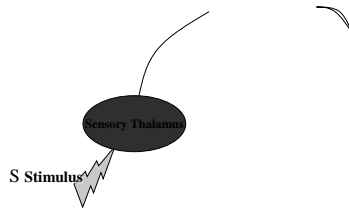
(Restak, 1988)

Between Stimulus and Response



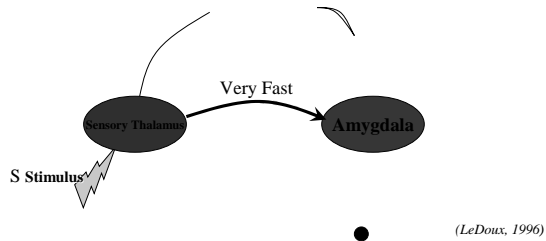
(LeDoux, 1996)

Between Stimulus and Response

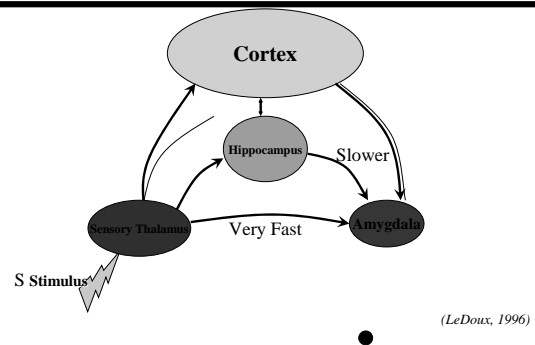


(LeDoux, 1996)

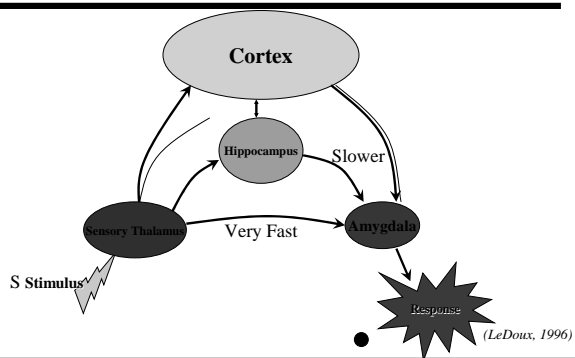
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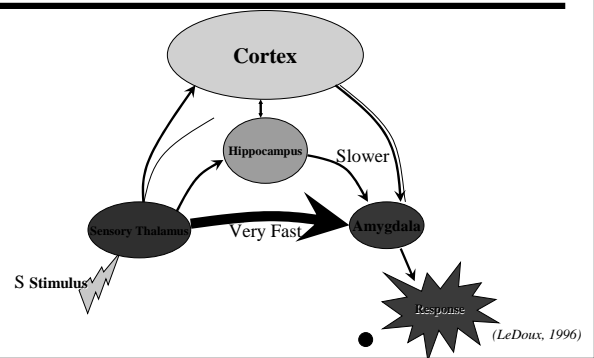
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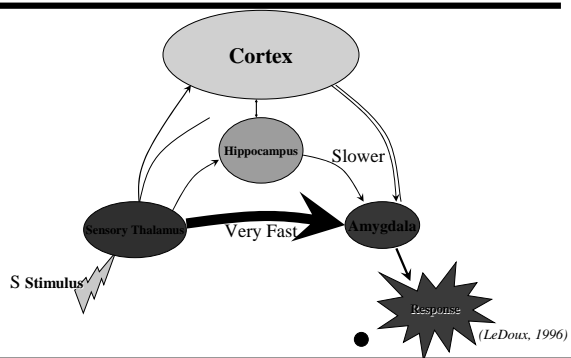
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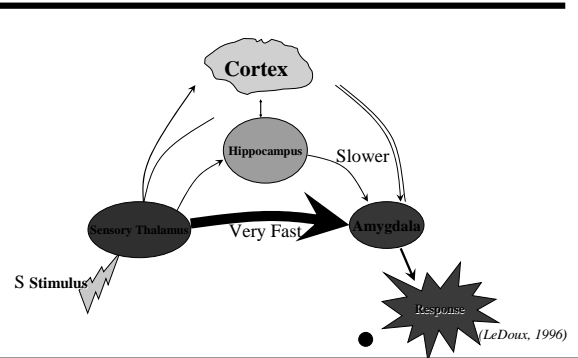
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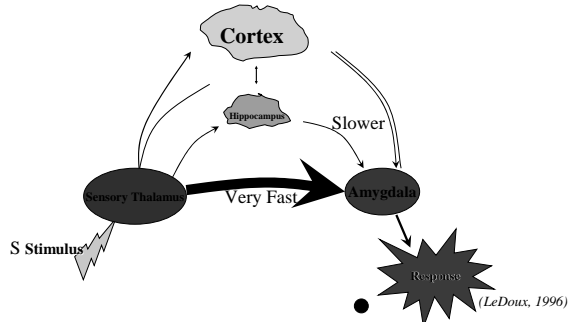
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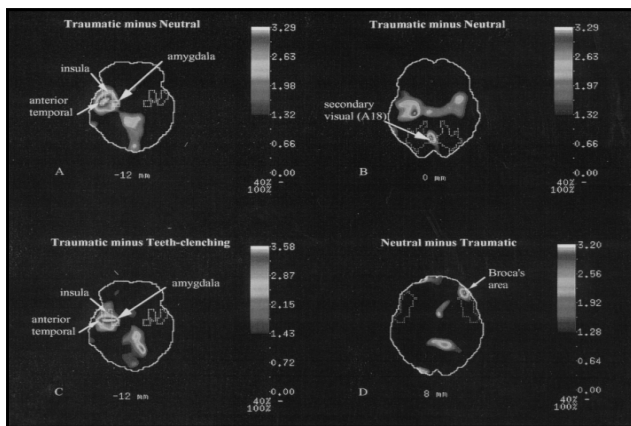
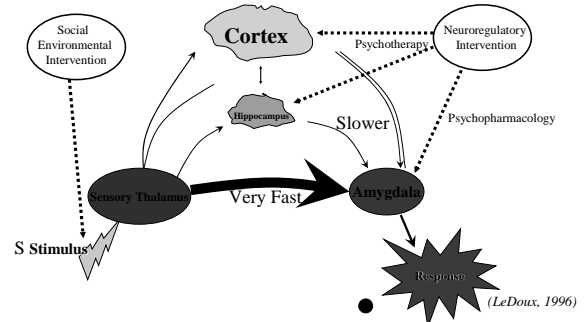
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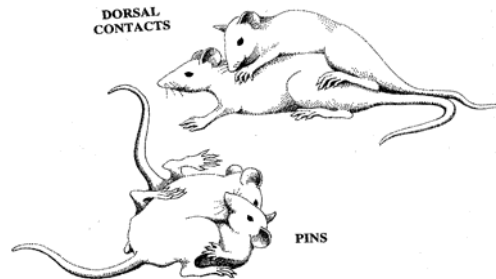
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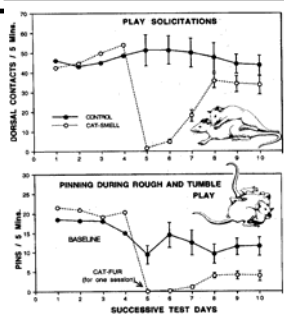
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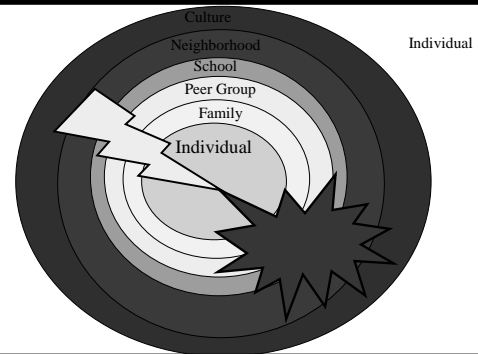
Play



Play and Fear



Social-Ecological Model



Core Concepts of Development

4) Human relationships, and the effects of relationships on relationships, are the building blocks of healthy development.

(Shonkoff & Phillips, 2000)

Core Concepts of Development

5) Children are active participants in their own development, reflecting the intrinsic human drive to explore and master one's environment.

(Shonkoff & Phillips, 2000)

Traumatic Mastery

- Many children have primarily experienced abusive and neglectful relationships
- Extreme behaviors within relationships can be seen as defensive or self-protective
- Traumatized children respond to their trauma history in the present. They are not able to discern that the context has changed
- This behavior must be seen as an attempt to master extremely difficult environments. In this way, traumatized children are “*doing the best that they can*”

Core Concepts of Development

6) The course of development can be altered...by effective interventions that change the balance between risk and protection, thereby shifting the odds in favor of more adaptive outcomes.

(Shonkoff & Phillips, 2000)

WHAT WORKS?

- Set up calm, nurturing and healing environments (e.g., sensory, touch, color, yoga)
- Ongoing training & supervision to ensure ‘caring, compassion, respectful’ for children & families
- Meticulously interview for triggers, warning signs, strategies
- Teach staff to always be observing for ‘triggers & warning signs’ (early signs that someone is beginning to move from a calm, continuous state to a discreet state of emergency)
- Teach staff to ADJUST the environment





Contact Information

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