

Understanding the BioPsychoSocial Impact of Trauma

Module created by Saxe, 2002

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What is Trauma?

The experience of violence and victimization including sexual abuse, physical abuse, severe neglect, loss, domestic violence and/or the witnessing of violence, terrorism or disasters.

(National Association of State Mental Health Program Directors, 2006)

Trauma in American Children

- 3 million children were *suspected* of being victims of abuse and/or neglect in 1998 (*Mazelis, 1999*)
- 3.9 million adolescents: 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*)
- Each year between 3.5 and 10 million children witness the abuse of their mother – up to half are victims of abuse themselves (*Edelson, 1999*)

Rates of Trauma

- 8-14% of Post Traumatic Stress Disorder rates in the general population and among certain disadvantaged groups may even be higher.

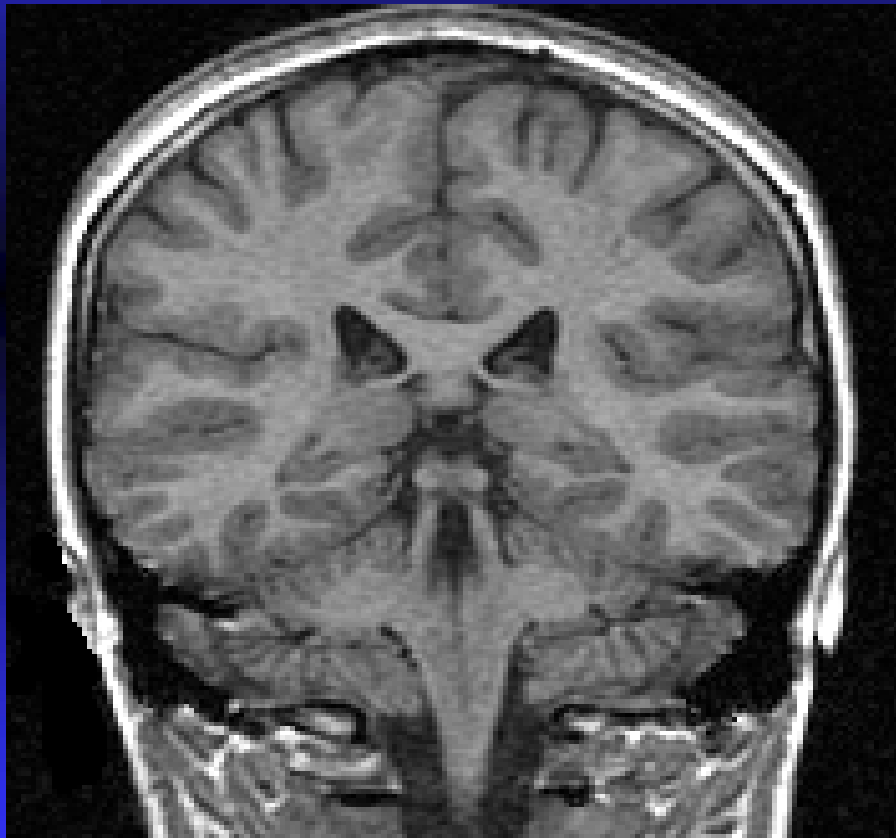
(Kaplan et al., 1994; Kessler et al., 1995)

- Trauma victimizations studies show prevalence between 51-98% among persons with serious mental illness (SMI) in the public sector.

(Goodman et al., 1997; Mueser et al., 1998))

Trauma and the Developing Brain

- *De Bellis et al., 1999*



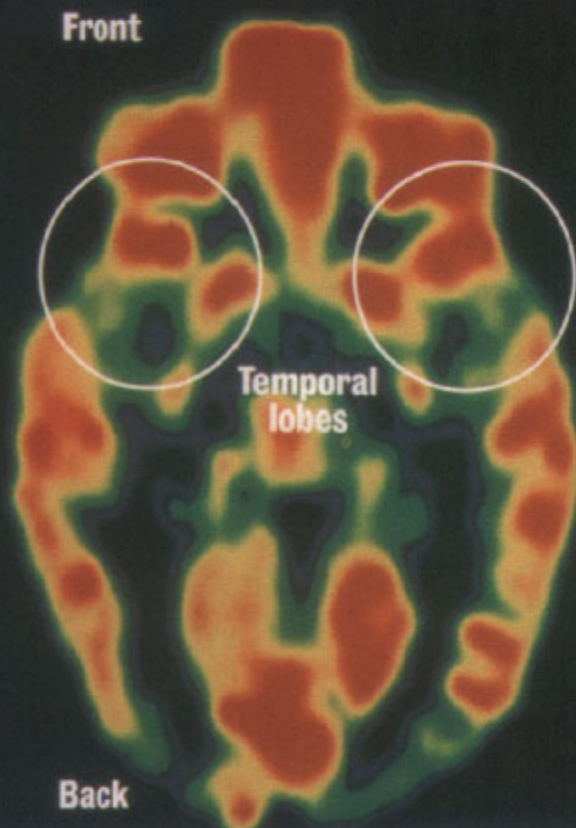
Normal 11 y.o. Male



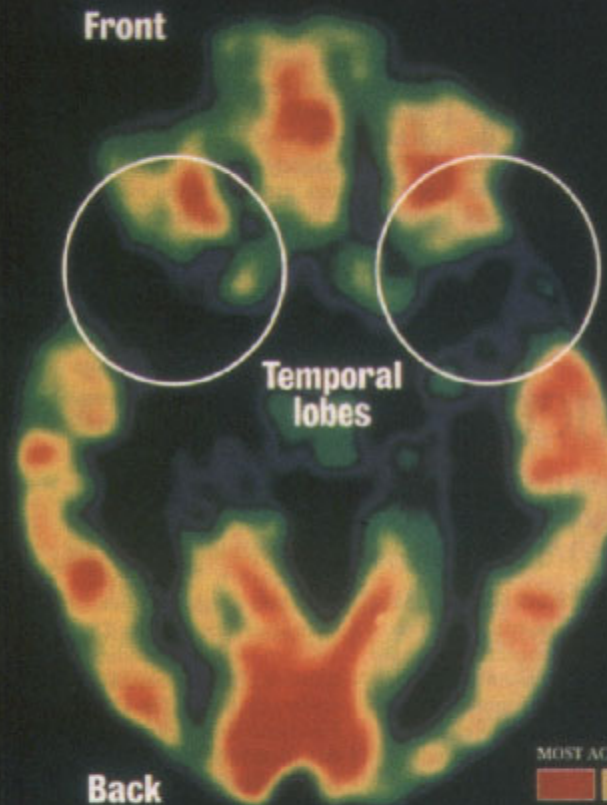
Maltreated 11 y.o Male with PTSD

Healthy Brain

This PET scan of the brain of a normal child shows regions of high (red) and low (blue and black) activity. At birth, only primitive structures such as the brain stem (center) are fully functional; in regions like the temporal lobes (top), early childhood experiences wire the circuits.



Front



An Abused Brain

This PET scan of the brain of a Romanian orphan, who was institutionalized shortly after birth, shows the effect of extreme deprivation in infancy. The temporal lobes (top), which regulate emotions and receive input from the senses, are nearly quiescent. Such children suffer emotional and cognitive problems.

MOST ACTIVE LEAST ACTIVE

Red	Orange	Yellow	Green	Blue	Black
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*From Neurons to Neighborhoods:
The Science of Early Child Development*

**Report from the National Research Council
and The Institute of Medicine**

Jack P. Shonkoff and Deborah A. Phillips, Editors

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)

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 the prison ward and was physically restrained.



State Change

12 year-old girl
with a history of
sexual abuse,
provoked by an
older male peer
while in school.



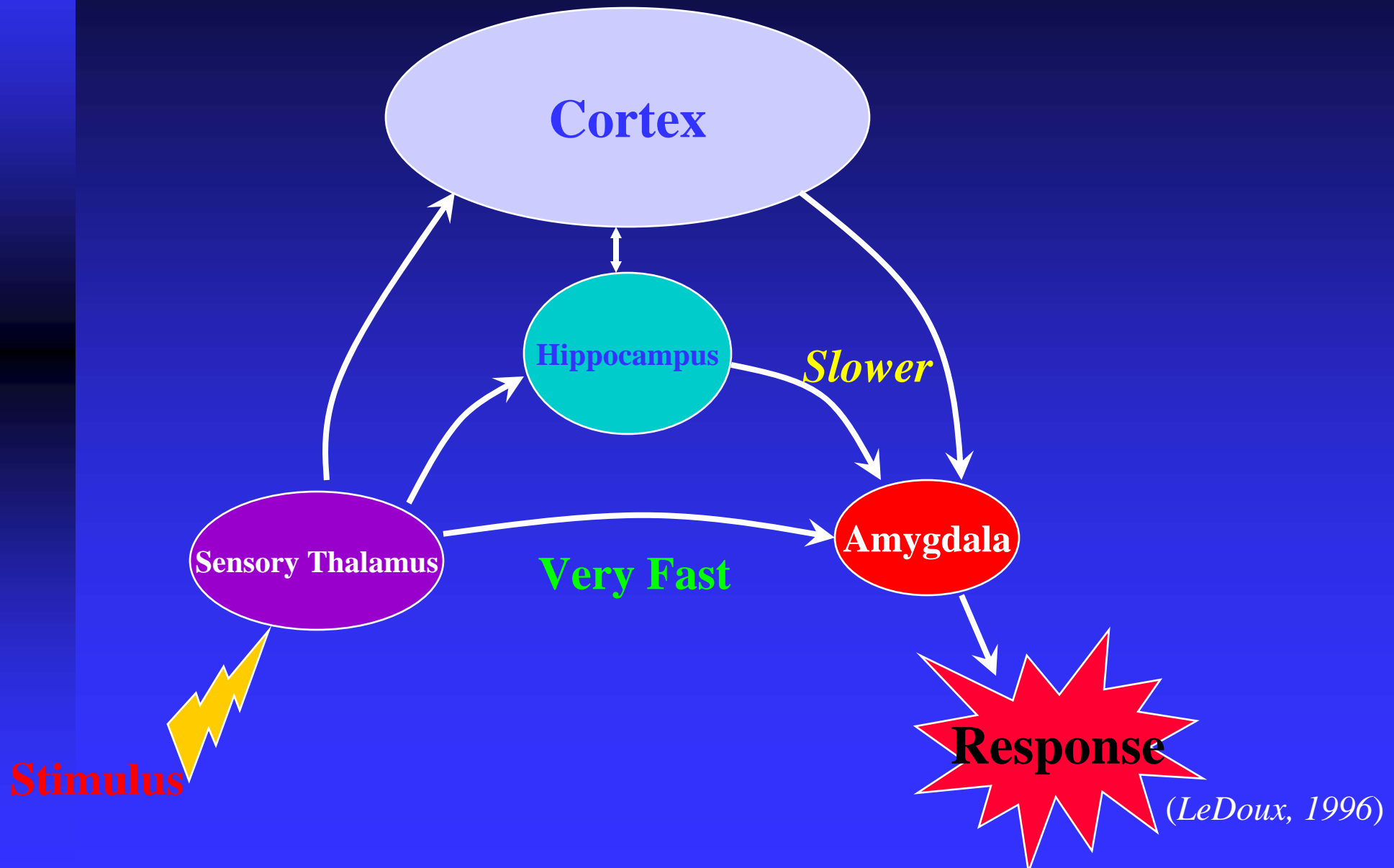
Core Concepts of Development

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

(Shonkoff & Phillips, 2000)

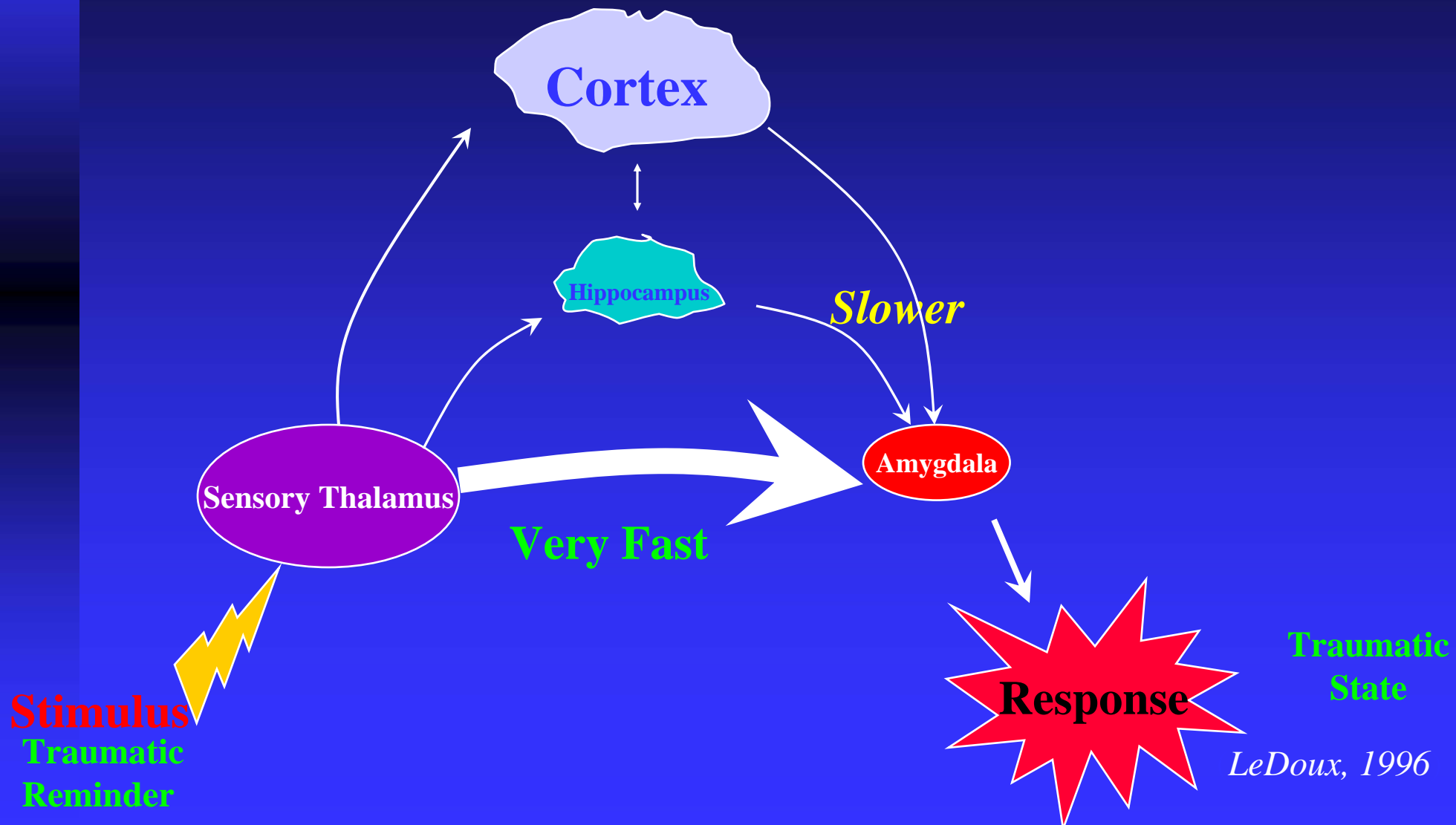
Transition Between Stimulus and Response :

The Normal Translation



Transition Between Stimulus and Response

Altered Form and Function



Triggers

Seeing, feeling, hearing, smelling something that reminds us of past trauma

Activates the alarm system...



The response is as if there is current danger.

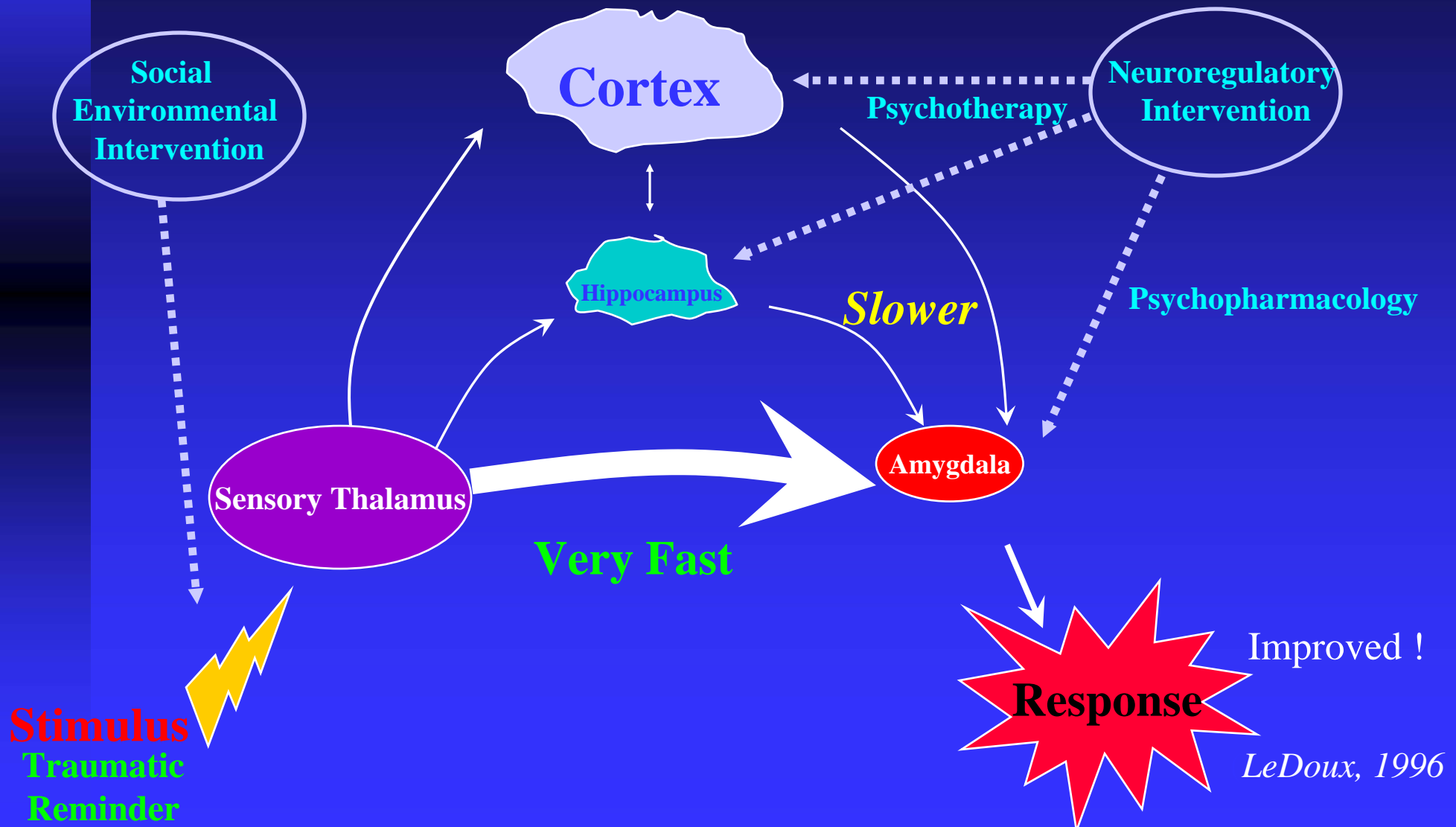
Thinking brain automatically shuts off in the face of triggers.

Past and present danger become confused.

causing...

Transition Between Stimulus and Response

Effective Interventions



Goal of Treatment

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

Core Concepts of Development

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

(Shonkoff & Phillips, 2000)

Attachment

- Earliest relationships are critical in developing the capacity to regulate emotional states.
- Neglectful and traumatic early relationships create a state of dysregulation that negatively impacts the interpersonal cues in future relationships.

Attachment & Relational Deficits

- Appear guarded & anxious
- Difficult to re-direct, reject support
- Highly emotionally reactive
- Hold on to grievances
- Do not take responsibility for behavior
- Make the same mistakes over and over
- Repetition compulsion / traumatic re-enactment

(Hodas, 2004)

Mastery of a Traumatic Environment

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

Core Concepts of Development

5) 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)

CONCLUSIONS

- Response to traumatic stress is learned behavior, mediated by the brain & the social environment.
- Traumatic stress brings the past to the present.
- The survival response impacts the mind, body, behavior & speech “... *the amygdala leads a hostile takeover of consciousness by emotion.*” (LeDoux, 2002)

Thank You !