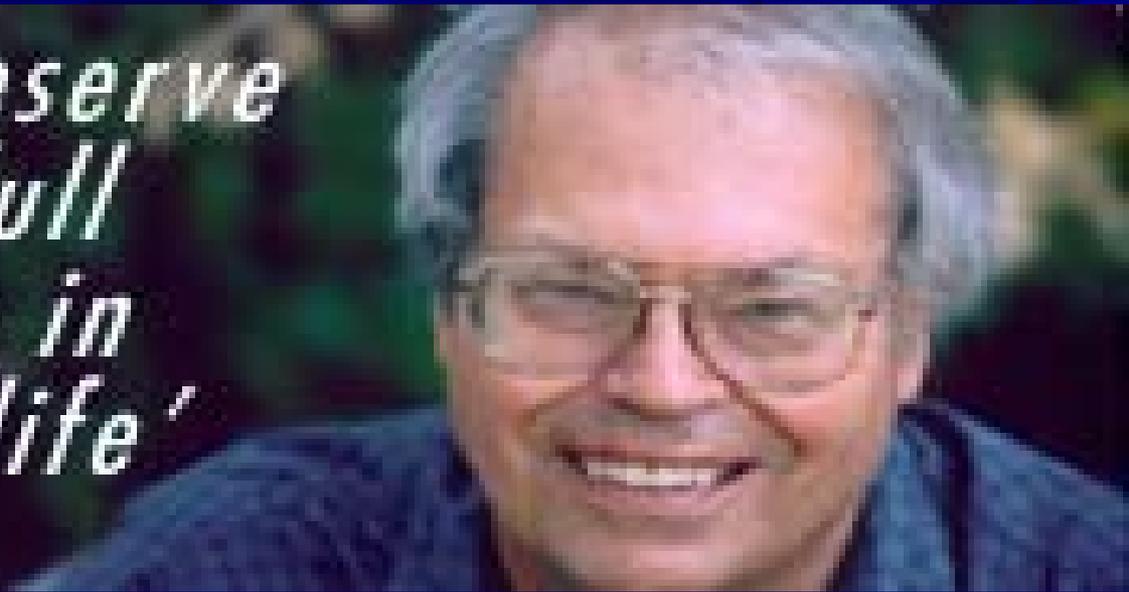


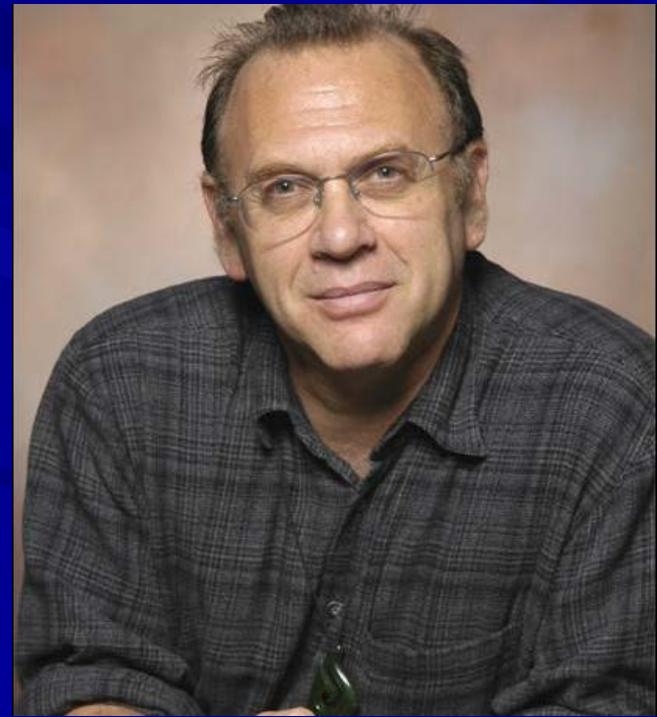
*'All children deserve
the right of full
participation in
community life'*

—Dr. Don Offord



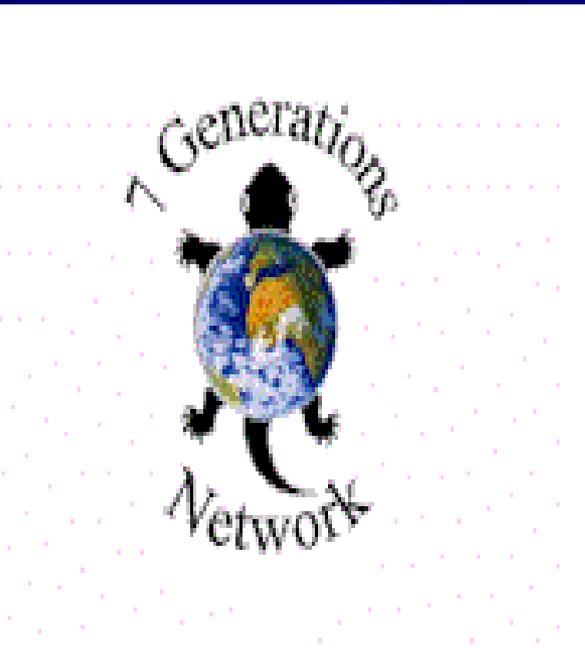
“The brain is not fragile; the brain is adaptive. The question is whether or not those adaptations will allow you to cope with the world you are then going to live in.”

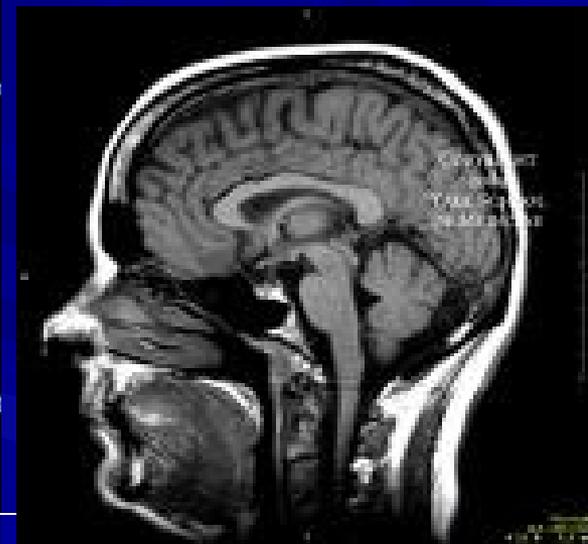
—Dr. Clyde Hertzman



The Wisdom of the Elders

- Consider the interest of the next 7 generations when decisions are being made





Adolescence is a time of growth and maturation in the brain.

Why do we care about brain?

You are your brain.



Time Magazine Dr J Stieben

BUT

**Your brain is not just
produced by your genes**

**Your brain is sculpted by a
lifetime of
experiences .**



Dr R Gibb UofLethbridge



The New Brain Science

- Old view: Brain had fixed structure and set number of brain cells, which declined over the aging process and with damage from trauma
- New view: Brain plasticity
 - Brain can grow new cells and make new connections throughout life
 - Brain and body experience alters the structure and connections in the brain, strengthening, growing or weakening them and changing structure

Adolescents: Why DO they do the things they do?



“I would there were no age between ten and three-and-twenty, or that youth would sleep out the rest; for there is nothing in the between but getting wenches with child, wronging the ancientry, stealing, fighting.

...

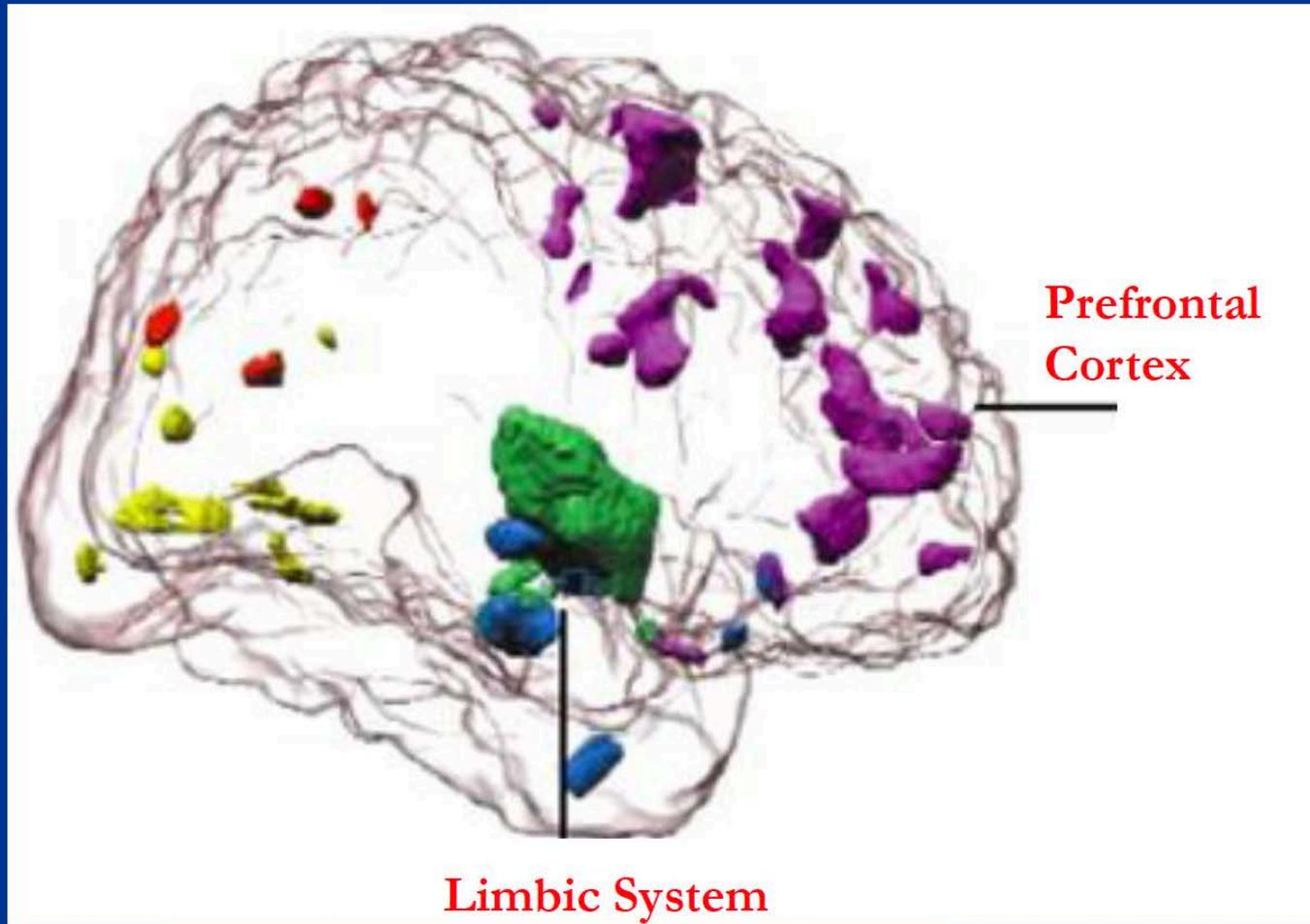
Would any but these boiled brains of nineteen and two-and-twenty hunt in this weather?”

Shakespeare, *The Winter's Tale*, III.iii

Mismatch- Dr Peter Gluckman

- **As a society we confuse physical maturation with psychosocial maturation**
- **Youngsters are biologically mismatched to the society they live,**
- **The time needed to be fully functional as an adult has increased markedly**
- **Our PSYCHOSOCIAL maturation occurs AFTER our physical maturation.**

Brain Regions Showing Most Change in Adolescence

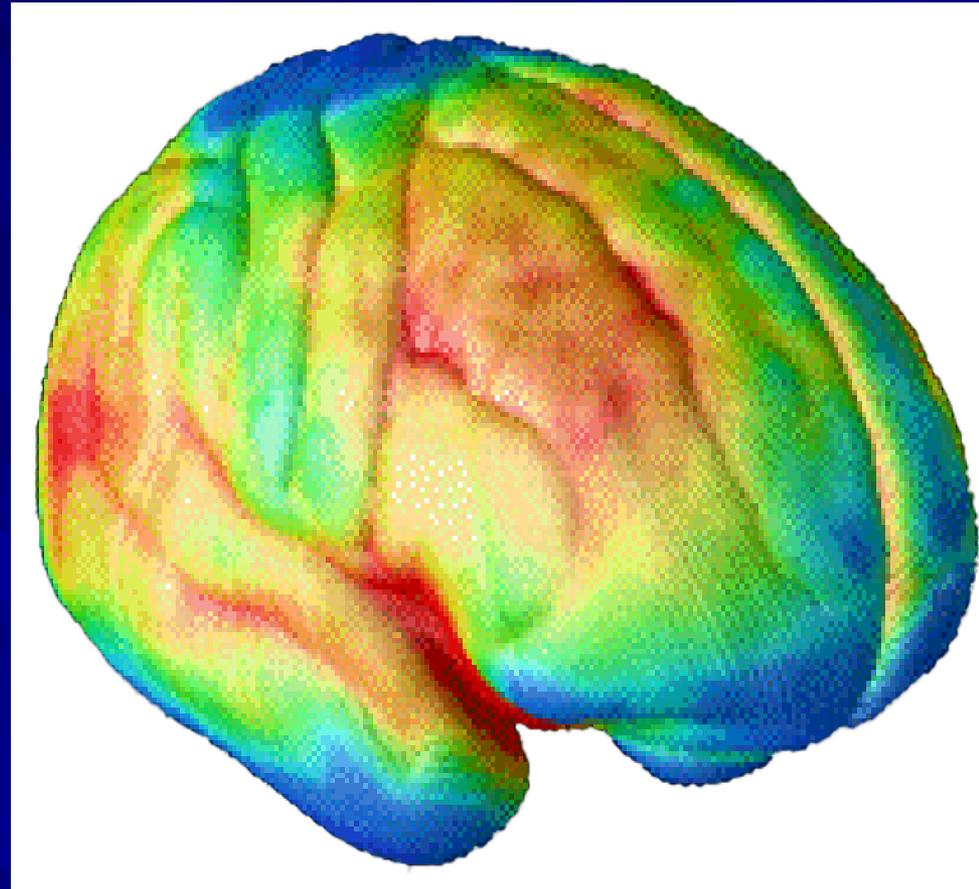


Brain Development

Maturation Occurs from Back to Front of the Brain

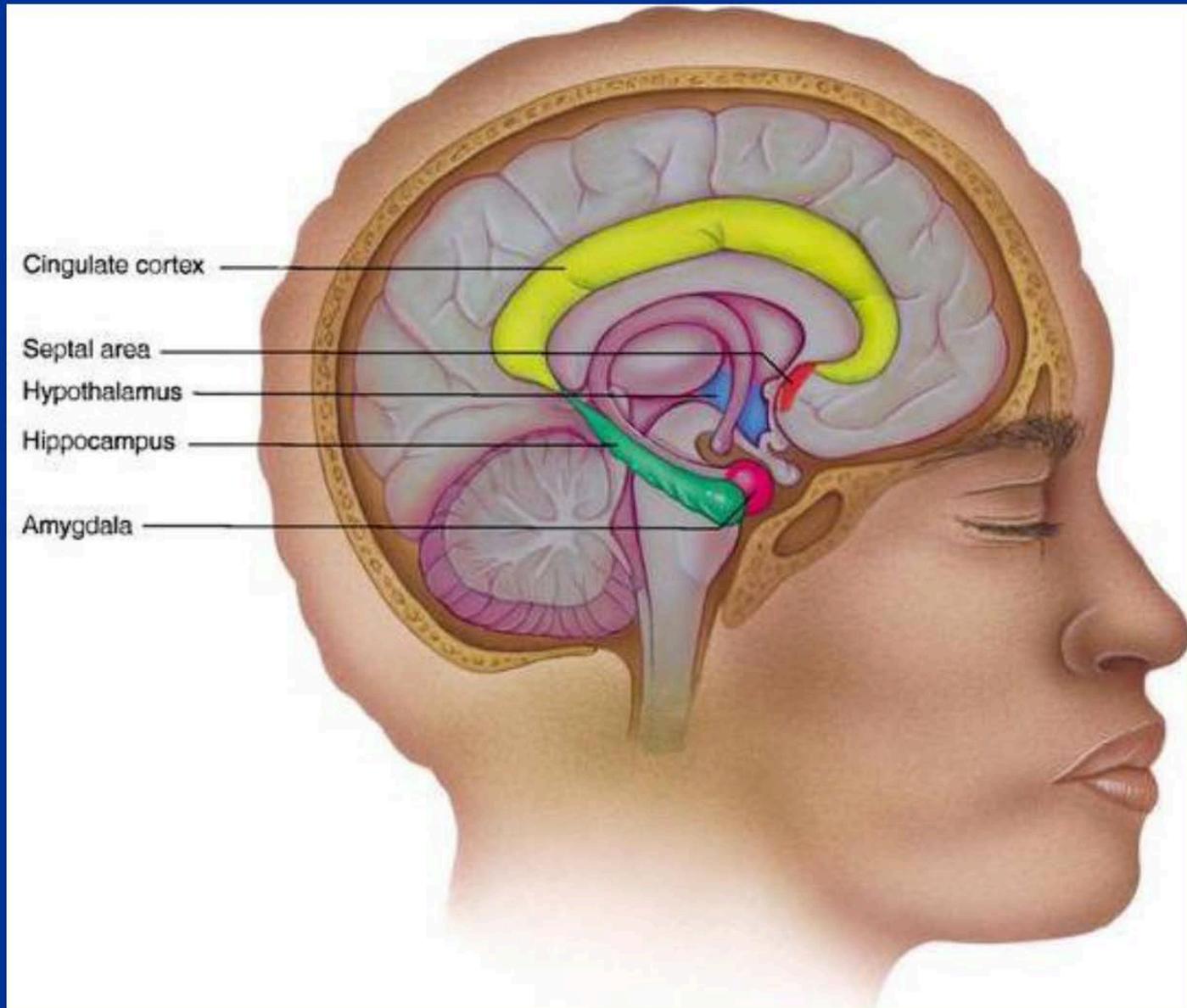
Images of Brain Development in Healthy Youth (Ages 5 – 20)

Blue represents maturing of brain areas



Source: Gogtay, Giedd, et al., 2004.

The Limbic System



Its OK Mum, Dad has already
grounded me!!

RISK-TAKING

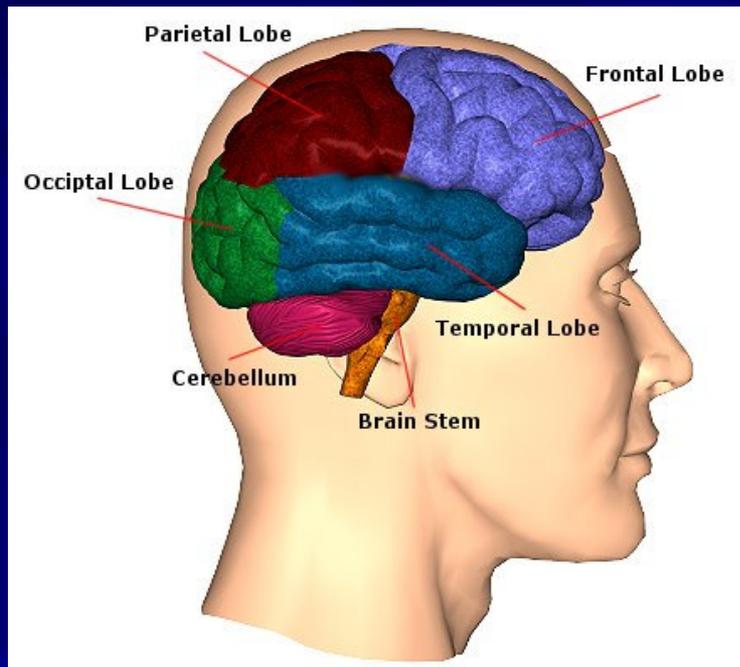
Teenagers are known for risk-taking, novelty seeking, reckless behaviour and impulsivity.

Believe it or not, some degree of risk-taking in adolescence is **normative** (and adaptive)!

(Spear, 2000)



The Frontal Lobes



■ **DEVELOPED** frontal cortex allows one to regulate emotions, solve problems effectively and plan behaviour.

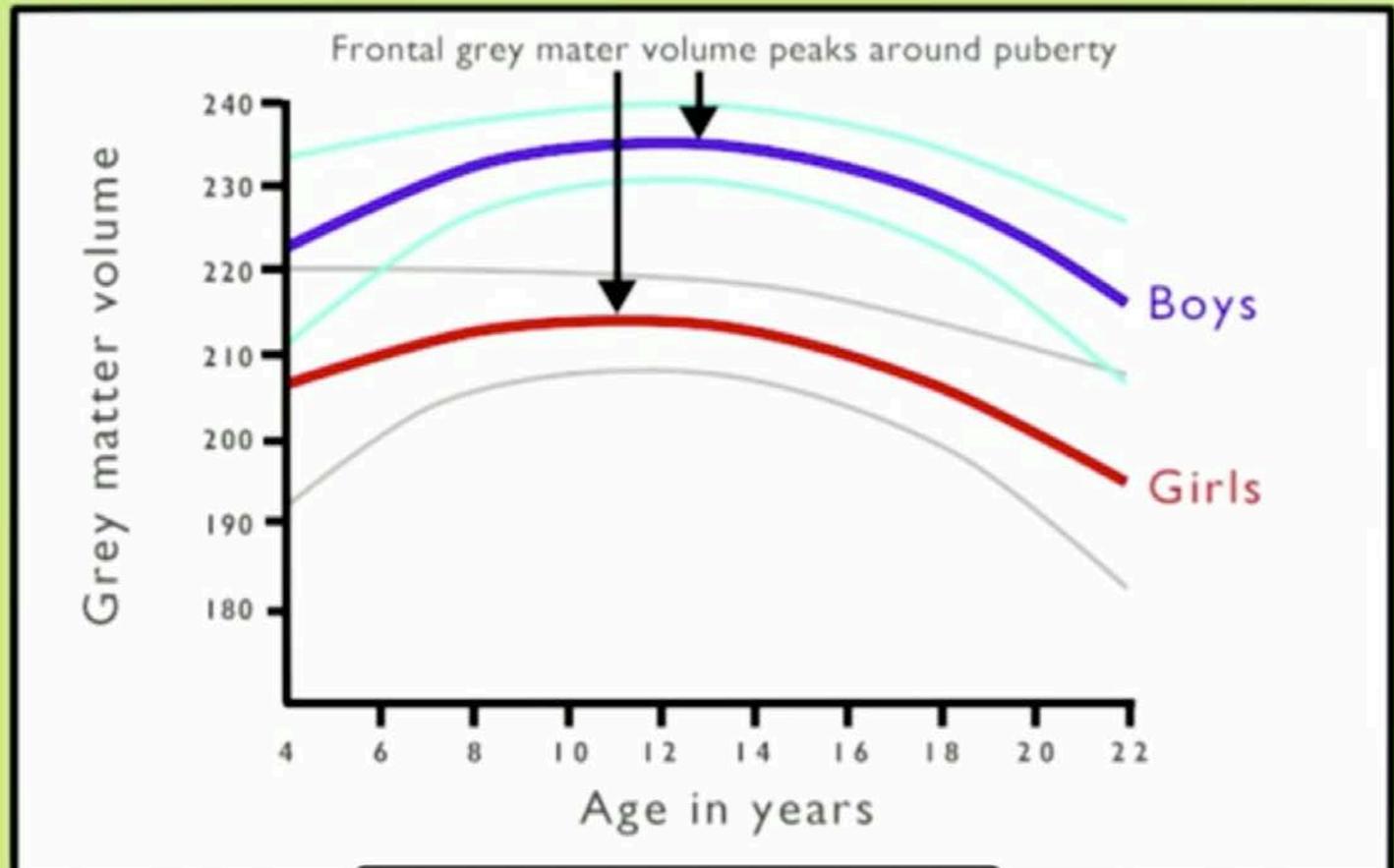
“Executive Functions”

- Governing emotions
 - Judgment
 - Planning
 - Organization
 - Problem Solving
 - Impulse Inhibition
 - Abstraction
 - Analysis/synthesis
 - Self-awareness*
 - Self-concept*
 - Identity
- and
- Spirituality

Hyper-Rational



Grey matter development in prefrontal cortex

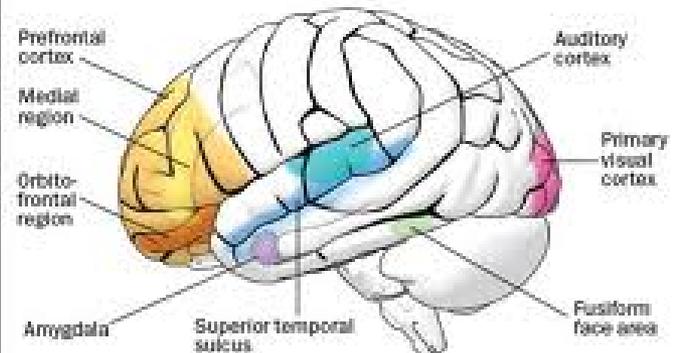


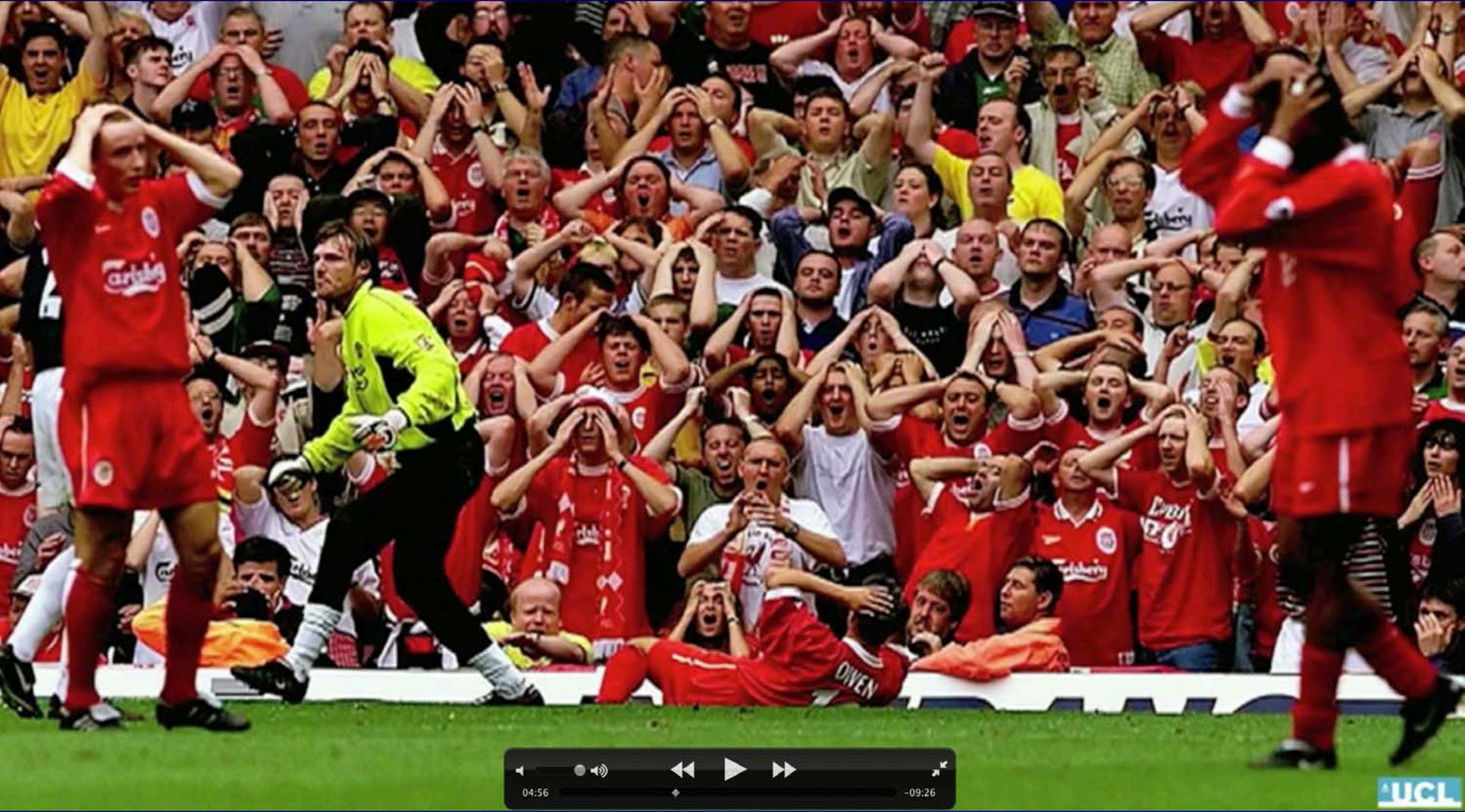
The Social Brain



The Social Brain

Perceiving emotion in others requires the collaboration of disparate brain regions. To read feeling in a face, the amygdala, an emotion hub, works with the fusiform face area, which is dedicated to face recognition. The medial prefrontal cortex and superior temporal sulcus read mood regardless of whether the cues come from a face, body or voice. They receive data from visual and auditory cortices, which process sights and sounds.





Do it Now!

Think about it



Limbic System



Prefrontal cortex

PEER POWER



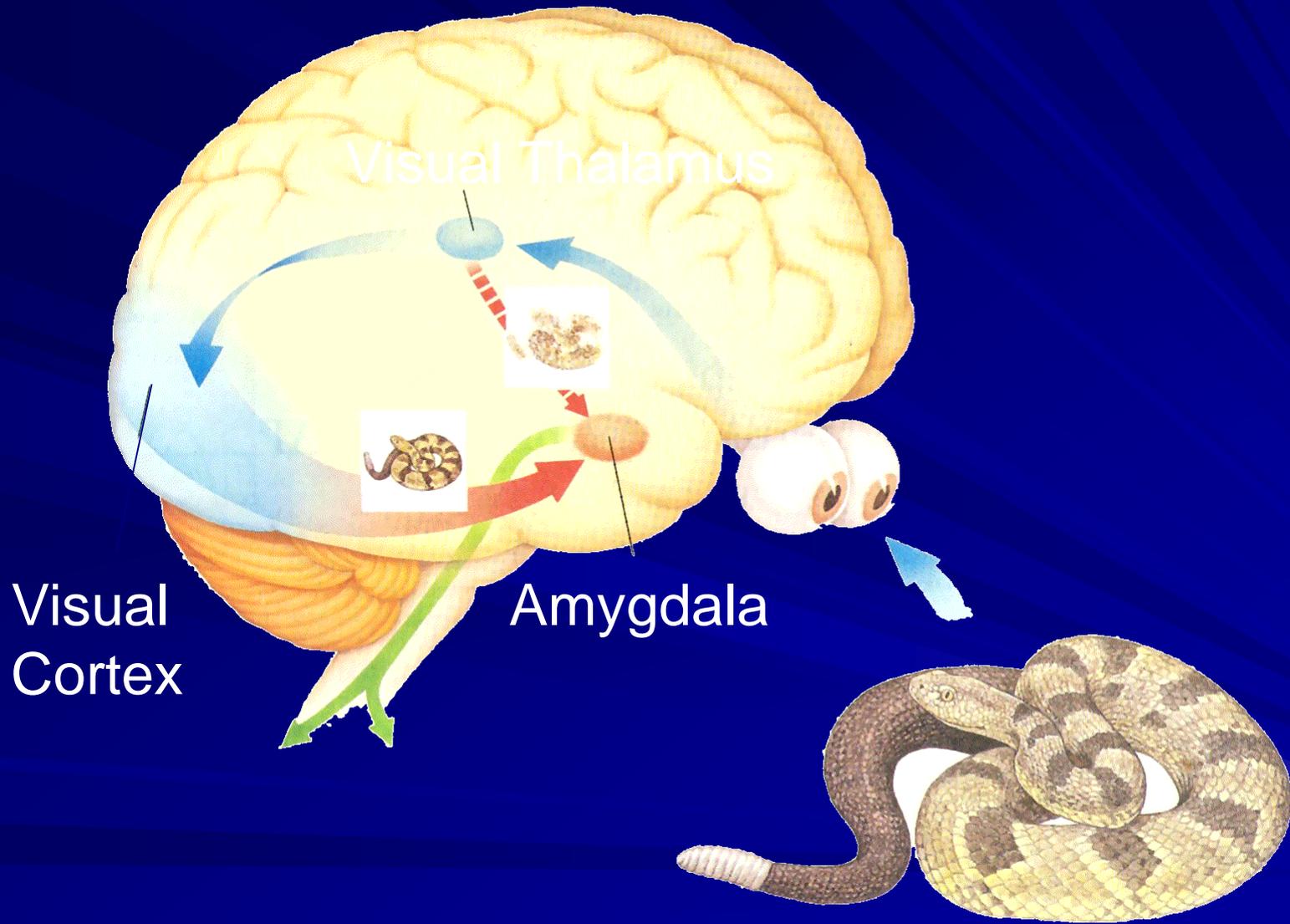
3 Key Points of Brain Maturation

- The brain matures by becoming more specialized (gray matter) and more “connected” (white matter)
- A changing prefrontal/limbic balance affects reward circuitry, hot vs cold cognition, temporal discounting, and decision making
- Enormous plasticity confers both vulnerability and opportunity

Scenarios

- What we Think....
- Affects how we feel....
- Affects how we act...

The Fear Response: Fight or Flight and Stress



Imagine you are walking home and you see a bear...



What happens when the bear is always there...

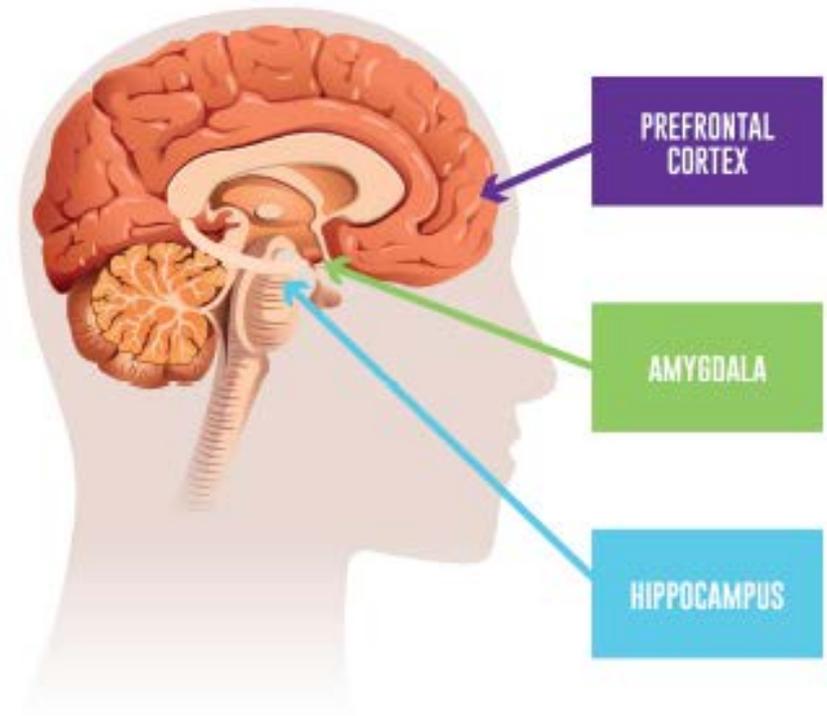
Irritability

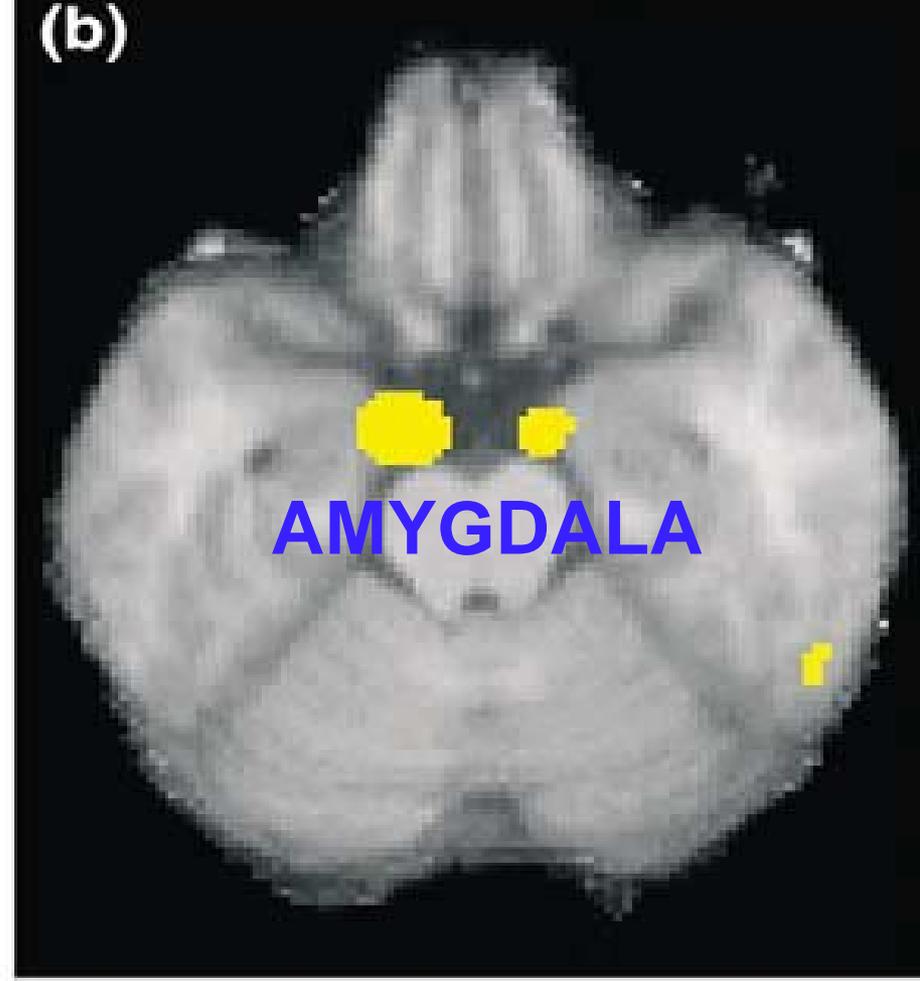
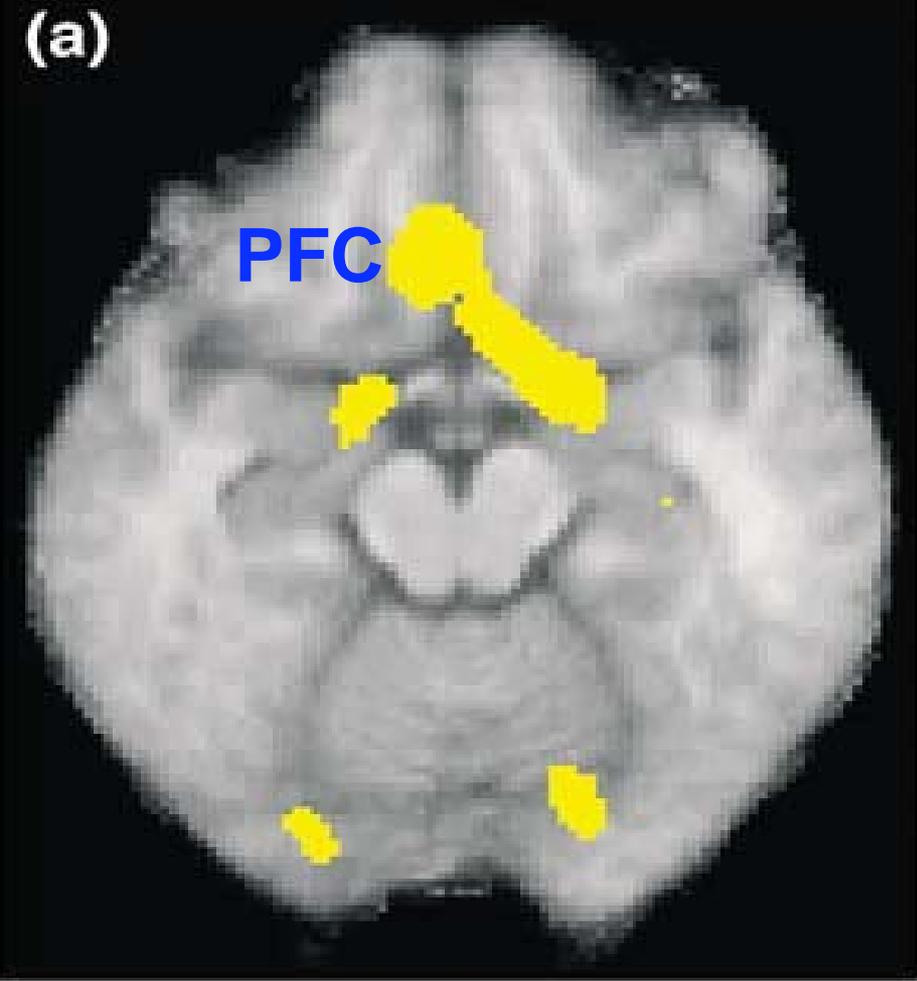
Poor memory

Difficulty focusing

Critical thinking difficulty

Increased anxiety and fear





A: Positive emotional state, flow through amygdala to PFC and better memory test results.

B: Stressed state: No passage of information to PFC & lower memory testing short and long-term.

(Hamman, et al. *Cognitive Neuroscience*.)

What emotion do you see?



YURGELUN-TODD

WHAT YOU SEE IS WHAT YOU GET!



Fear



Contempt



Surprise



Anger



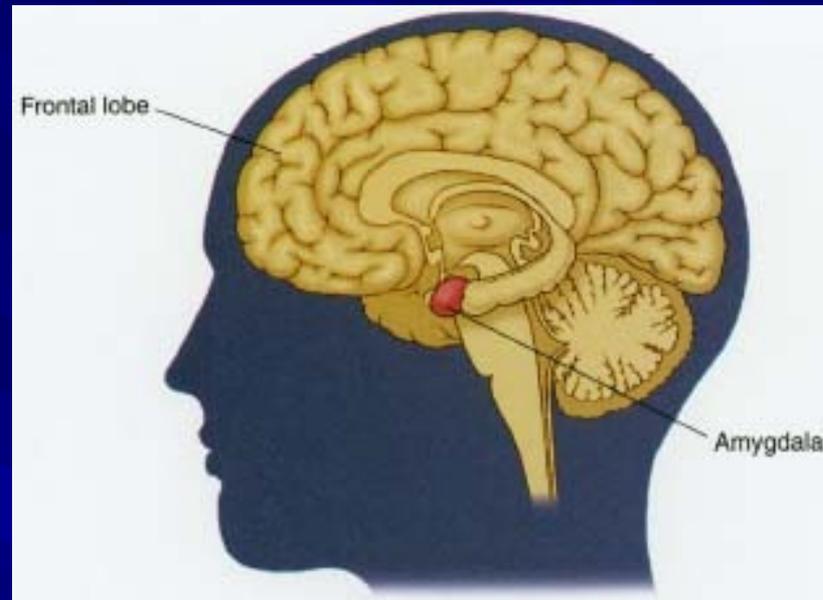
Disgust



Happiness

YURGELUN_TODD

Sadness



Adolescents use the **Amygdala** (fight or flight response) rather than the **Frontal Cortex** (used by older adults) to read emotions



Sleep is very important during periods of brain maturation!



This means that although many teenagers get **less** sleep than younger children, there is actually an **increase** in sleep needs during the teenage years!

GREATEST OPPORTUNITY...

GREATEST VULNERABILITY

As the adolescent brain is reconfigured it is more susceptible to long lasting damage of drugs, alcohol, and negative experiences. Unfortunately, the brain is most vulnerable at a time when they are most inclined to take risks and to act impulsively...”

(Jay Giedd, NIH 2004)

Peer INfluence



**STREET
WORKS**



However, in a world of fast cars, readily available drugs and alcohol, this combination simply puts teens at increased risk



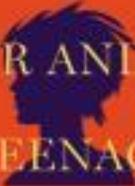
Scenarios

- What we Think....
- Affects how we feel....
- Affects how we act...

THE *NEW YORK TIMES* BESTSELLER

AN INSIDE-OUT GUIDE TO THE EMERGING
ADOLESCENT MIND, AGES 12-24

BRAINSTORM

THE POWER AND PURPOSE
 OF THE TEENAGE BRAIN

DANIEL J. SIEGEL, M.D.

bestselling author of *The Whole-Brain Child*
and *Parenting from the Inside Out*

Resources

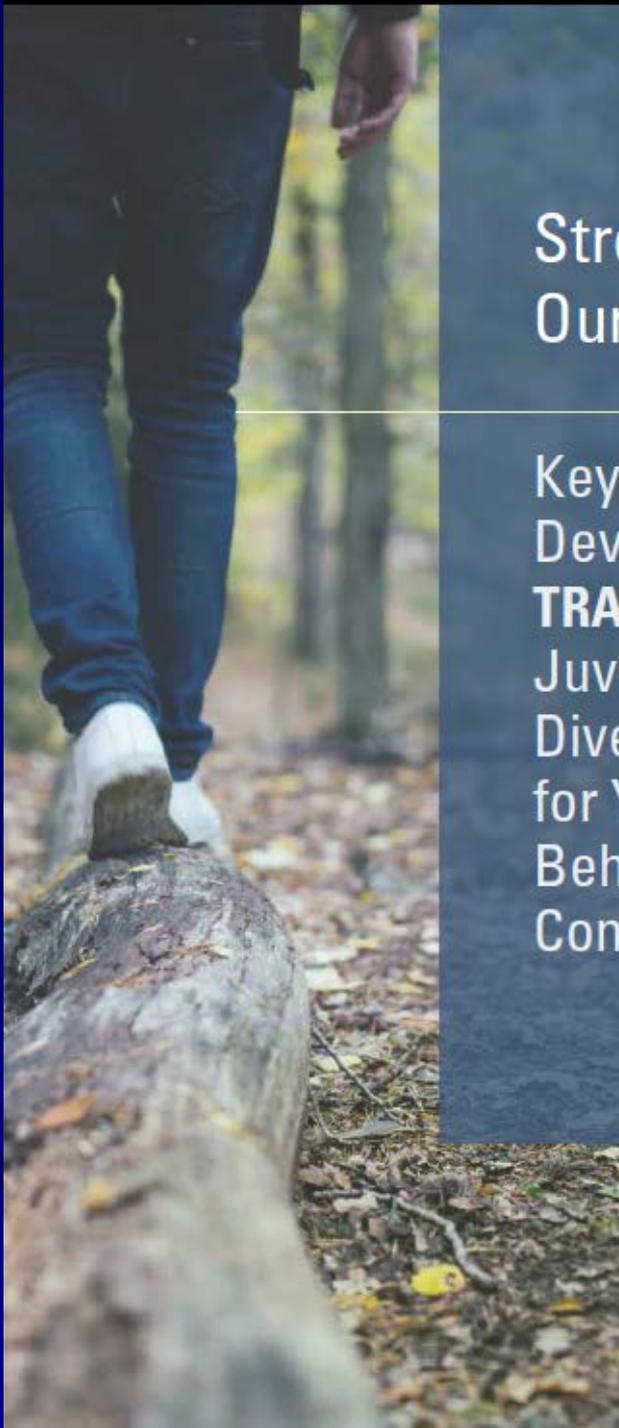
- www.teenmentalhealth.org
- www.teensteps.org
- www.mindyourmind.ca
- <http://www.btslessonplans.org>
- www.gettingtobetter.ca
- <http://www.children.gov.on.ca/htdocs/English/topics/youthopportunities/steppingup/contents>

Books Mentioned

- Brain storm- Dan Siegel
- Whole Brain Child –Dan Siegel
- Mindset –Carol Dweck
- Drive - Dan Pink
- Raising your spirited child –Mary Sheedy Kurcinka
- Discipline Kids are Worth it Barbara Coloroso
- Adolescent Therapy that Really Works
 - Jane Sasson Edgette
- You and your Adolescent
 - Laurence Steinberg
- Hold Onto your Kids
 - Gordon Neufeld Gabor Mate

**“Everyone has a right to
have a future that is not
dictated by the past.”**

Karen Saakvitne

A photograph of a person's legs in blue jeans and white sneakers walking on a large, weathered log in a forest. The background is a blurred forest floor with fallen leaves.

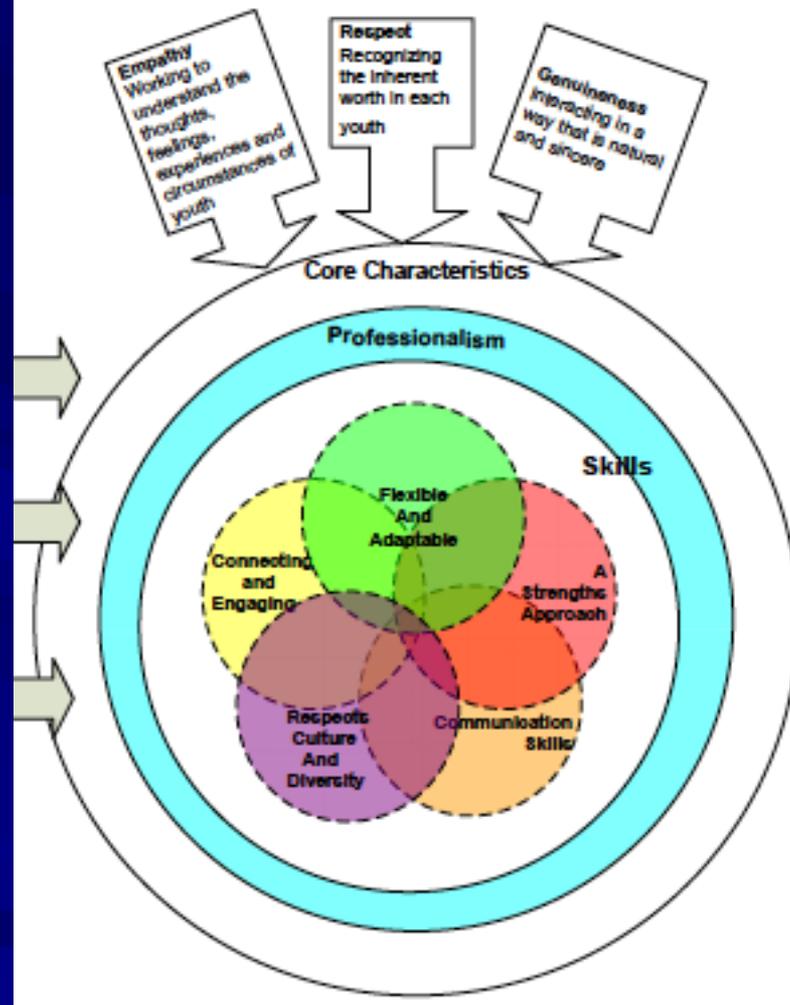
Strengthening Our Future:

Key Elements to
Developing a
TRAUMA-INFORMED
Juvenile Justice
Diversion Program
for Youth with
Behavioral Health
Conditions

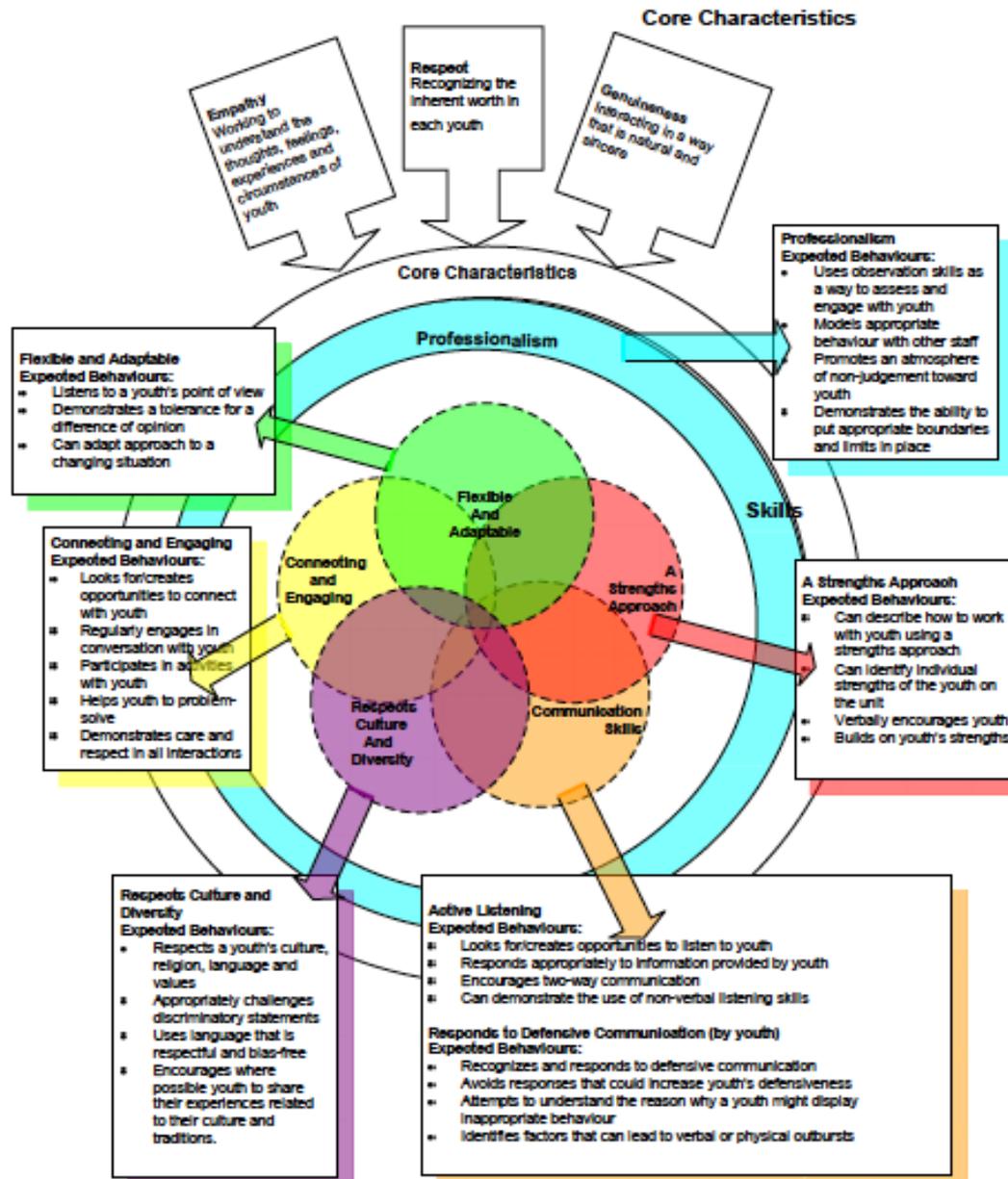
Principles of Trauma Informed Care

- Understanding Trauma and Its Impact
- Promoting Safety
- Ensuring Cultural Competence
- Supporting Consumer Control, Choice and Autonomy
- Sharing Power and Governance
- Integrating Care
- Healing Happens in Relationships
- Recovery is Possible

Overview of Characteristics and Skills



Relationship Custody Approach: Overview of Characteristics, Skills and Behaviours



MAKING SERVICES WORK FOR ABORIGINAL YOUTH INVOLVED IN ONTARIO'S JUSTICE SYSTEM



