

Twice-Exceptional (2e)

April 8, 2016

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For the power point go to:

<http://www.jimrussellphd.com>

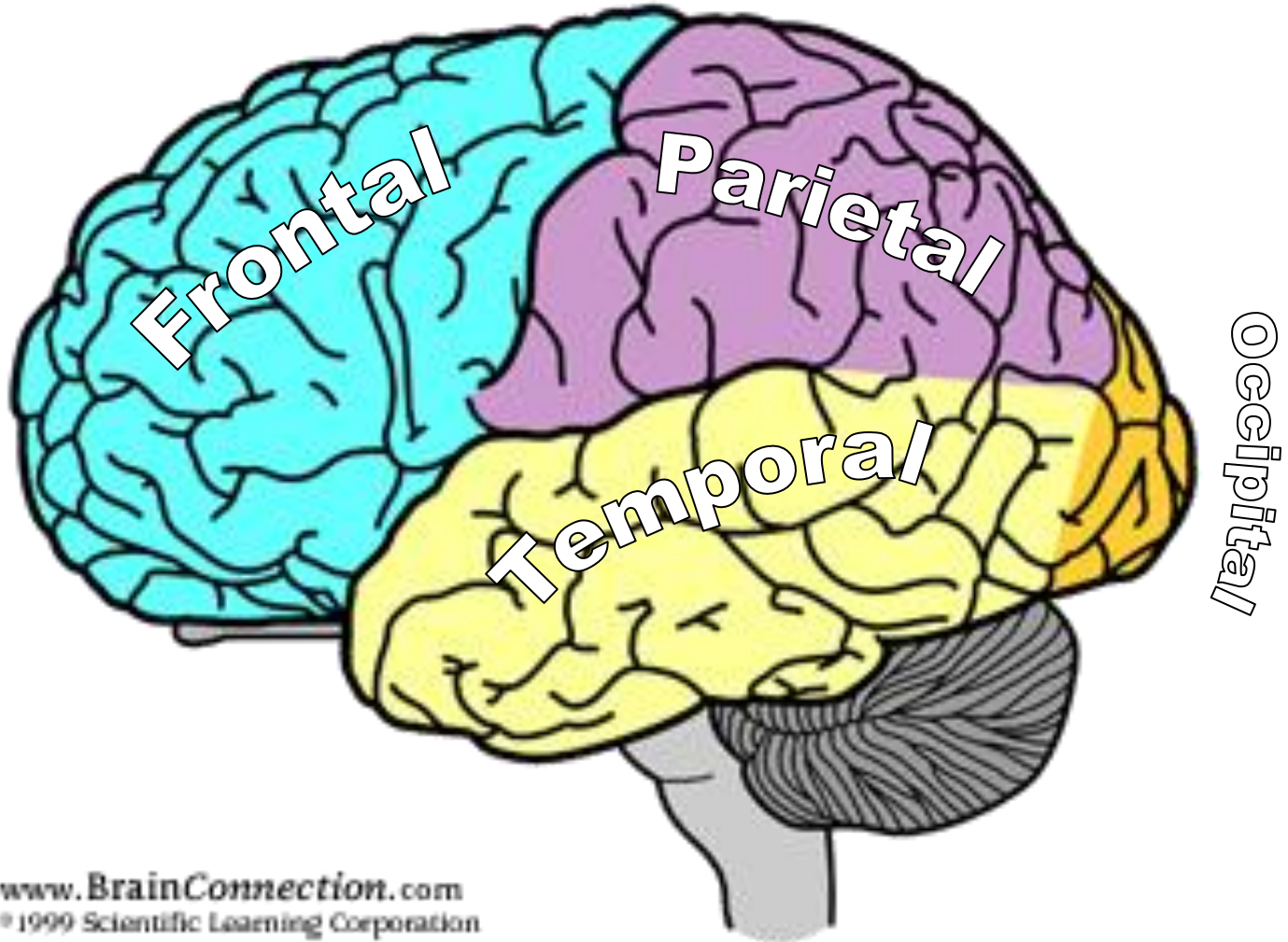
Learning Objectives

- Description of the twice-exceptional person: i.e., being Gifted/Dyslexic
- Using the DSM-5 to identify Learning Disorders
- Asynchronous Development
- Nonverbal Learning Disabilities

Neurobiology

- Lobes:
 - »Frontal
 - »Temporal
 - »Parietal
 - »Occipital
- Cortex: Lateral Frontal Cortex (IQ)
- Amygdala & Hippocampus (Emotional Intelligence)

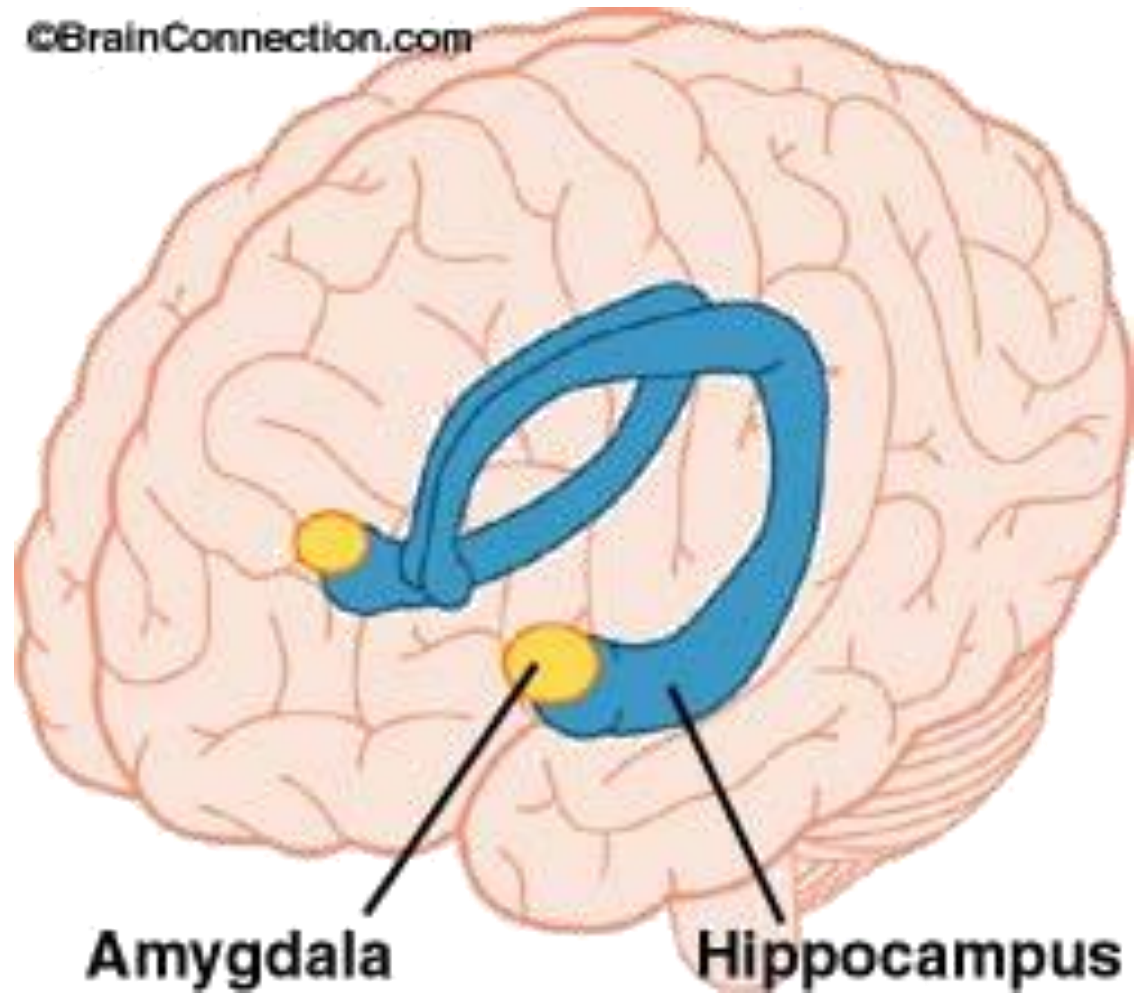
Lateral Brain



www.BrainConnection.com
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Amygdala & Hippocampus

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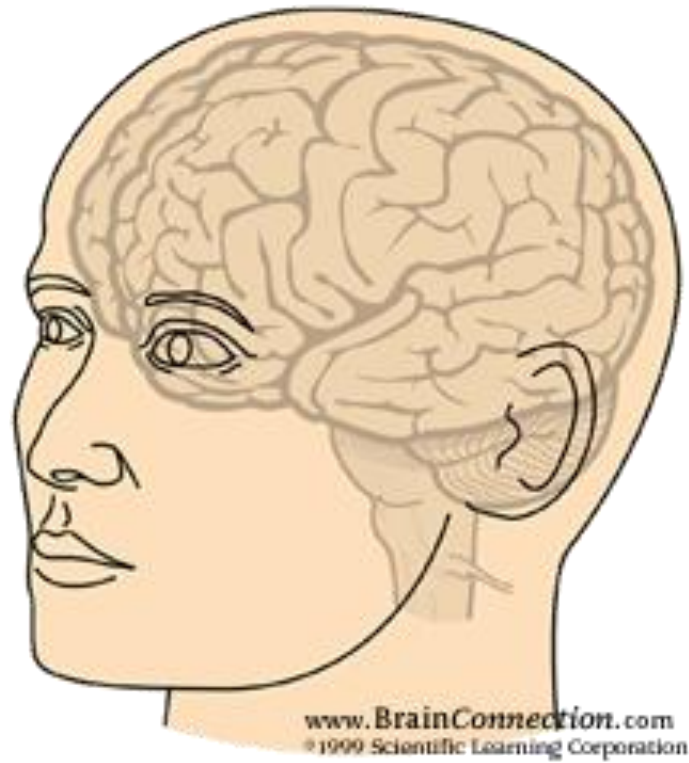


Flow chart for LD:

- Input
- Integration
- Memory
- Output

Adapted from
Dr. Larry Silver's book,
The Misunderstood Child₆

Head 1



The rate at which you learn
will become the only
sustainable competitive
advantage you'll have in your
life.

Peter Senge (The Fifth Discipline).

Use of Wechsler Subtests to evaluate for exceptionality:

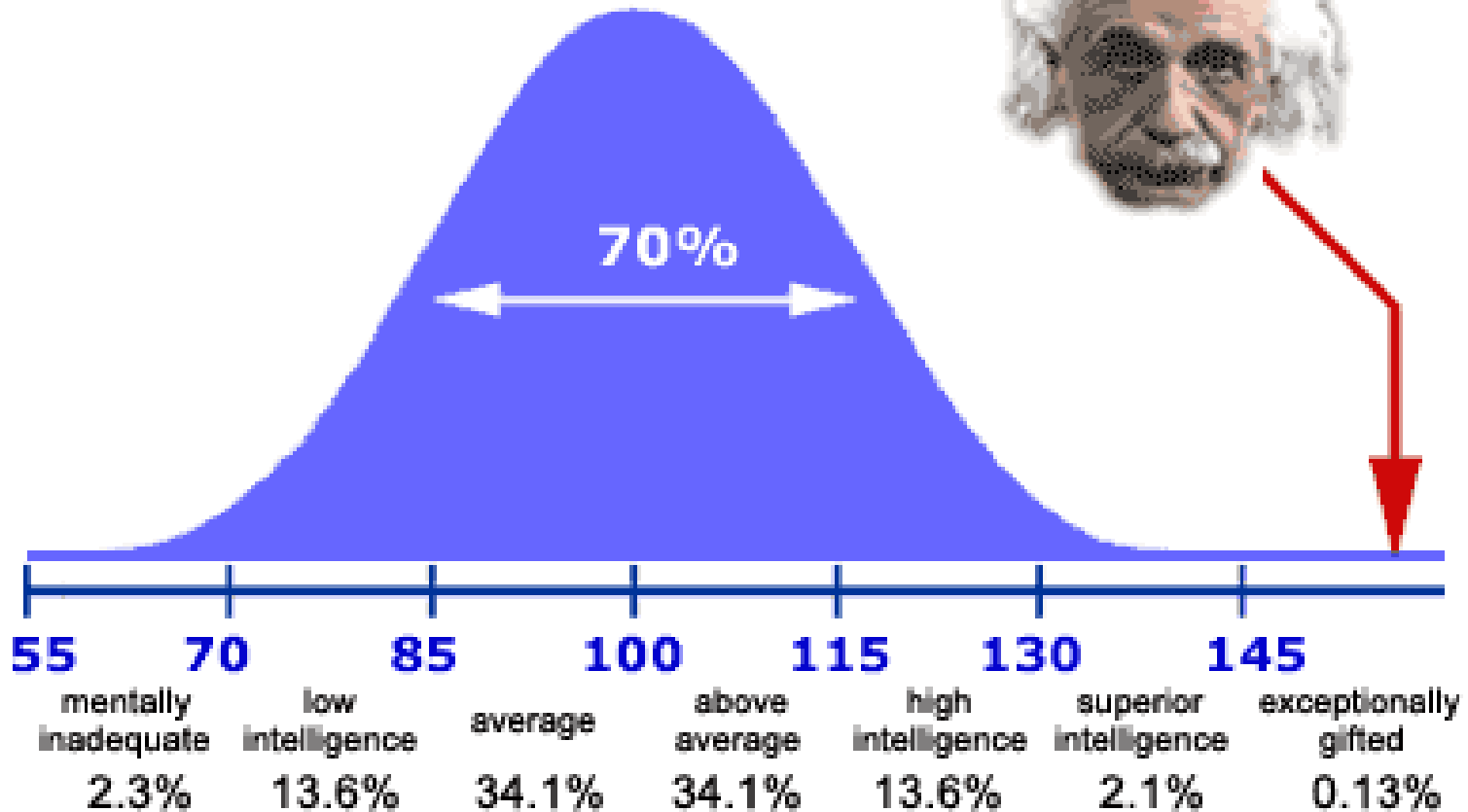
• Subtests	Mean	STD
• Similarities	10	3
• Comprehension	10	3

Use 120 as Superior IQ—Susan Baum et al.

- Verbal IQ
- Performance IQ
- Full IQ

Einstein's IQ

Einstein's IQ = 160+
What about yours ?



Hot Tip!

- IQ tests are not great predictors of later issues with reading

Susan Baum et al., Gt/LD (2e)

- Gifted students who are then identified as having an LD
- LD students who are then identified as being Gifted
- Average student who is usually not identified—until later

Higgins & Neilsen (2000) list *Strengths*:

- wide range of interests not related to school
- penetrating insight into complex issues
- specific talent or consuming interest area
- sophisticated sense of humor

Higgins & Neilsen (2000) list *Weaknesses*:

- poor social skills
- high sensitivity to criticism
- lack of organizational and study skills
- discrepant verbal and performance abilities

Higgins & Neilsen (2000) list *Weaknesses*:

- poor performance in one or more academic areas
- difficulty in written self expression
- stubborn, opinionated demeanor
- high impulsivity

Higgins & Neilsen (2000) list *Weaknesses*:

- superior vocabulary
- advanced ideas and opinions
- high levels of creativity and problem-solving ability
- extremely curious, imaginative, & questioning

Linda Kreger Silverman (1989, p.37) describes the characteristic behaviors of this group as:

- Perfectionism
- Supersensitive
- Lacks social skills
- Has unrealistic self-expectation
- Socially isolated
- Hyperactive
- Low self esteem
- Distractible
- Has psychomotor inefficiency
- Chronically inattentive
- Frustrated by demands of the classroom
- Fails to complete assignments
- Excessively critical of others
- Rebellious against drill and excessive repetition
- Become "an expert" in one area and dominates discussion with their expertise
- Disparaging of the work they are required to do

Today's problems come from
yesterday's "solutions."

Peter Senge

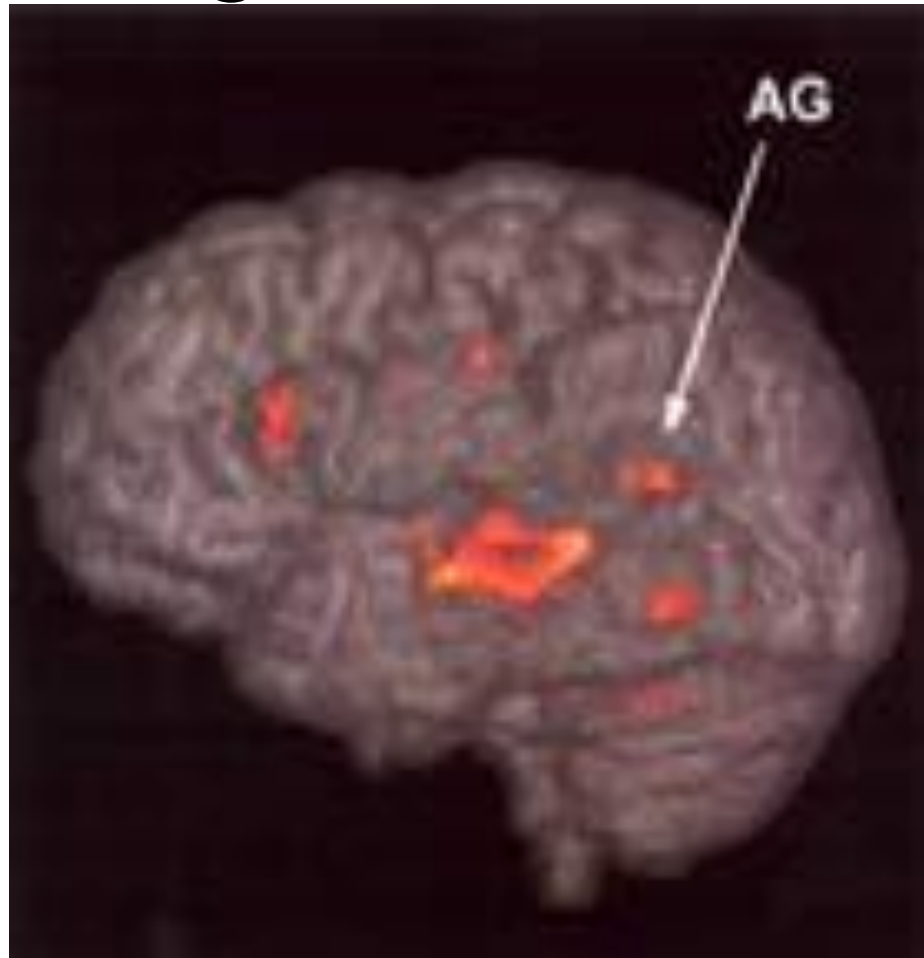
The Art of War, Sun Tzu

Know yourself and know others	100%	success
Know yourself but do not know others	50%	success
Unknown self and do not know others	0%	success

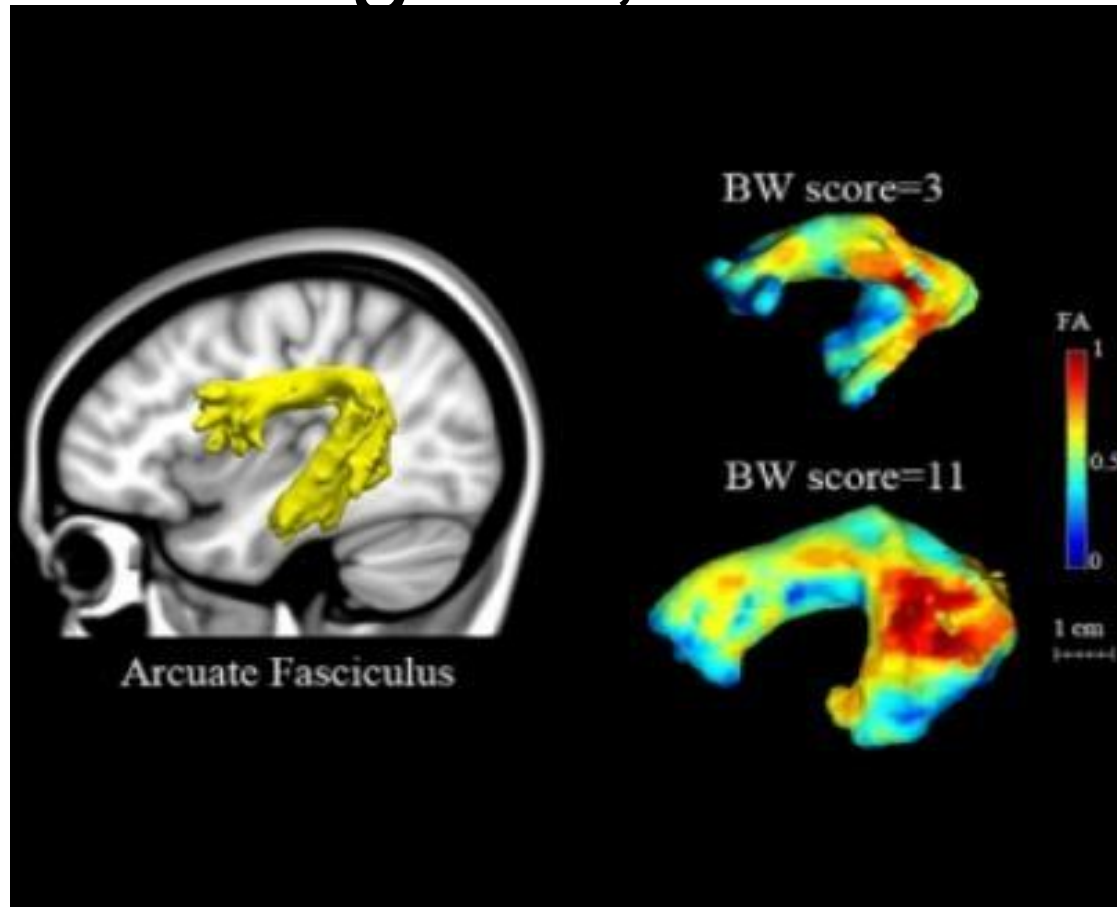
Neurobiology of LD:

- Drs. Bennett & Sally Shaywitz, Co-directors of the Center for the Study of Learning and Attention at Yale explains:
- “The brain does not have an innate reading ability-as it does for speech-so it deals with the written word by converting it into the nuts and bolts of a familiar phonetic language.” P.56
- **Poor Reading means Poor Prospects**

Image by Dr. Guinevere Eden, Georgetown University



Science Daily, Brain Scans May Help Diagnose Dyslexia, Aug. 13, 2013



Arcuate Fasciculus

Definition

Arcuate fasciculus: is a bundle of fibers that serves as the neural pathway connecting the expressive (i.e., Broca's area) and receptive (i.e., Wernicke's area) language areas to one another and plays a vital role in repetition [3].

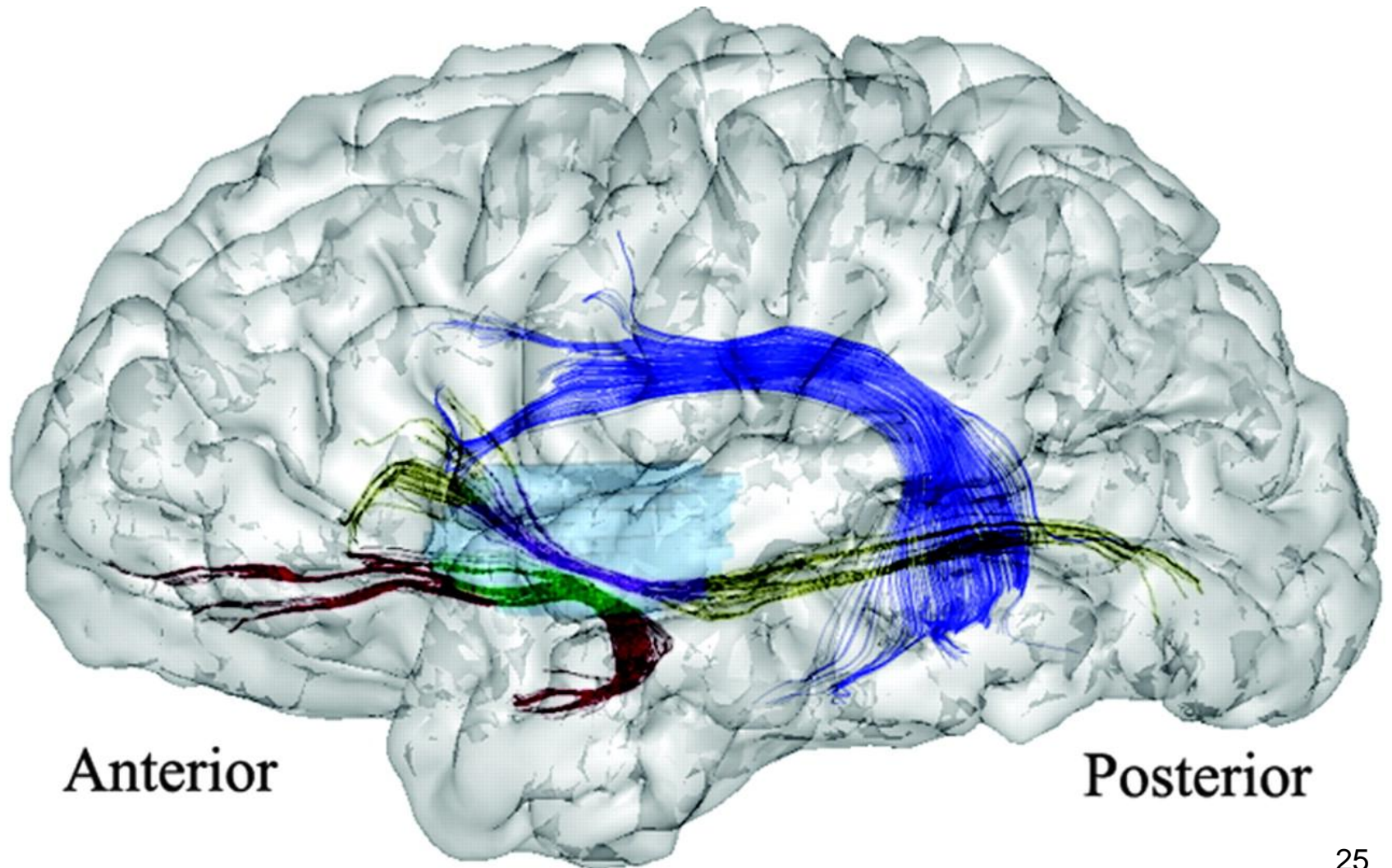
Arcuate Fasciculus

Description continued

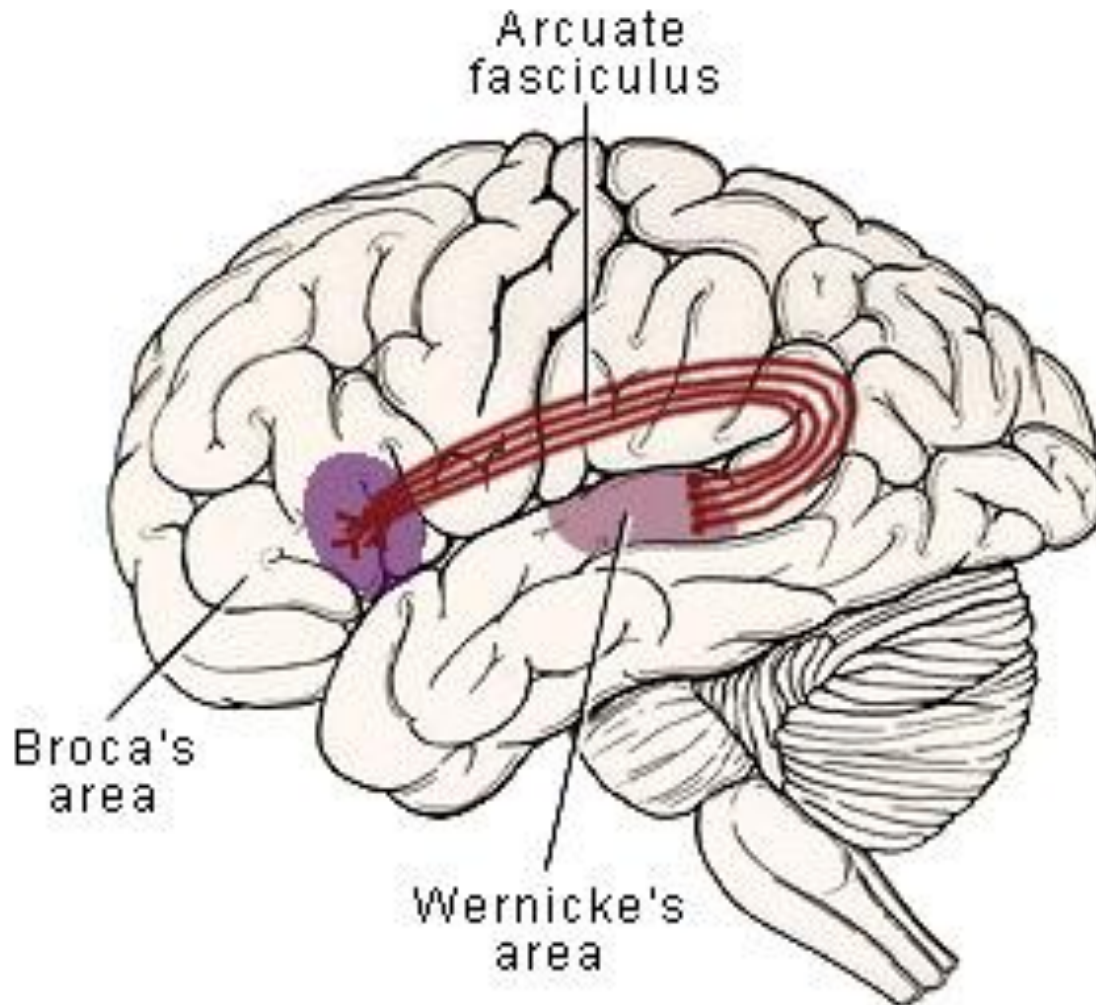
In terms of neurocognitive functioning, the arcuate fasciculus is said to play a vital role in repetition [1]. Specifically, as auditory information comes into the neural system that is to be repeated, it is first processed by the receptive center of the brain (i.e., Wernicke's).

<http://www.springerreference.com/docs/html/chapterdbid/179699.html>

Arcuate Fasciculus

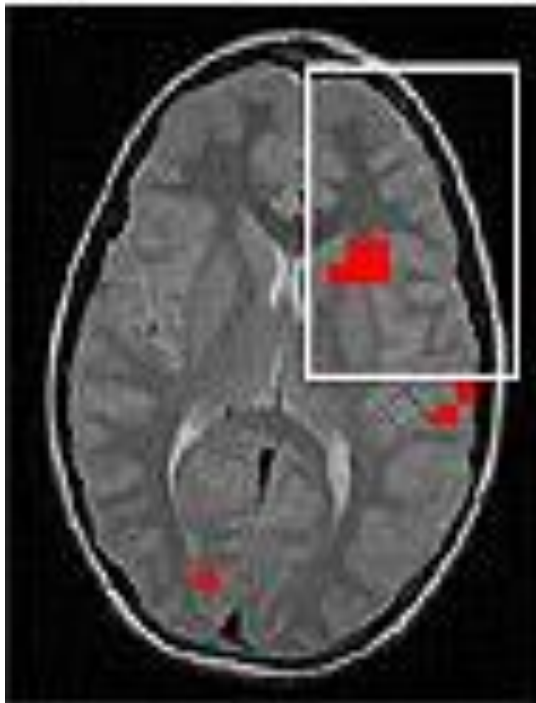


Arcuate Fasciculus



Dyslexic Brains

Dyslexic Example



←
Left
Anterior

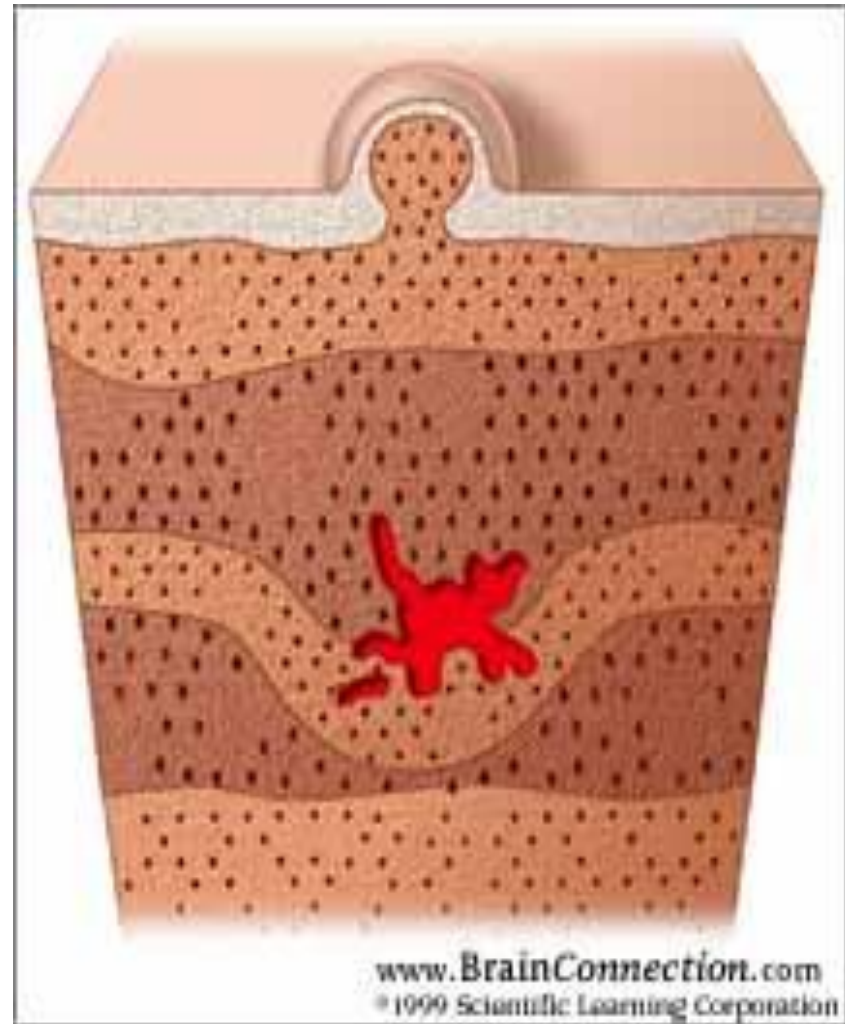
Control Example



←
Left
Anterior

Dyslexic cerebral cortex

Cross-section of dyslexic cerebral cortex showing the disorganization of cortical lamination and abnormal vessel architecture



Yale Center for Dyslexia and Creativity

Trouble learning common
nursery rhymes, such as
“Jack and Jill”

Yale Center for Dyslexia and Creativity

Difficulty learning (and remembering) the names of letters in the alphabet
Seems to be unable to recognize letters in his/her own name

Yale Center for Dyslexia and Creativity

Mispronounces familiar words;
persistent “**baby talk**”

Doesn't recognize rhyming
patterns like cat, bat, rat

A family history of reading
and/or spelling difficulties

Modified from Overcoming Dyslexia by Sally Shaywitz, M.D.

Speak directly to your child. Speak slowly and clearly, pronouncing each sound very carefully; you want him to notice each word or word part you say.

Exaggerate sounds—for example, *mmman*—and have him do the same when he repeats back to you.

Modified from Overcoming
Dyslexia by Sally Shaywitz, M.D.

Read to your child daily.

Play rhyming games (example: have him pick objects that rhyme with a common word—selecting a shoe for a word that rhymes with “two.”)

Learning...

- Disabilities—require accommodations to level the playing field
- Difficulties— may need enrichment in an area of weakness
- Differences—need to understand strengths and weaknesses

Hot Tip!

- Dr. Sally Shaywitz, M.D., in [Overcoming Dyslexia](#), On page 149:
- “I strongly recommend not delaying kindergarten entry; this will only delay needed help.”
- “Delaying a child’s entry into school does not help him become a better reader.”

DSM-5

Specific Learning Disorder

Domain: 315.00 With impairment in reading:

Subskills: Word reading accuracy
Reading rate or fluency
Reading comprehension

315.00 Specific Learning Disorder, With impairment in reading, Word reading accuracy, Moderate Severity

DSM-5

Specific Learning Disorder

Domain: 315.2 With impairment in written expression

Subskills: Spelling accuracy

Grammar and punctuation accuracy

Clarity or organization of written expression

315.2 Specific Learning Disorder, With impairment in written expression, Spelling accuracy, Severe Severity

DSM-5

Specific Learning Disorder

Domain: 315.1 With impairment in mathematics

Subskills: Number sense

Memorization of math facts

Accurate or fluent calculation

Accurate math reasoning

315.1 Specific Learning Disorder, With impairment in mathematics, Number sense, Mild Severity

DSM-5 Symptoms of preschool children with Specific Learning Disorders

Lacking interest in playing games with language sounds i.e., repetition, rhyming

Trouble learning nursery rhymes

Use “**Baby talk**”

Mispronounce words

DSM-5 Symptoms of preschool children with Specific Learning Disorders

Trouble remembering:

Names of letters

Numbers

Days of week

Trouble learning to talk

Do not know the letters in there own name

DSM-5 Symptoms of kindergarten aged children with Specific Learning Disorders

Cannot recognize or draw all the letters

Can't write name

Invented spelling

Can't break words into syllables

COWBOY = COW----BOY

DSM-5 Symptoms of kindergarten aged children with Specific Learning Disorders

- Trouble recognizing words that rhyme
e.g., cat---bat---hat
- Connecting letters with sounds
b = bah sound

DSM-5 Symptoms of kindergarten aged children with Specific Learning Disorders

- Trouble processing phonemes
e.g., dog, man, & car
- Knowing which of the words above
start with the same sound as “Cat.”

Why are learning problems so complicated?

- Time Magazine
- March 26, 2001
- Blame it on the Written Word
- By Unmesh Kher
- English has 1120 different spellings for ~44 phonemes
- Italian has 33 different spelling for 25 phonemes
- English is notoriously illogical

Clinical Judgment:

- The clinician/diagnostician needs to be very specific in describing his or her clinical judgment regarding the standardized test scores and percentile ranks that support the identification of a learning disability. He or she must demonstrate that the person experiences a substantial limitation for a major life activity.

Asynchronous Development

- Chronological age = 12
- Intellectual age = 16
- Emotional age = 9

Nonverbal LD

- Common Characteristics of Nonverbal Learning Disorders
- by Liza Little, PsyD, RN, NLD on the Web!
- Source - This article first appeared in the Journal of the Society of Pediatric Nurses, Vol. 4, No. 3, July-September, 1999. It has been posted on NLD on the Web! with express permission of the Journal, and the author.

Nonverbal LD

by Liza Little, PsyD, RN, NLD on the Web!

- SAVME:

Social

Academic

Visual-Spatial

Motor

Emotional

Nonverbal LD

by Liza Little, PsyD, RN, NLD on the Web!

- Social
- Lack of ability to comprehend nonverbal communication
- Significant deficiencies in social judgment and social interaction

The meaning behind words

- I did not say he stole my pencil.
- I **did not** say he stole my pencil.
- I did not **say** he stole my pencil.
- I did not say **he** stole my pencil.
- I did not say he **stole** my pencil.
- I did not say he stole **my** pencil.
- I did not say he stole my **pencil**.

Nonverbal LD

by Liza Little, PsyD, RN, NLD on the Web!

- Academic
- Problems in math, reading comprehension, handwriting
- Problems with organization, problem-solving, higher reasoning
- Strengths include strong verbal and auditory attention and memory

Nonverbal LD

by Liza Little, PsyD, RN, NLD on the Web!

- Visual-Spatial
- Lack of image, poor visual recall
- Faulty spatial perception and spatial relations

Nonverbal LD

by Liza Little, PsyD, RN, NLD on the Web!

- Motor
- Lack of coordination
- Severe balance problems
- Difficulties with fine motor skills

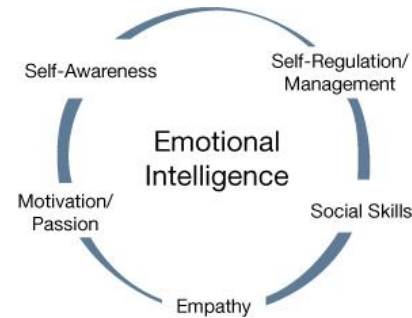
Nonverbal LD

by Liza Little, PsyD, RN, NLD on the Web!

- Emotional
- Frequent tantrums, difficulties soothing, easily overwhelmed
- Fears of new places and changes in routines
- Prone to depression and anxiety as they get older



Emotional Intelligence



- Shame –embarrassment & humiliation, vs (Guilt, remorse, & contrition)
- Dr. Russell—Motivation to keep a human on task or involved with an activity or another person.
- Dr. Russell – Feelings related to Learning.

No Asperger's Disorder in DSM-5:

Autism Spectrum Disorder, 299.00
aka Spectrum issues

Social (Pragmatic) Communication Disorder,
315.39

Social (Pragmatic) Communication Disorder, 315.39

- Deficits in using communication for social purposes
- Inability to change communication to match context
- Difficulties with following rules for conversations and storytelling
- Difficulties with understanding what is not explicitly stated

Statistics



Arthur Schopenhauer (1788-1860)



The Philosopher Arthur Schopenhauer :

All truth passes through 3 stages:

- It is ridiculed
- It is violently opposed
- It is accepted as being self evident

The rate at which you learn
will become the only
sustainable competitive
advantage you'll have in your
life.

Peter Senge (The Fifth Discipline).

Anyway, by Kent M. Keith

Paradoxical Commandments

People are illogical, unreasonable, and self-centered

- Love them anyway

If you do good, people will accuse you of selfish ulterior motives

- Do good anyway

If you are successful, you will win false friends and true enemies

- Succeed anyway

Anyway, by Kent M. Keith

Paradoxical Commandments

The good you do today will be forgotten tomorrow

- Do good anyway

Honesty and frankness make you vulnerable

- Be honest anyway

Anyway, by Kent M. Keith

Paradoxical Commandments

The biggest men and woman with the biggest ideas can be shot down by the smallest men and the smallest mind

- Think Big anyway

People Favor underdogs but follow only the top dogs

- Fight for a few underdogs anyway

Anyway, by Kent M. Keith

Paradoxical Commandments

What you spend years building may be destroyed overnight

– Build anyway

People may really need help but may attack you if you do help them

-Help people anyway

Anyway, by Kent M. Keith

Paradoxical Commandments

- Give the world the best you have and you'll get kicked in the teeth
 - Give the world the best you have anyway

Thank you!

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Bonus material

Scaffolding Instruction

Gives students a

- context,
- motivation, or foundation

from which to understand the *new information* that will be introduced during the coming lesson.

Scaffolding Strategies

Activating prior knowledge

- offering a motivational context to pique student interest or curiosity in the subject at hand
- breaking a complex task into easier, more "doable" steps to facilitate student achievement
- showing students an example of the desired outcome before they complete the task
- modeling the thought process for students through "think aloud" talk
- offering hints or partial solutions to problems
- using verbal cues to prompt student answers
- teaching students chants or mnemonic devices to ease memorization of key facts or procedures

Scaffolding works by:

- facilitating student engagement and participation
- displaying a historical timeline to offer a context for learning
- using graphic organizers to offer a visual framework for assimilating new information
- teaching key vocabulary terms before reading
- guiding the students in making predictions for what they expect will occur in a story, experiment, or other course of action

Scaffolding works by:

- asking questions while reading to encourage deeper investigation of concepts
- suggesting possible strategies for the students to use during independent practice
- modeling an activity for the students before they are asked to complete the same or similar activity
- asking students to contribute their own experiences that relate to the subject at hand

Name: _____

K <i>What I Know</i>	W <i>What I Want to Know</i>	L <i>What I Learned</i>

NPR, Closing the word gap between Rich and Poor, Dec.,29, 2013 .

- The “word gap” appears as early as 18 months.
- By age 3, low income children hear 30 million fewer words
- Two-thirds of kindergarteners are behind national literacy benchmarks

<http://www.npr.org/2013/12/29/25/closing...>

NPR, Closing the word gap between Rich and Poor, Dec.,29, 2013 .

- Dr. Dana Suskind, University of Chicago, started the 30 million word project.
- The parent should “tune in” to what the child is looking at, talk about it and ask questions that can create a sort of “serve and return,” between parent and child.

<http://www.npr.org/2013/12/29/25/closing...>

NPR, Closing the word gap between Rich and Poor, Dec., 29, 2013 .

- One parent described the program, (30 Million Words in Chicago), this way:
... “that program taught her to talk to her young daughter in new ways. She says she never realized bath time--with the colors and shapes of the bubbles and toys to describe--could be a teachable moment.”

<http://www.npr.org/2013/12/29/25/closing...>

NPR, Closing the word gap between Rich and Poor, Dec.,29, 2013 .

- Dr. Russell's prescription for small humans:
- Tune in
- Talk more
- Engage with the child interactively

The Highly Sensitive Child

by Elaine N. Aron, PH.D.

- 15%-20% of the population are Highly Sensitive Children (HSC)
- Introversions is not high sensitivity (70% of introverts are highly sensitive HS)
- Not inherently shy or neurotic
- Their brains process information more thoroughly, feel stronger emotions
- Overwhelmed by “high volume”

The Highly Sensitive Child by Elaine N. Aron, PH.D.

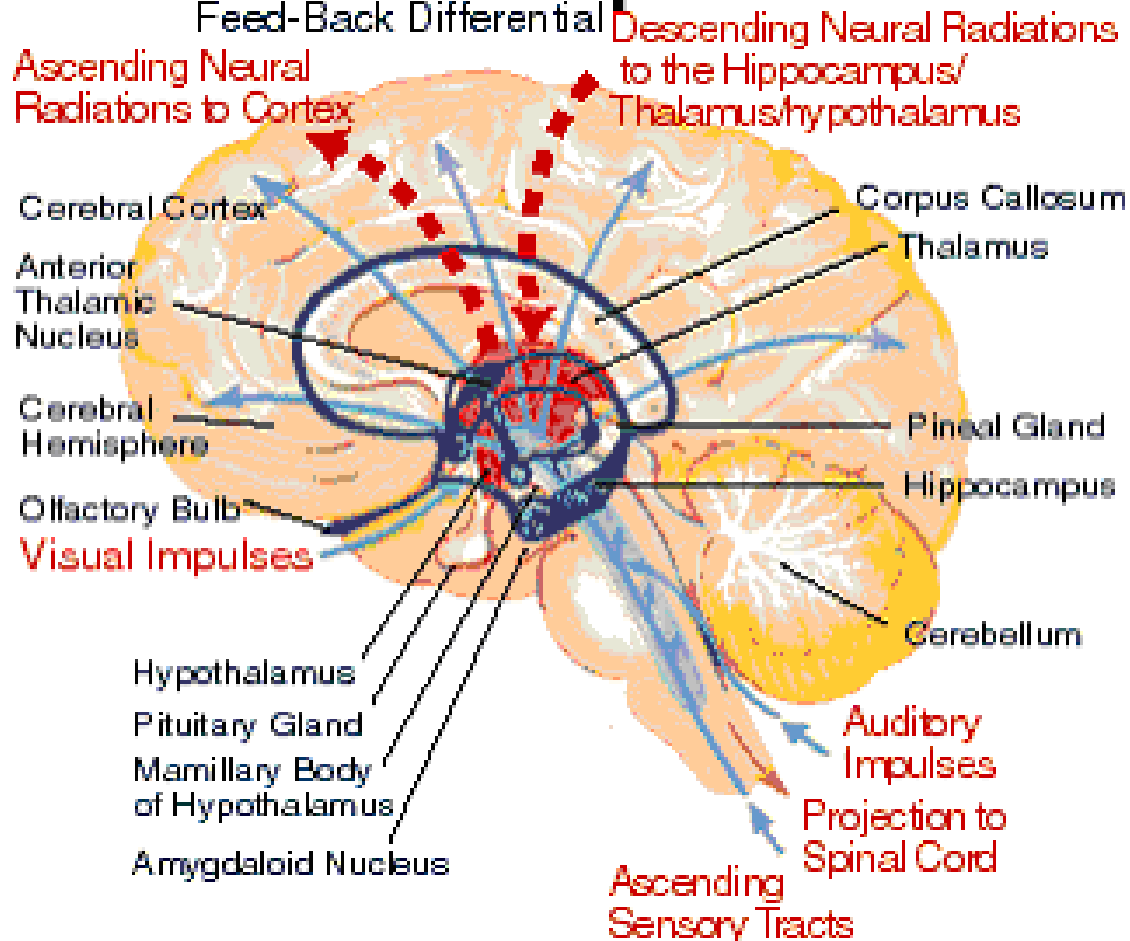
- Stronger feelings
- Deeper thoughts
- Suffer when others suffer
- Will melt down when overwhelmed
- Want to know the “meaning” of life
- Afraid of social judgments
- Scientists-theologians- historians- lawyers-
doctors-nurses-teachers-artists

The Highly Sensitive Child, by Elaine N. Aron, PH.D.

- “If you want to have an exceptional child,
- you must be willing to have an exceptional child.”

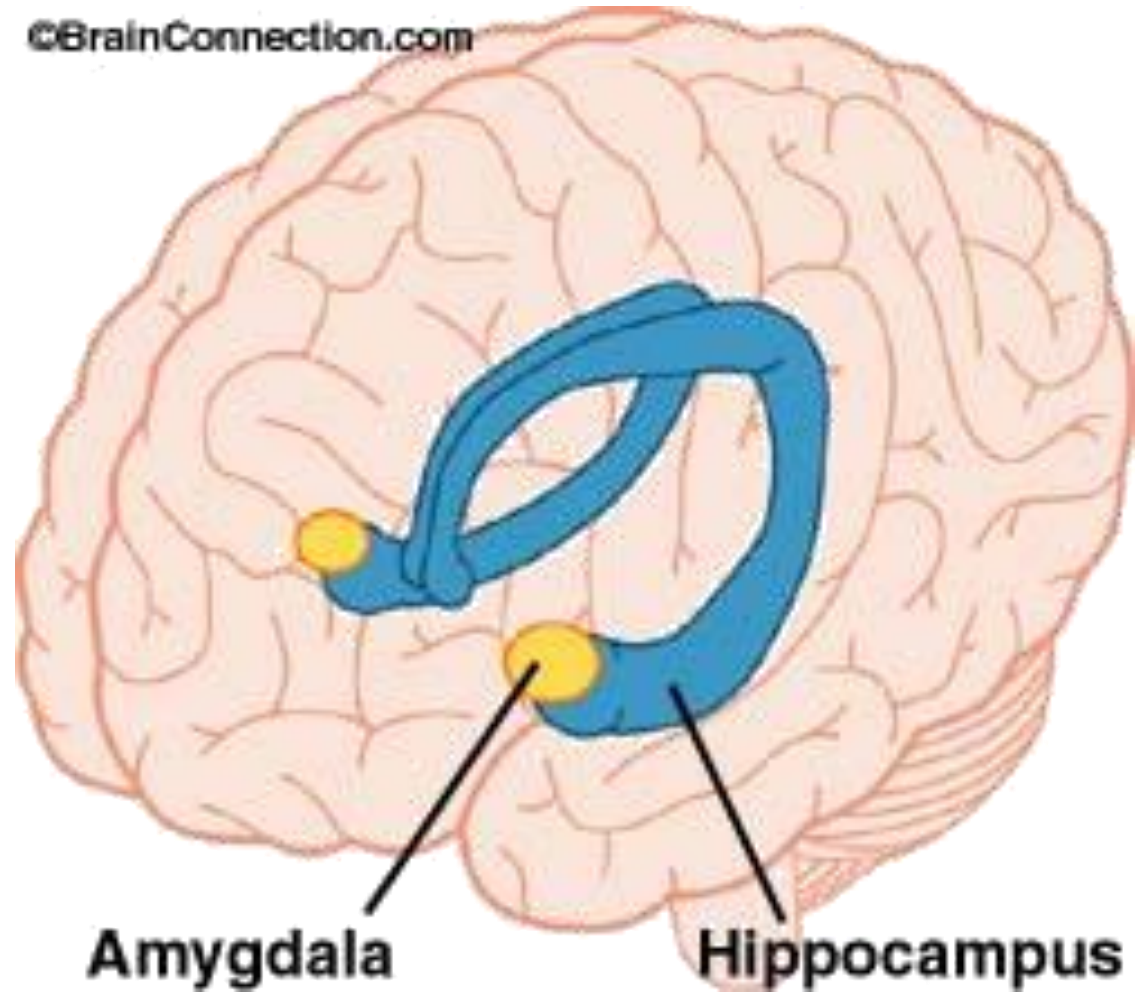
Reticular Activating System

Control Loop



Amygdala & Hippocampus

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Joseph LeDoux

- The Emotional Brain
- ISBN 0-684-83659-9 (pbk.)
- High road to sensory cortex
- Low road to the Amygdala

Fear

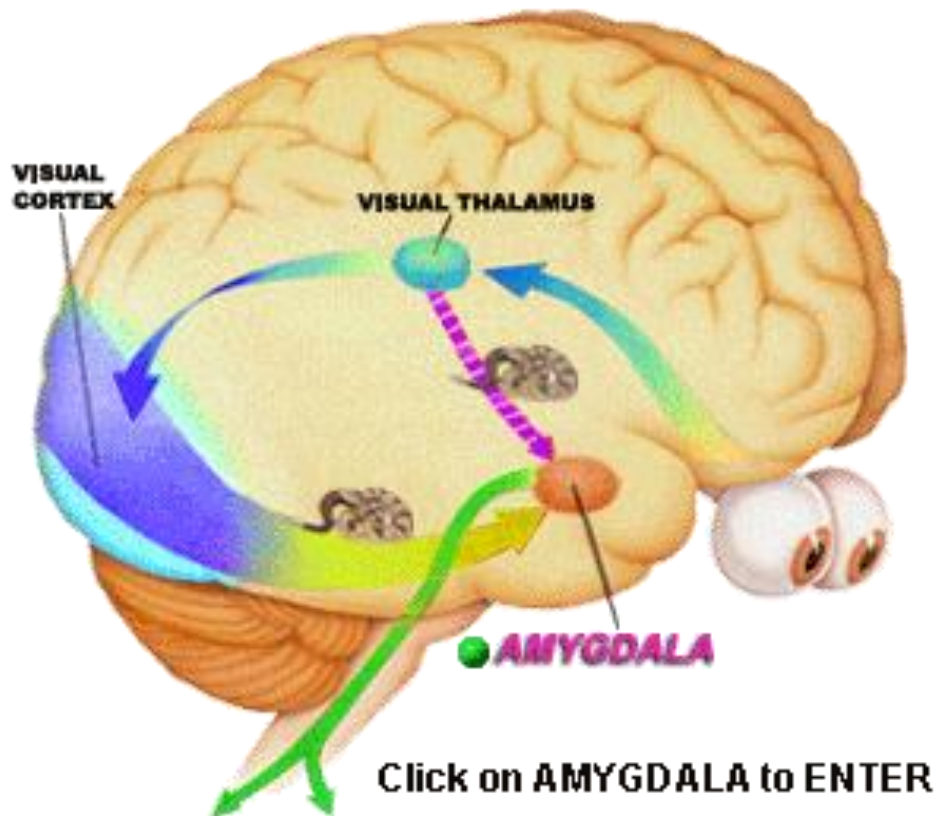


Illustration based on LeDoux JE (1994) Emotion, Memory, and the Brain. Scientific American.

Sensory Information

2 Pathways

- Eyes
- Optic Nerve
- Optic Chiasm
- Thalamus
- Cortex
- Slower

Eyes
Optic Nerve
Optic Chiasm
Thalamus
Amygdala
Faster