

THE 3RD INTERNATIONAL LEARNING AND THINKING (ILAT) CONFERENCE

Learning Styles and the use of Multiple Intelligences Model

A session presented by

Dr Peter Shephard





Carpe diem.
(Seize the day!)

Horace

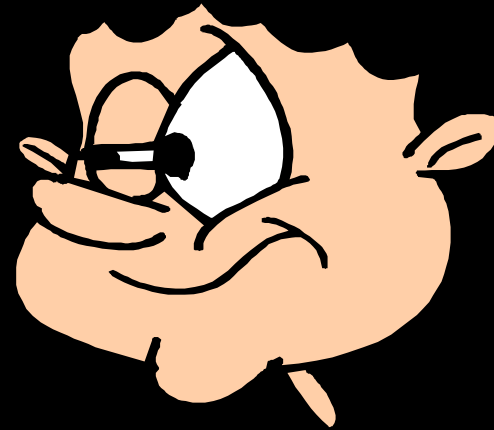
SESSION OBJECTIVE

To recognise how learning styles preferences can enhance knowledge and skills acquisition, using Multiple Intelligences

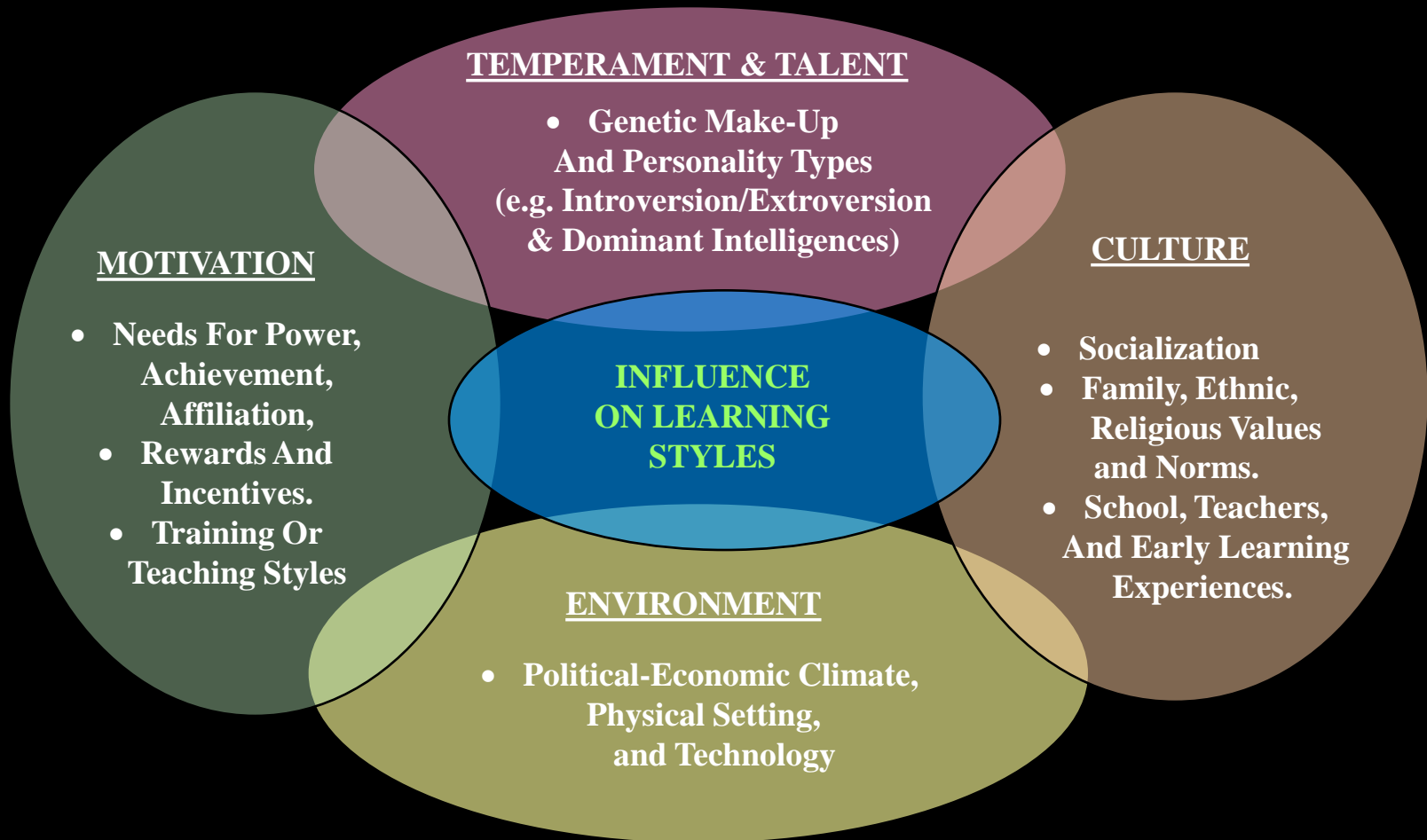
**I THINK,
THEREFORE**



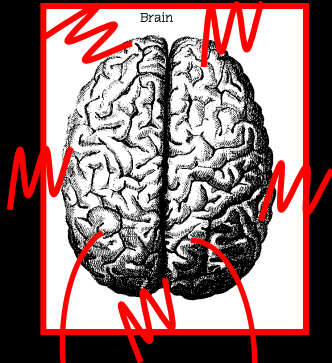
TIRE EASILY



WHY PEOPLE LEARN DIFFERENTLY



OUR PREFERRED LEARNING STYLE



Style Preference

Personality

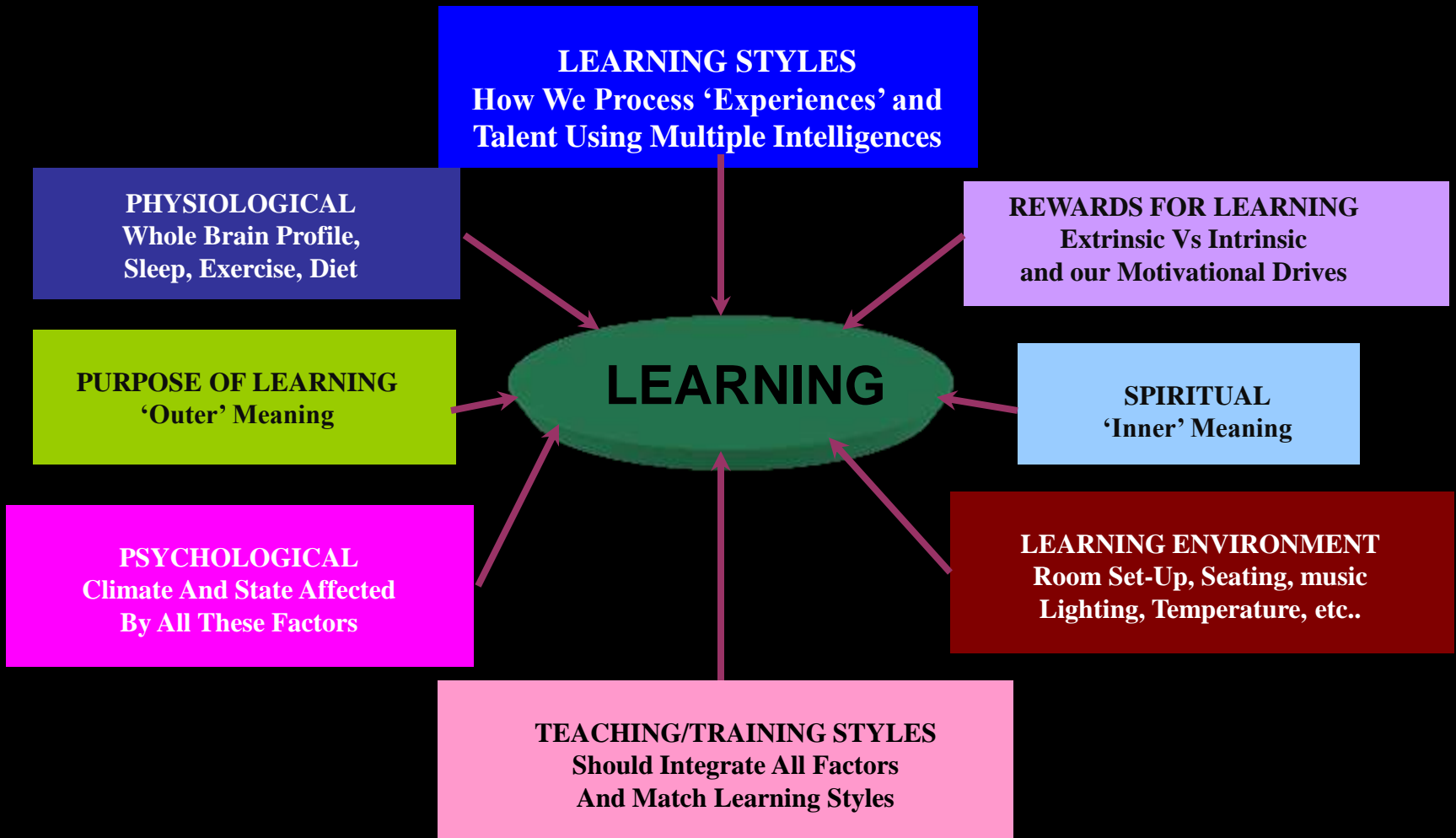
Temperament

Talents

- Recent research indicates that our learning style preferences relate more strongly to our personality and how our brains are "wired - up".
- That is : whether we are more 'left' or 'right' brained - or more 'cerebral' (thinking) - or more 'limbic' (feeling).
- We tend to prefer a style of learning that suits our temperament (eg. Expressive, quiet, venturesome and active or passive, calm, reflective etc)
- We also tend to prefer capitalizing on our strongest talents or intelligences. (Logical, numerative, verbal, analytic, visual, kinesthetic, musical & rhythmic, creative etc.)

Assess your style preferences on the next page →

FACTORS AFFECTING LEARNING

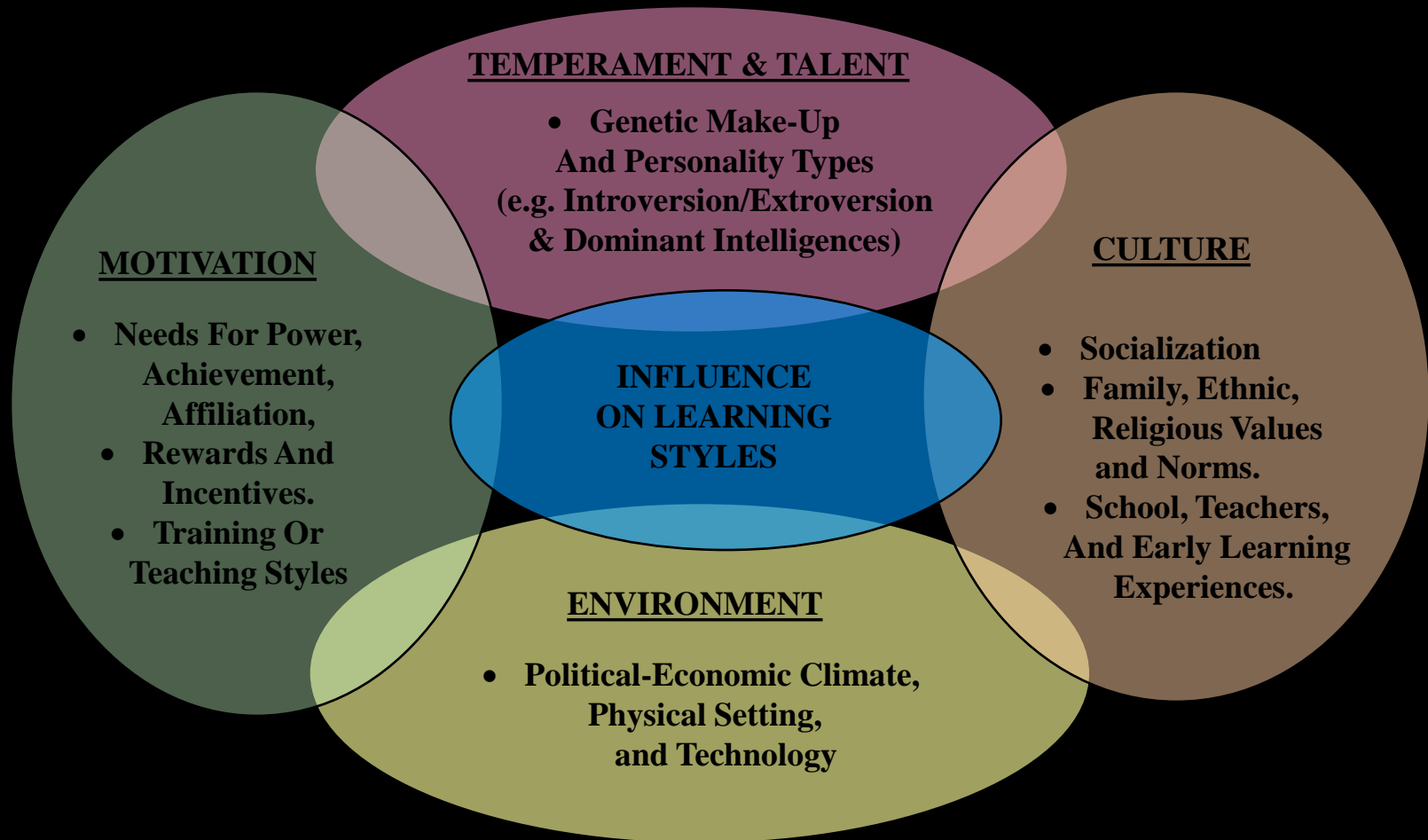


A photograph of a forest with tall, slender trees. Sunlight filters through the canopy, creating a dappled pattern of light and shadow on the ground. The overall atmosphere is bright and serene.

We Are What We Repeatedly Do

Aristotle

WHY PEOPLE LEARN DIFFERENTLY



EXERCISE, THE BRAIN AND ENERGY

Aerobic exercise increases our cardio-vascular fitness. Other exercises that promote deep breathing and reduces stress, also help.

BRAIN

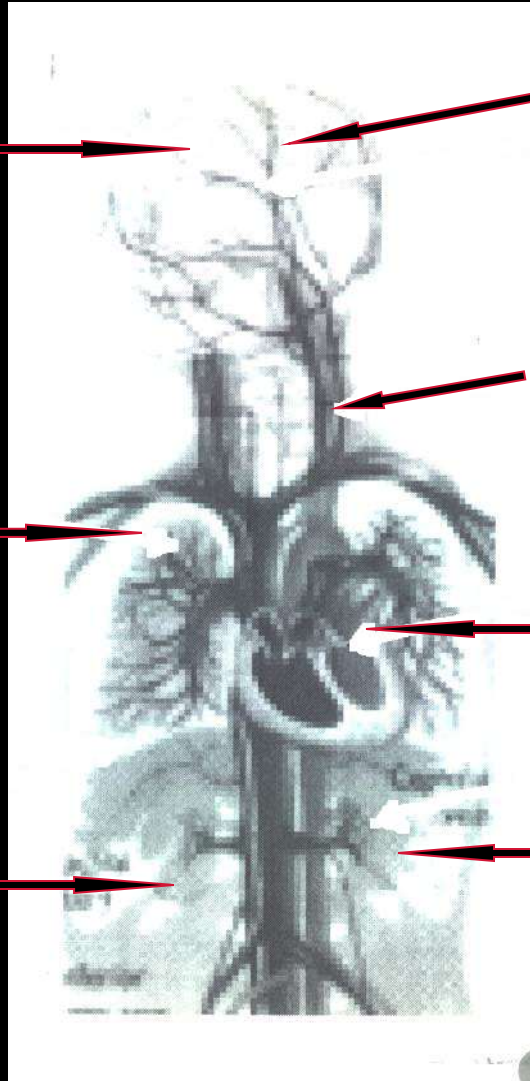
Billions Of Neurons Receive Glucose And Oxygen From Blood

LUNGS

Breathes In Oxygen And Transfers To Blood Supply

DIAPHRAGM

Pushes Down Into Stomach To Extend Lung Capacity



BLOOD VESSELS

Carries Glucose And Oxygen To The Brain

CAROTID ARTERIES

Main Supply Of Blood To The Brain

HEART

Pumps Blood To The Brain

STOMACH

Liver & Pancreas Processes Food To Supply Blood With Glucose And Nutrients For The Brain

5 MODELS OF LEARNING STYLES

BEHAVIOURAL MODELS

- | | |
|---|--|
| <p>1. Kolb's Model (LSI)
4 Styles : Concrete Experience
 : Reflective Observation
 : Abstract Conceptualization
 : Active Experimentation</p> | <p>2. Honey & Mumford's Model (LSQ)
4 styles : Activist
 : Reflector
 : Theorist
 : Pragmatist</p> |
|---|--|

BRAIN PHYSIOLOGY MODELS

- | | |
|--|---|
| <p>3. Herrmann's Whole Brain Model (LSP)
4 Styles
: Rational/Quantitative } Left
: Organized/Procedural } Brain

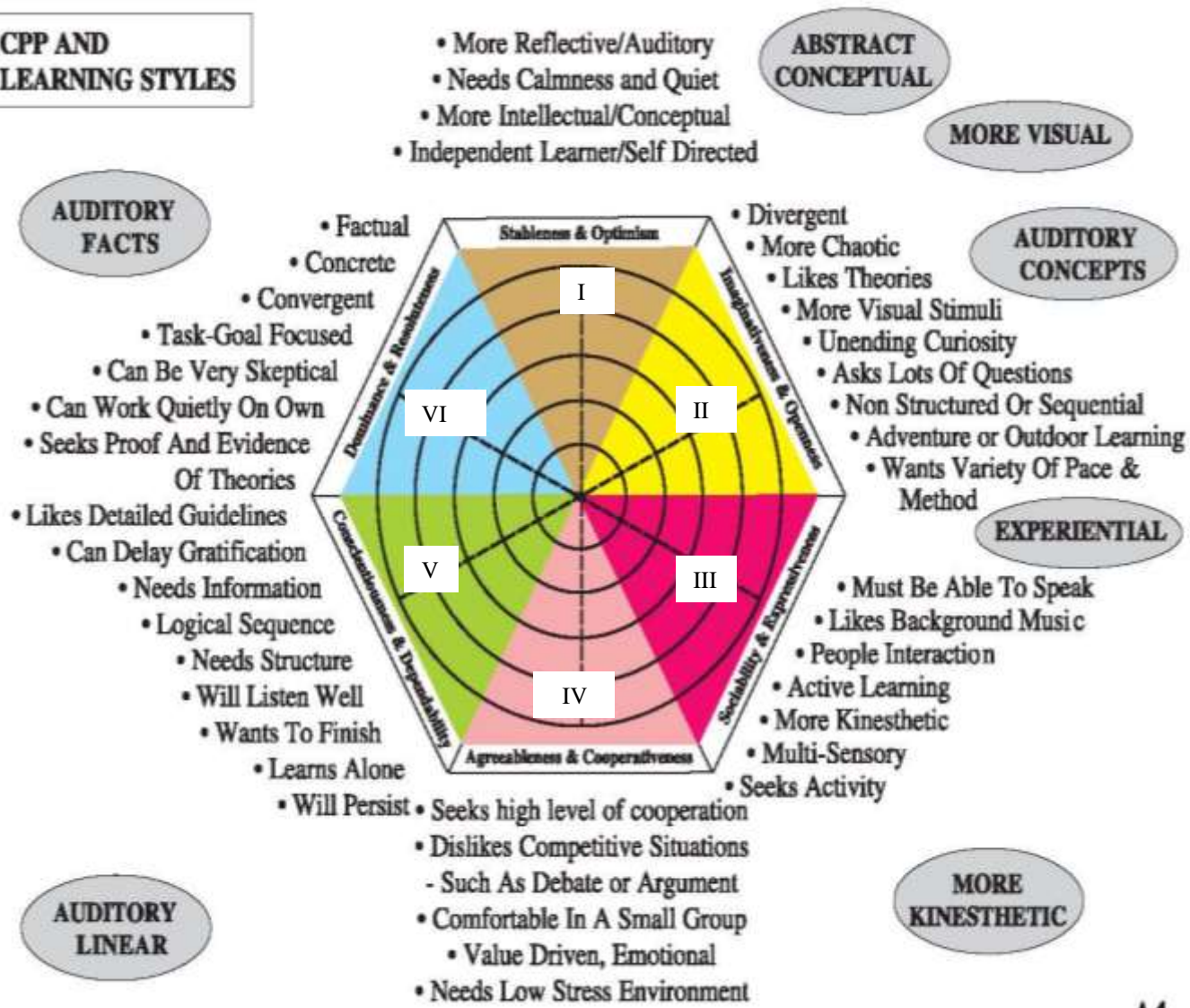
: Emotional/Interpersonal } Right
: Visual/Conceptual } Brain</p> | <p>4. Dunn & Dunn Model
2 Styles
: Analytic (Left Brain)

: Global (Right Brain)</p> |
|--|---|
5. **Neuro Linguistic Programming (NLP)**
- **Visual** • **Auditory** • **Kinesthetic/Haptic**

AN ASSESSMENT OF YOUR LEARNING STYLE

Study the chart below, and select 20 of the descriptors that best describe how you prefer to learn - when learning something new or difficult and if given a choice. These preferences or 'conditions' may be anywhere on the chart. Next, identify which colour segment they appear in, and enter the number of these in the boxes below and multiple by the factor shown. This will give you a relative percentage.

CPP AND LEARNING STYLES



CLUSTER SCORE	FACTOR	%
CLUSTER I <input type="text"/>	X 6 =	___%
(Brown)		
CLUSTER II <input type="text"/>	X 4 =	___%
(Yellow)		
CLUSTER III <input type="text"/>	X 5 =	___%
(Red)		
CLUSTER IV <input type="text"/>	X 6 =	___%
(Pink)		
CLUSTER V <input type="text"/>	X 4 =	___%
(Green)		
CLUSTER VI <input type="text"/>	X 5 =	___%
(Blue)		

Add Cluster I, II & VI % score (___%)
This shows your cognitive learning style preferences

Add Cluster III, IV & V % scores (___%)
This shows your emotional learning style preferences.

Add Cluster II & III % scores (___%)
This shows your left-brained learning style preferences

Add Cluster V & VI % scores (___%).
This shows your right-brained learning style preferences.

MEMORY IN THE BRAIN

LEFT HEMISPHERE

Words / Meaning

**Data
Numbers
Facts**

**Order / Sequence
Tone / Meaning**

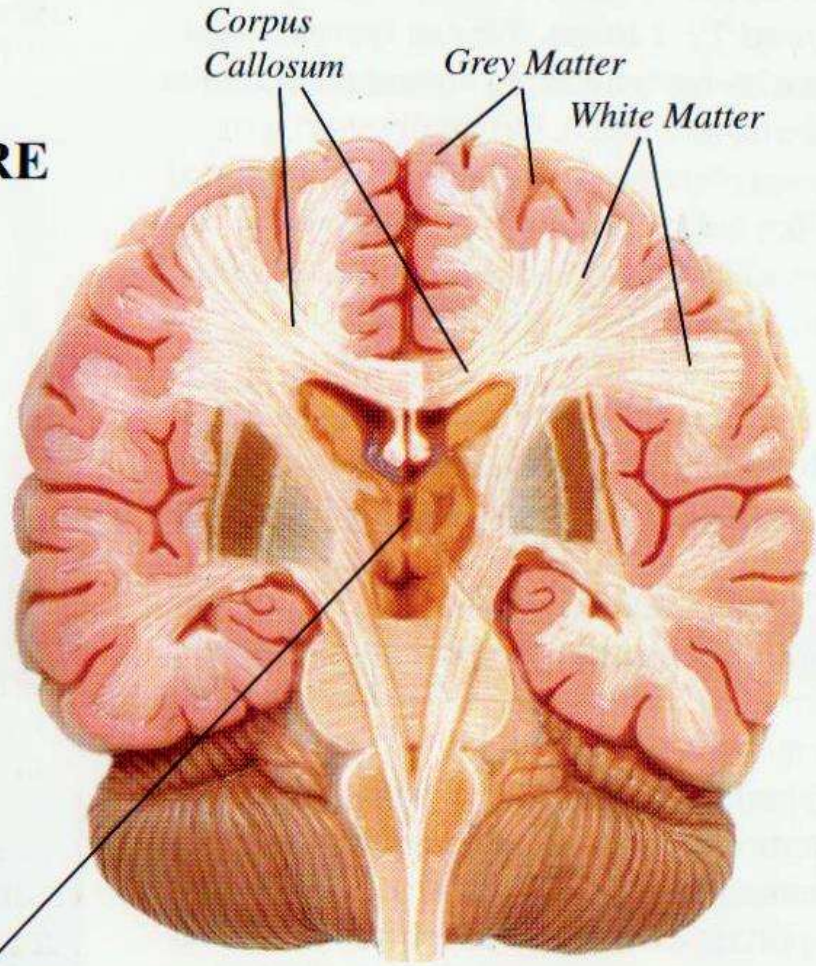
RIGHT HEMISPHERE

**Shapes / Patterns
Relationships**

**Concepts / Ideas
Synthesis / Integration
Visioning / Visualizing**

**Movement
Colour / Emotions**

Expressing Feelings



**ALL SHORT-TERM
MEMORY GOES
THROUGH THE
LIMBIC SYSTEM**

Memory is spread throughout the brain depending upon the functional areas that process it - but each can be connected - while parallel processing occurs.

INTELLIGENCE :

SOME DEFINITIONS AND THEORIES

“Ability to Solve Problems or Fashion Products”
(Howard Gardner)

“Thinking Smart”

“Ability to Learn, Think & Adapt to Environment”
(Shephard & Juno)

“What you do with what you know”

“Talents are Intelligences”
(Robert Ornstein)

IQ + EQ
Intellectual (I)
& Emotional (E)
Quotient (Q)

Multiple Intelligences Theory – 10 or 11 types – by Howard Gardner

Distribution Theory

- Physical
- Social
- Symbolic

Sensory Acuity
“Using Our Senses”

Triad of Effective Intelligence
“Ability to Make Wise Decisions”

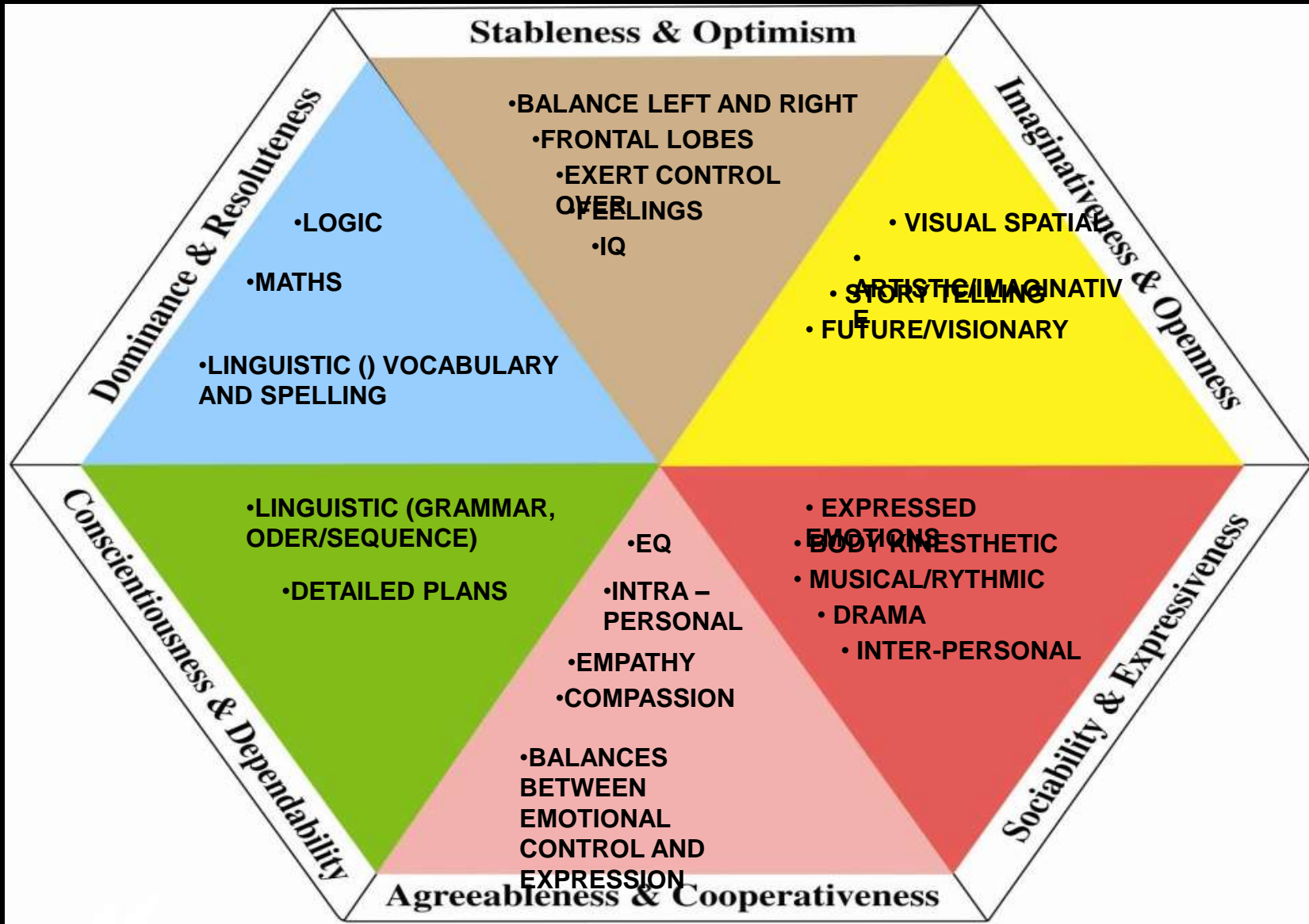
- Process Information
- Make Judgments
- Assess Past Experience
- Take Action
- Evaluate Results

Learnable Intelligence or Mindware
(David Perkins)

- Neural Efficiency
- Genetic Endowment
- Reflective

Contextual or Practical
• **Experiential (Creative)**
• **Componential (Analytic)**

WHICH PART OF THE BRAIN LEARN'S WHAT





BODILY - KINESTHETIC

- Dancers
 - Inventors
 - Athletes
 - Surgeons
 - Actors
 - Karate teachers
 - Mechanically gifted
- Living sculptures movement concept
 - Control of one's body and objects timing; trained responses that function like reflexes

NATURALISTIC

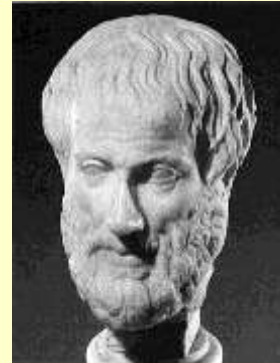
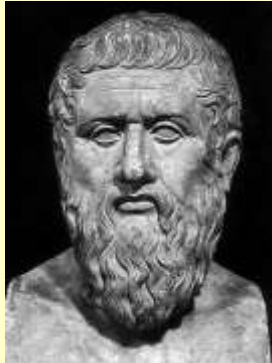


- Farmers, Fishermen
- Gardeners, Landscapers
- Hunters, Trackers
- Animal Lovers, Zoologists
- Veterinarians
- Conservationists



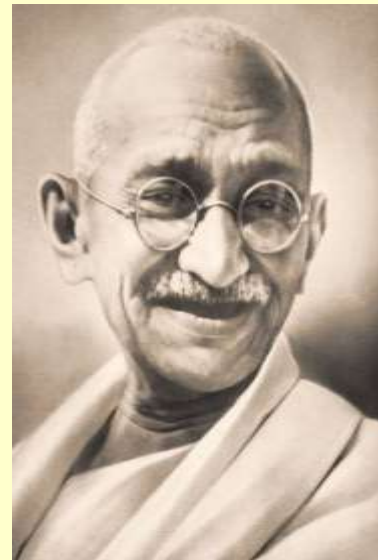
- Likes natural beauty
- Likes & is good with animals
- Preserves natural environment
- Has 'green' fingers
- Interested in nature

SPIRITUAL / EXISTENTIAL



- ❖ Philosophers
- ❖ Religious / Spiritual
 - Leaders
 - Healers
 - Preachers
- ❖ Mystics, Yogis
- ❖ Cosmic Scientists

- ❖ Concerned with meaning of life and death
- ❖ Interested in relationship
 - God, Man and Destiny
- ❖ Experiences strong religious or spiritual feelings
- ❖ Seeks harmony
 - Mind, Body, Spirit & Worldly.



MORAL / ETHICAL



- Behaves ethically
- Rejects racism, bigotry, sexism
- Displays skills & strengths around human sensitivities
 - Listens, Justice
 - Truth, Fairness
 - Clarifies values
 - How people feel



- Judges
- Legal Reformists
- Religious Leaders
- Philosophers
- Moral Teachers
- Counselors



INTER



PERSONAL



- ❖ Sensitivity to others
- ❖ Ability to read others' intentions and desires, potentially influencing them
- ❖ Consideration for others
- ❖ Good and new
- ❖ Think and listen
- ❖ Validation circle
- ❖ Speak up

- ❖ Politicians
- ❖ Teachers
- ❖ Religious Leaders
- ❖ Counselors
- ❖ Salespeople
- ❖ Manager
- ❖ Therapists

INTRA – PERSONAL



- Gurus
- Novelists
- Counselors
- Wise elders
- People with deep sense of self



- Self-knowledge
- Sensitivity to one's own values, purpose and feelings
- A developed sense of self
- Interpret information through body sculptures, skits, creative writing sessions, expand-a-story approach

- Writing
- Storytelling
- Sensitivity to language meanings and the relation among words.
- Reading out what's written



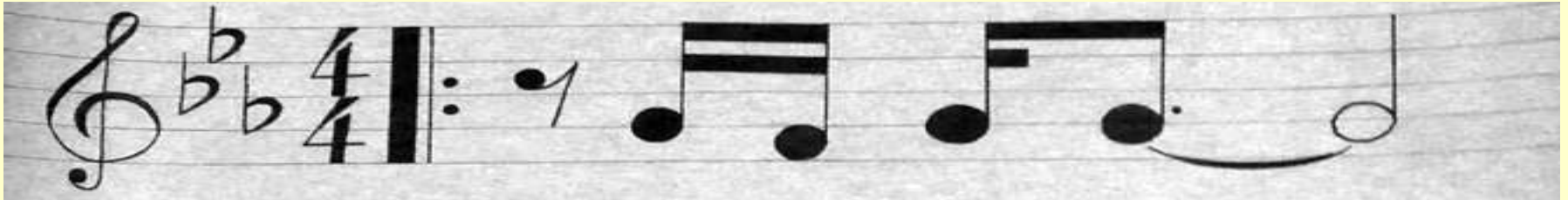
Styles of writing **VERBAL LINGUIST**



- Novelists
- Copywriters
- Scriptwriters
- Speechwriters
- Reporters
- Poets
- Editors
- PR Directors

APA KHABAR!
 VANAKAM!
 SAWADEE KAP!
 G'DAY MATE!
 NI HAO MA!
 HOLA!
 CA VA!
 HOWDY!
 OHAYO GOZAIMASU!

MUSICAL



❖ Sensitivity to pitch, rhythm, timbre emotional power and complex organization of music.



❖ Performer, Composer, Conductor, Recording Engineer, maker of musical instruments



❖ Use songs for rote learning. Have music in the background when trying to remember facts.



VISUAL / SPATIAL



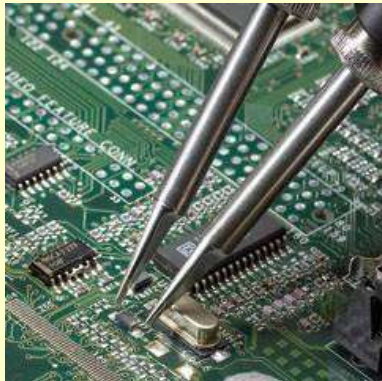
- Theoretical physicists
- Battlefield strategists
- Architects, Painters
- Naturalists

- Keen observation
- Visual thinking
- Mental images
- Metaphor
- Sense of a gestalt

- Use pictures, posters, models, diagrams, information maps via guided imagery which is an internal visualization method

LOGICAL / MATHEMATICAL

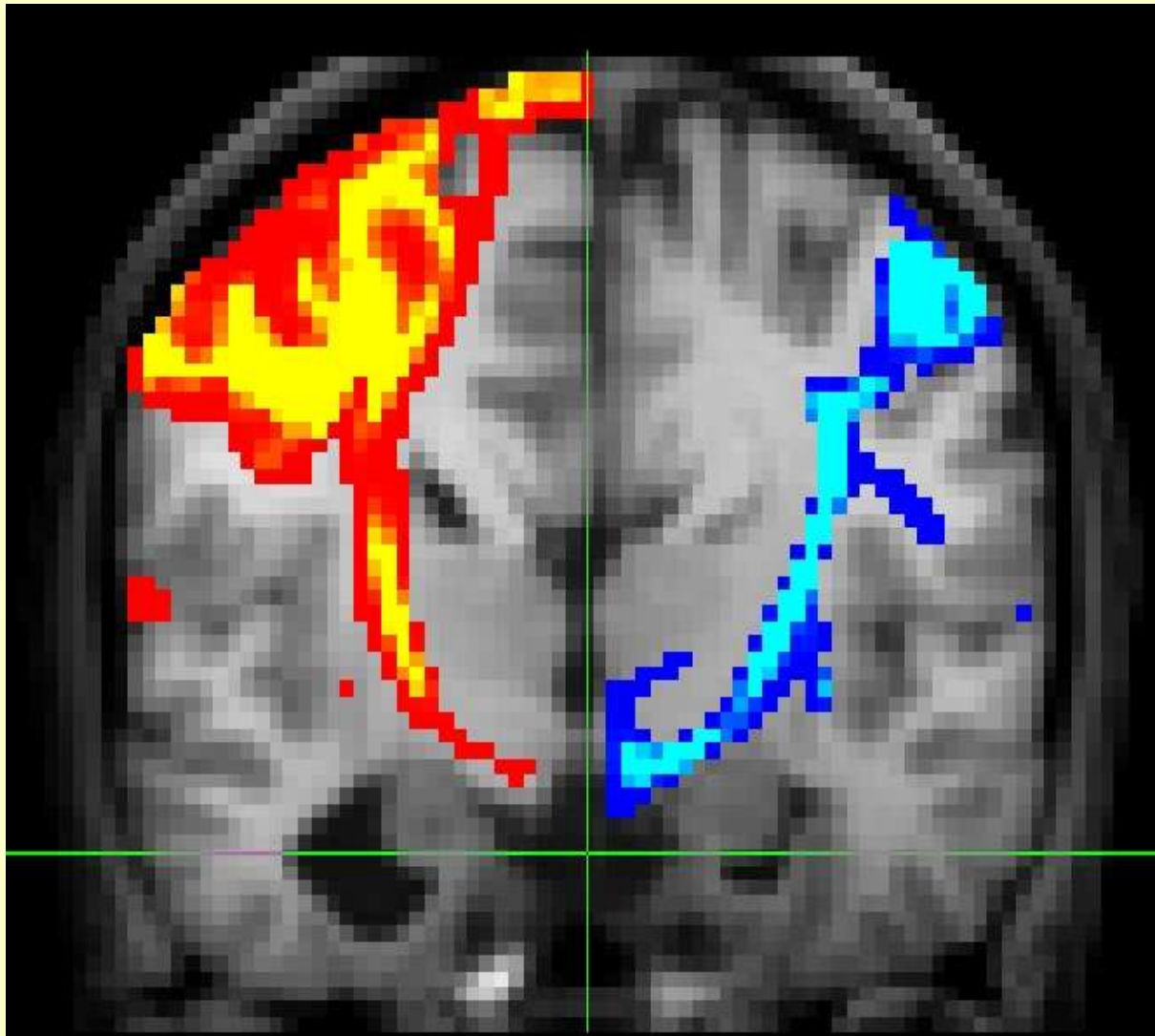
$$N = \sum_{n=0}^{n-1} \lambda_n$$



- Abstract thought
- Precision
- Counting
- Organization
- Logical Structure
- Reading
- Writing
- Mathematics

- Scientists
- Engineer
- Animal Tracker
- Lawyer
- Accountant
- Police Investigator
- Mathematician





Dominant Locations of Intelligences

Logic Maths

Technical /
Digital

Verbal –
Linguistic



Creative

Visual-Spatial

Existential

Abstract –
Conceptual

Naturalistic
Aesthetic

NOTE # 2

Other intelligences not shown earlier also exist, such as taste and smell - which initially relate to emotional memory and to instinct.

NOTE # 1

The 15 intelligences shown are in their dominant parts of the brain.

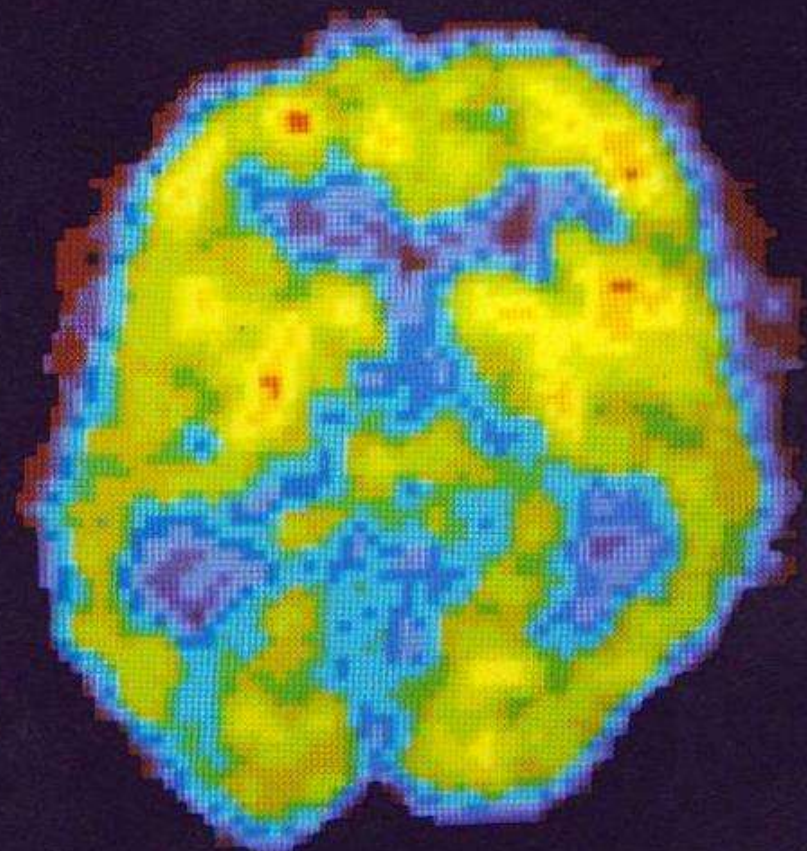
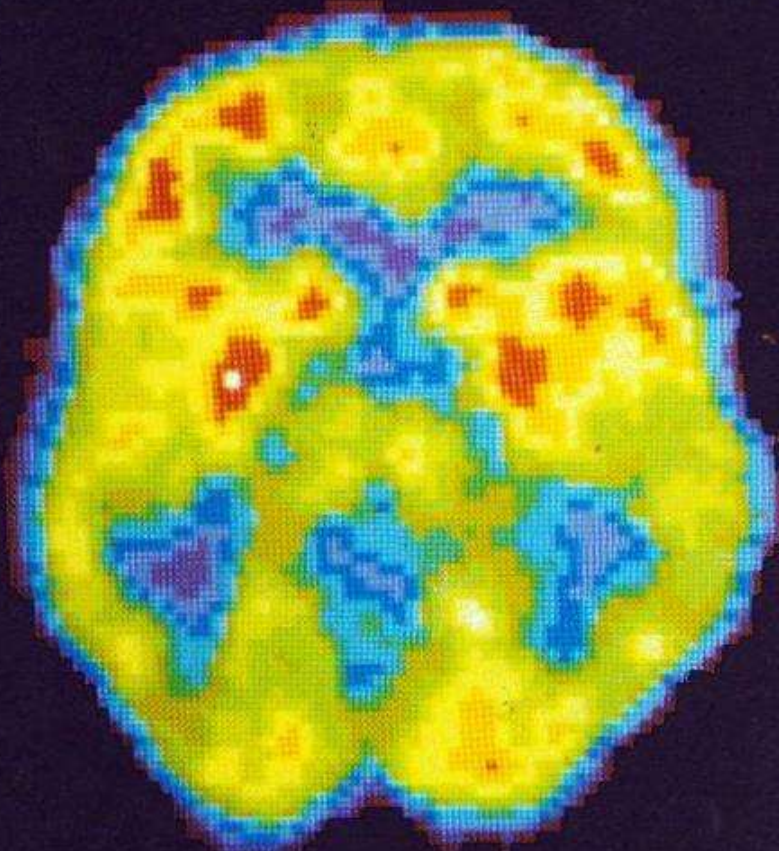
Some are 'split', depending on different aspects of that intelligence

We usually use more than one intelligence simultaneously.
(e.g. see, touch, taste and smell)

2 PET SCANS

LEARNING

MASTERY



**Greater Neural Activity
while Learning**

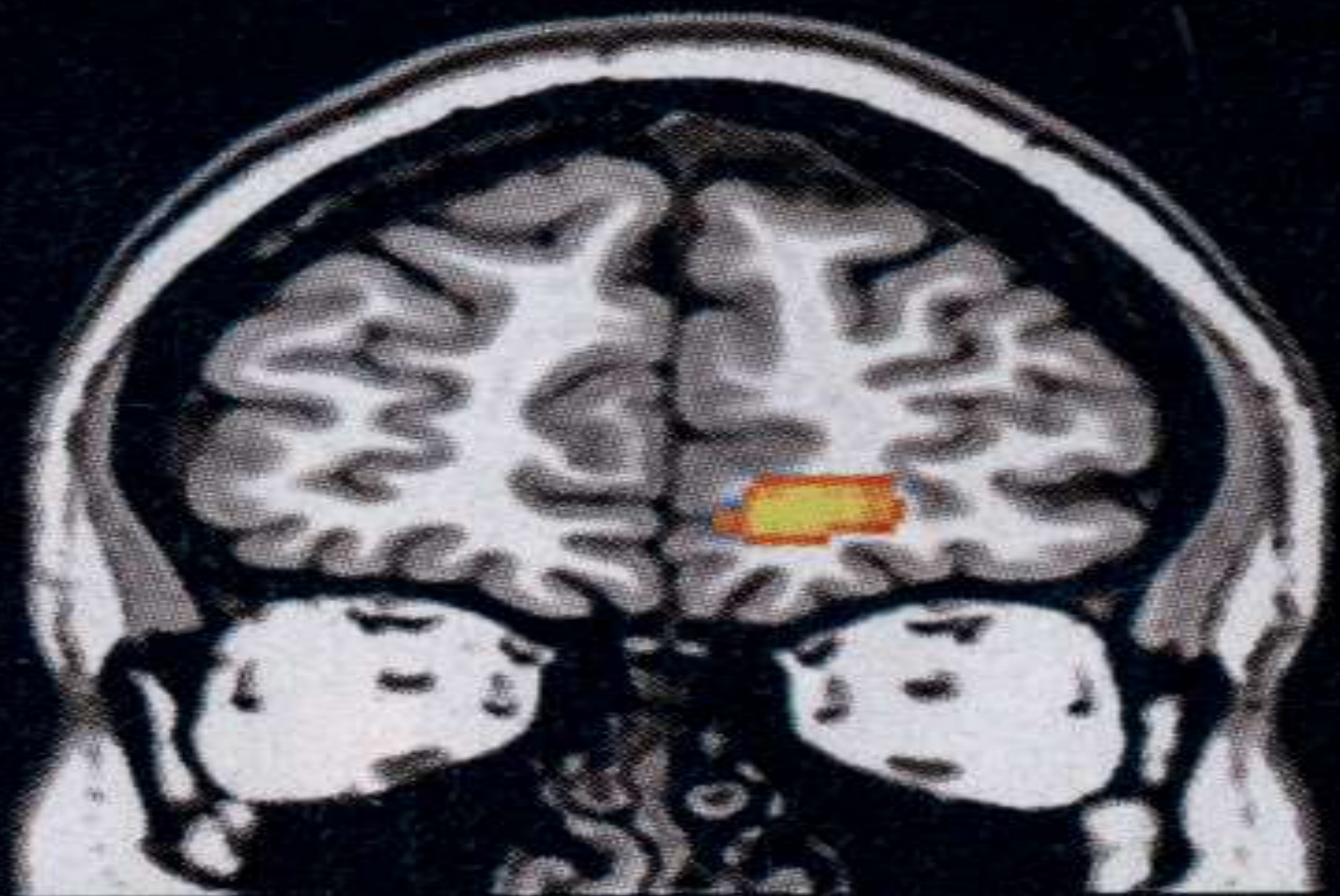
**Lesser Effort After
Mastery**



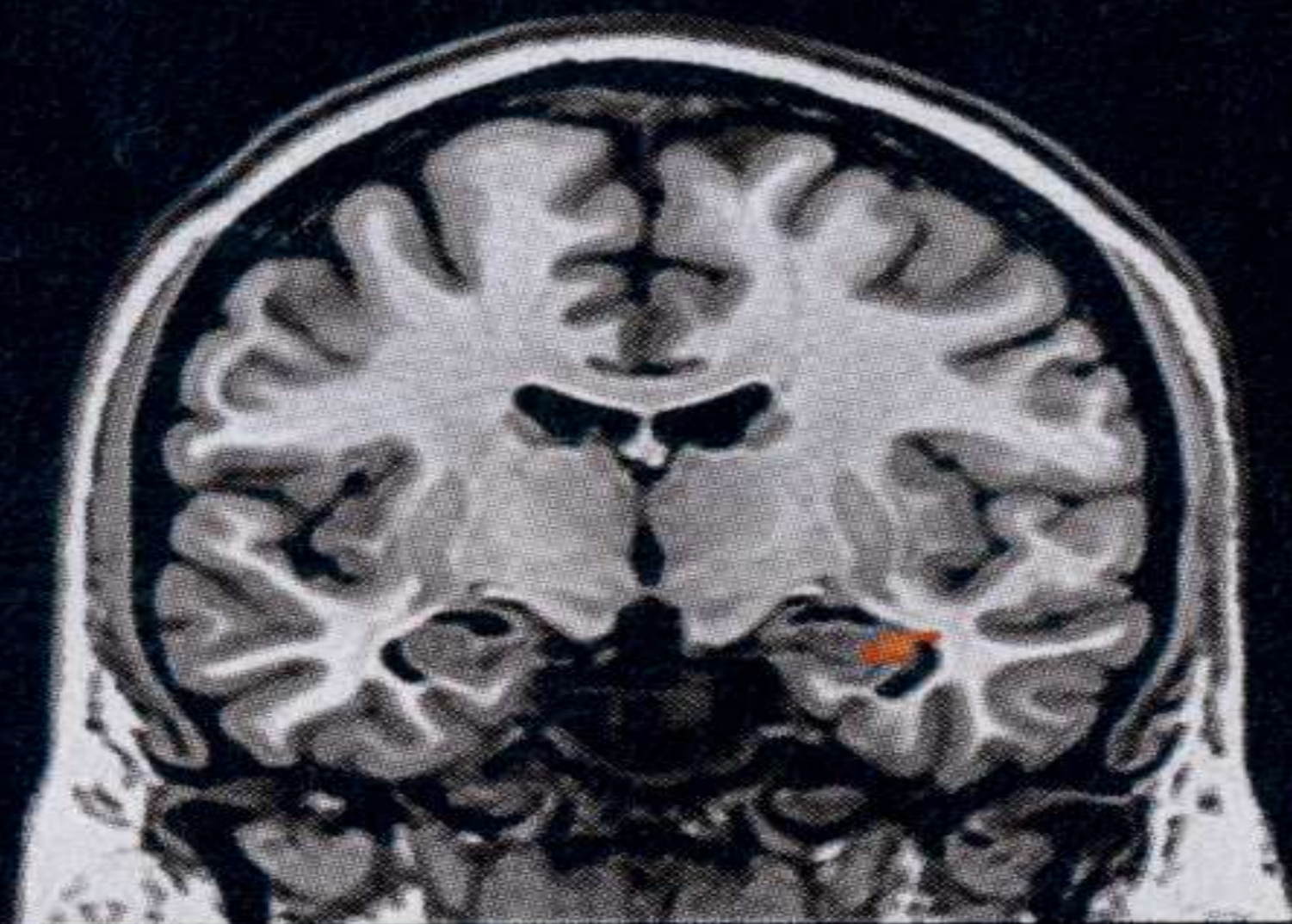
Thank You for participation !

I HOPE MY PERSPECTIVES HELP!

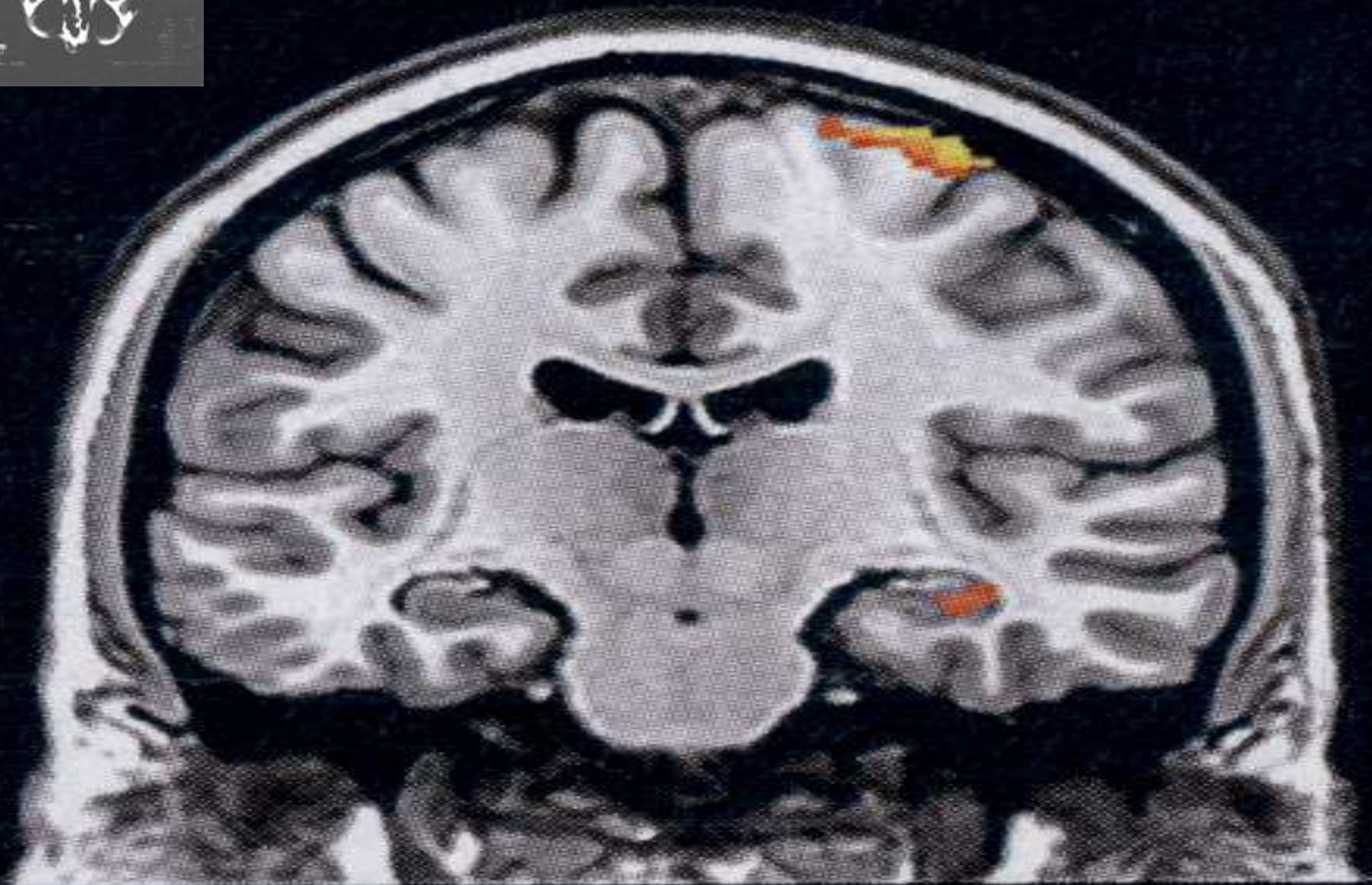
*For feedback or questions – please e-mail me at
ps@bdglobal.org or call me at
6-012-273944. You could also visit our website :
www.bdgglobal.org*



Right medial
prefrontal cortex

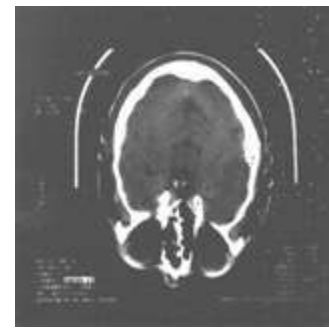


Right hippocampus



Right primary
motor cortex

IMAGES OF ALBERT EINSTEIN BRAIN



1. Unusually shaped Inferior parietal lobes – responsible for :
 - Spatial Thinking
 - Visual Imagery
 - Mathematical Thinking
 - Intuiting Numbers

2. Brain overall smaller than average 2.7lbs vs 3.lbs
3. Cerebral Cortex thinner, but greater neuronal density
 - possible decrease in ‘conduction’ time resulting in faster thought
4. Hemispheres 15% wider, having a larger integrated cortex
5. Left Hemisphere had 73% more gliet cells per neuron

