



# **CNS 5037**

# **NEUROPHILOSOPHY**

**Day 1**

# Agenda For the Day

- Introductions
- What is our class about and why is it important?
- Syllabus review
- Brain Nervous System Basics
- Traditional Neurophilosophy
- Changing Your Mind
- Mindfulness Exercise



# What is this Class About?

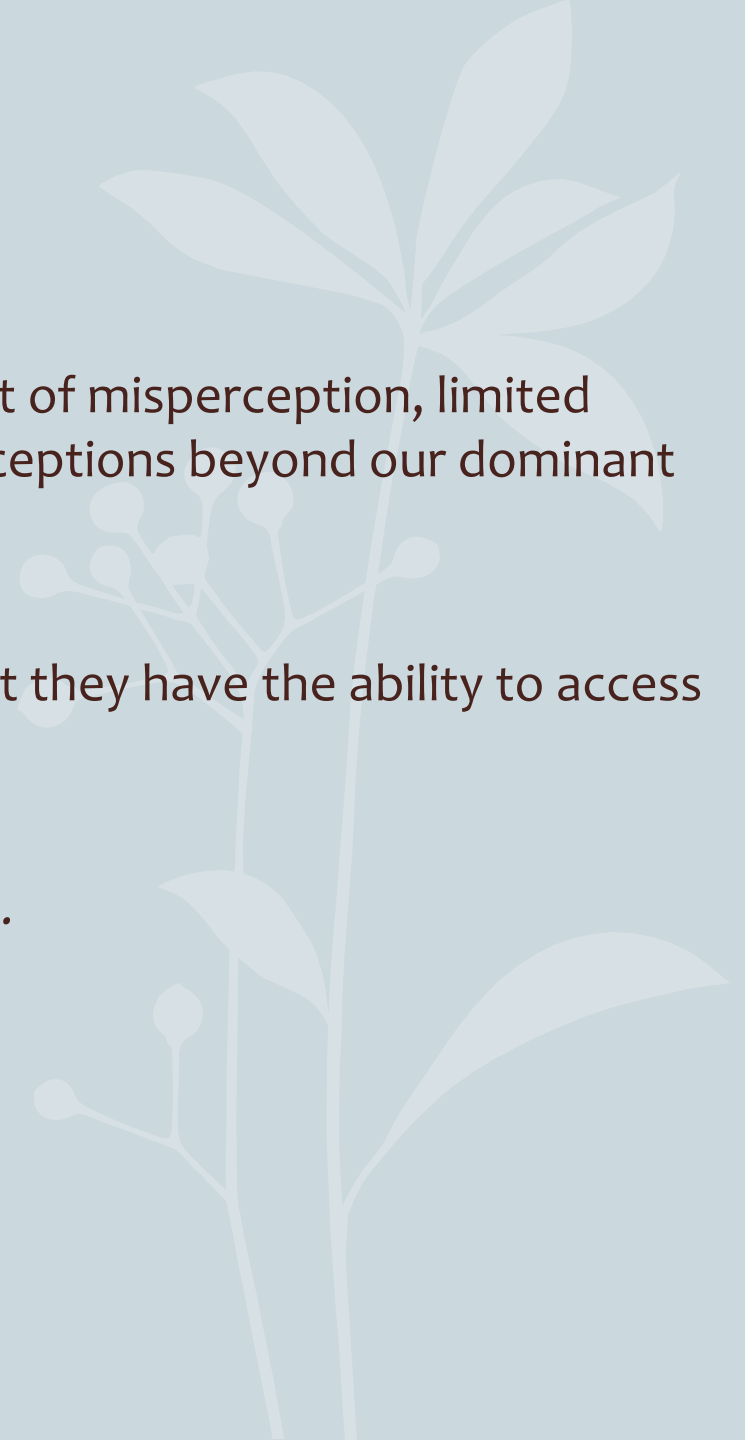
- Activity: Zoom!
  - Form groups of 5-7.
  - No looking at one and other's image.
  - Approximately 10 minutes.
- Post-Activity
  - What made the activity difficult?
  - What types of strategies would have worked better?
  - How is this activity a metaphor for life?
- Our class is about perspectives & self-awareness (consciousness)



# What is this class About?

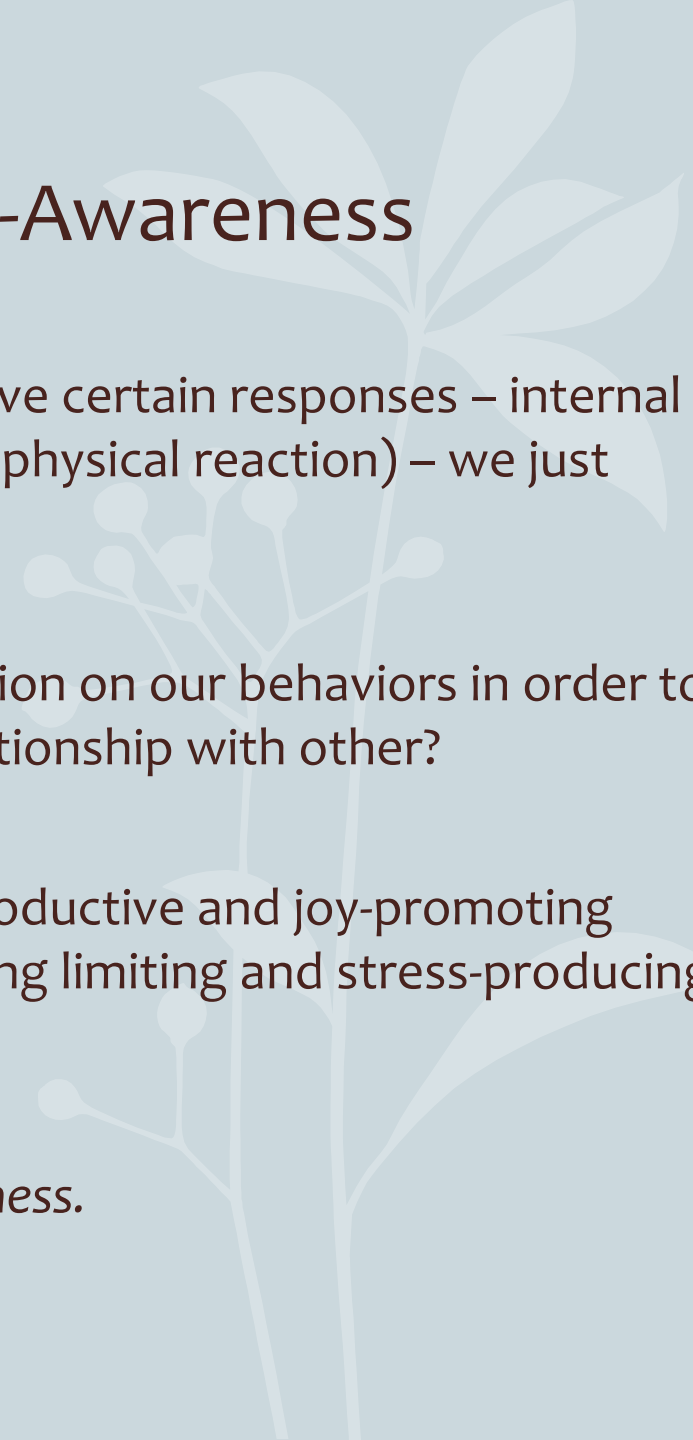
## 1. Perspectives

- Stress, unhappiness, conflict often the result of misperception, limited perception, or unwillingness to explore perceptions beyond our dominant ones.
- More often, people are simply unaware that they have the ability to access different perspectives.
- *Our class is about exploring new perspectives.*



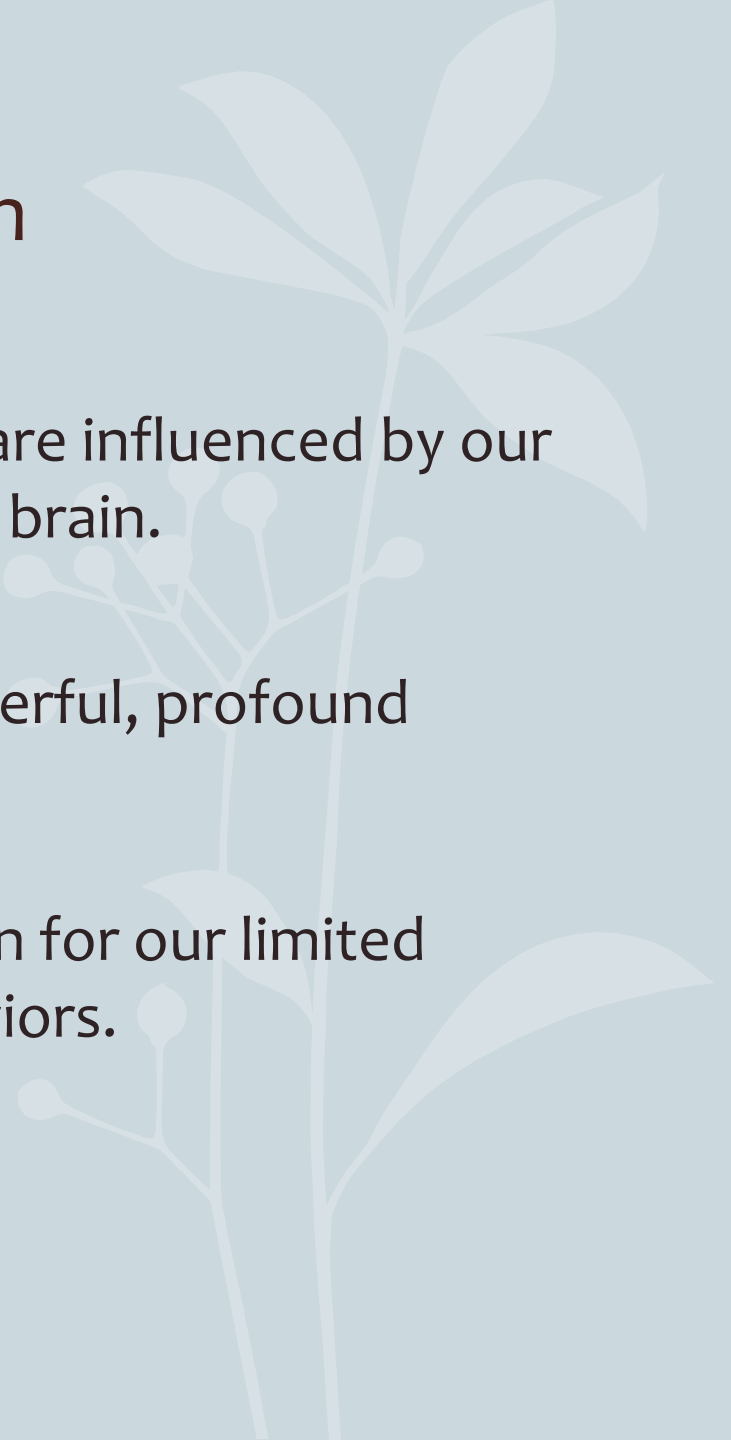
# What is this Class About?

## 2. Conscious Awareness / Self-Awareness

- We are often unaware are we of why we have certain responses – internal (thoughts, emotions), or external (verbal & physical reaction) – we just have them.
  - Is it possible to consciously place our attention on our behaviors in order to alter our perspective of self, other, and relationship with other?
  - Is it possible to consciously choose more productive and joy-promoting behaviors rather than unconsciously choosing limiting and stress-producing ones?
  - *Our class is about developing this self-awareness.*
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# What is this Class About?

## 3. The Brain & Nervous System

- Both our perceptions and behaviors are influenced by our nervous system and in particular, our brain.
  - The brain is critical for so many wonderful, profound experiences.
  - Yet, in many ways, it is also the reason for our limited perceptions and self-defeating behaviors.
- 

The main premise of this class:

By exploring how the brain operates and exploring the philosophical implications that follow, we can learn more about how people can live a more conscious life, beyond perceptual assumptions and behavioral habits.

# Expectations: Review of the Syllabus

- Exercise all 4 functions (Thinking, Feeling, Intuitive, Sensation)
- Three Types of Knowledge
- Course Website
- Grading
- Class Policies



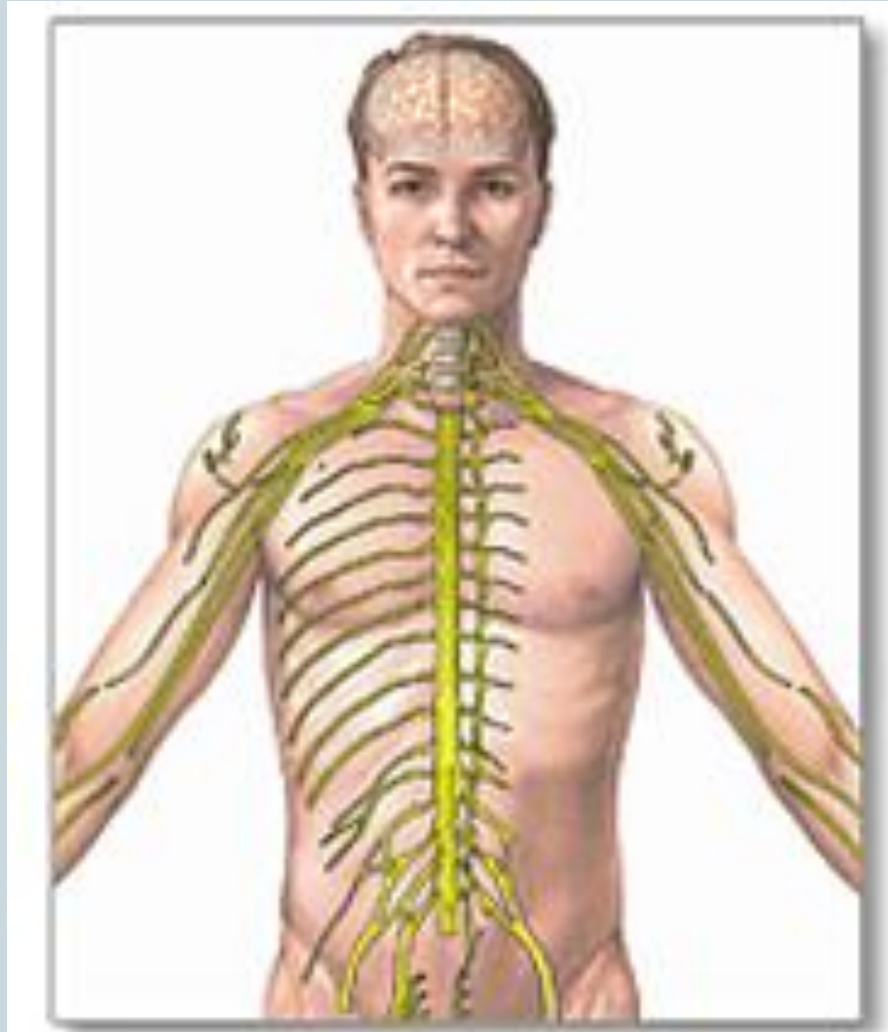


# The Brain & Nervous System

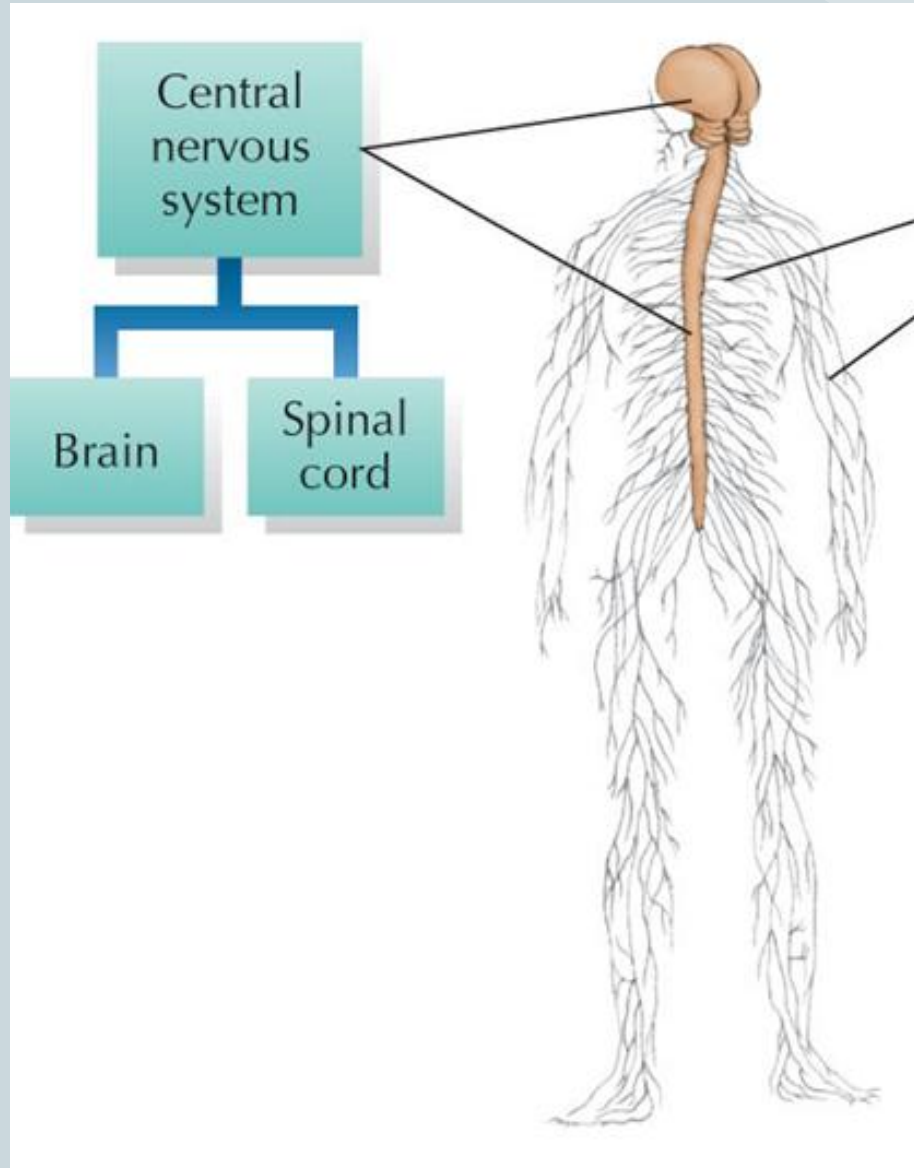
## A Brief Overview



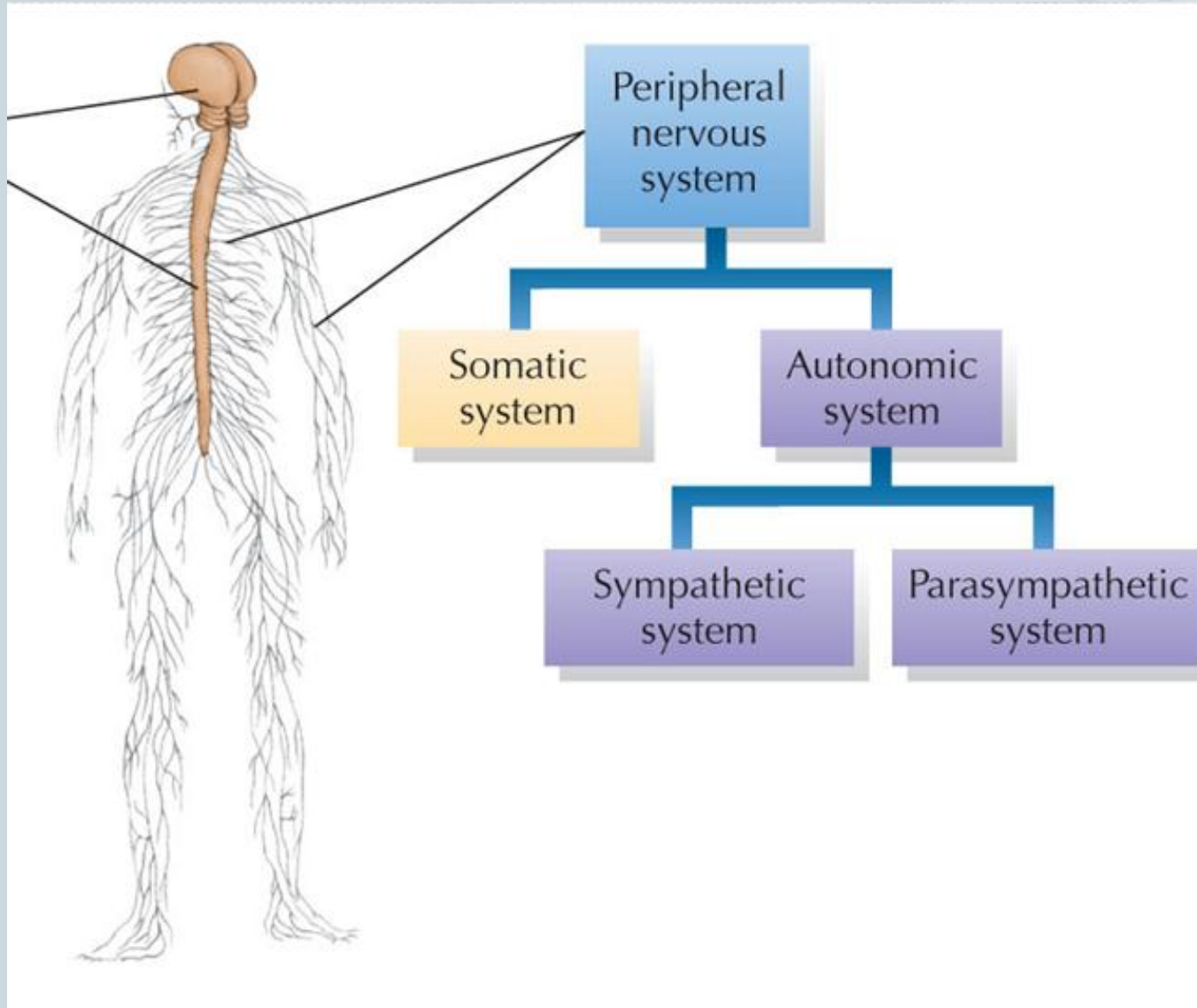
# What do you know about the Nervous System?



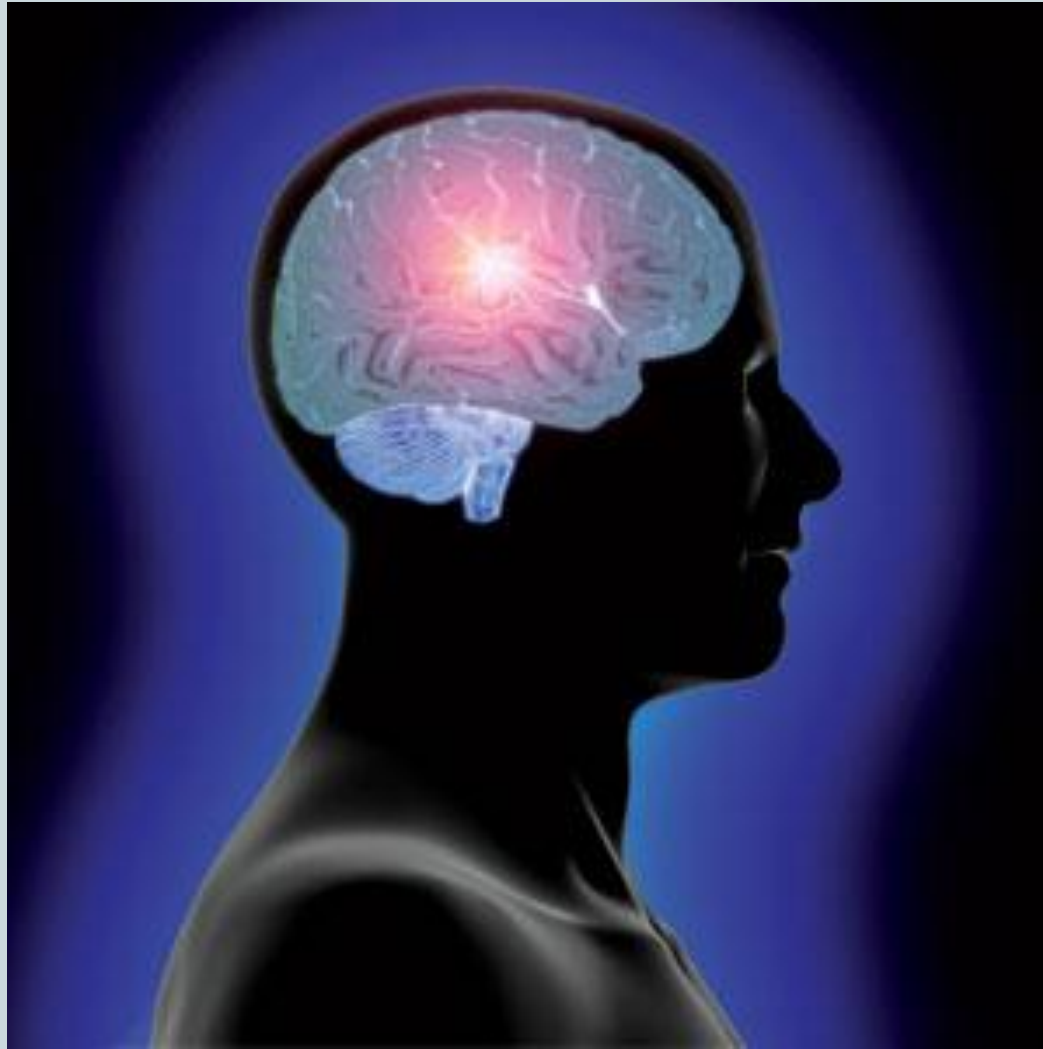
# The Nervous System



# The Nervous System



# What do you know about the brain?

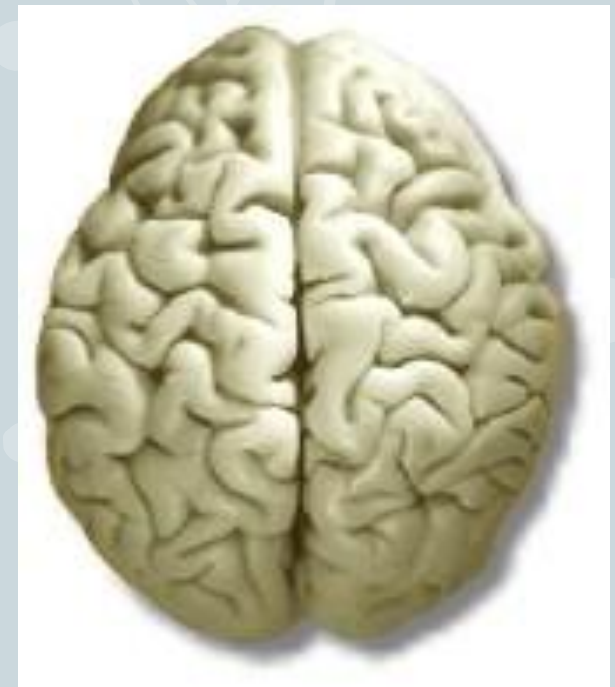
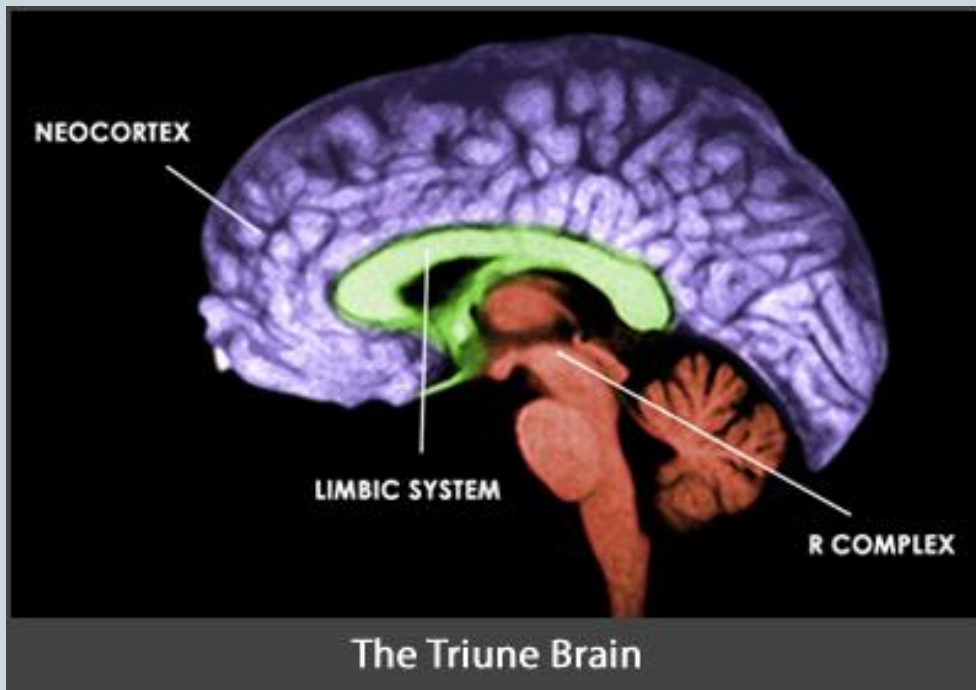






# Brain's Basic Structure

- Three Major Systems
- Two Hemispheres



## Frontal lobe

(sense of smell, motor control, and higher mental abilities such as reasoning and planning)

## Parietal lobe

(sensation such as touch, temperature, and pressure)

## Occipital lobe

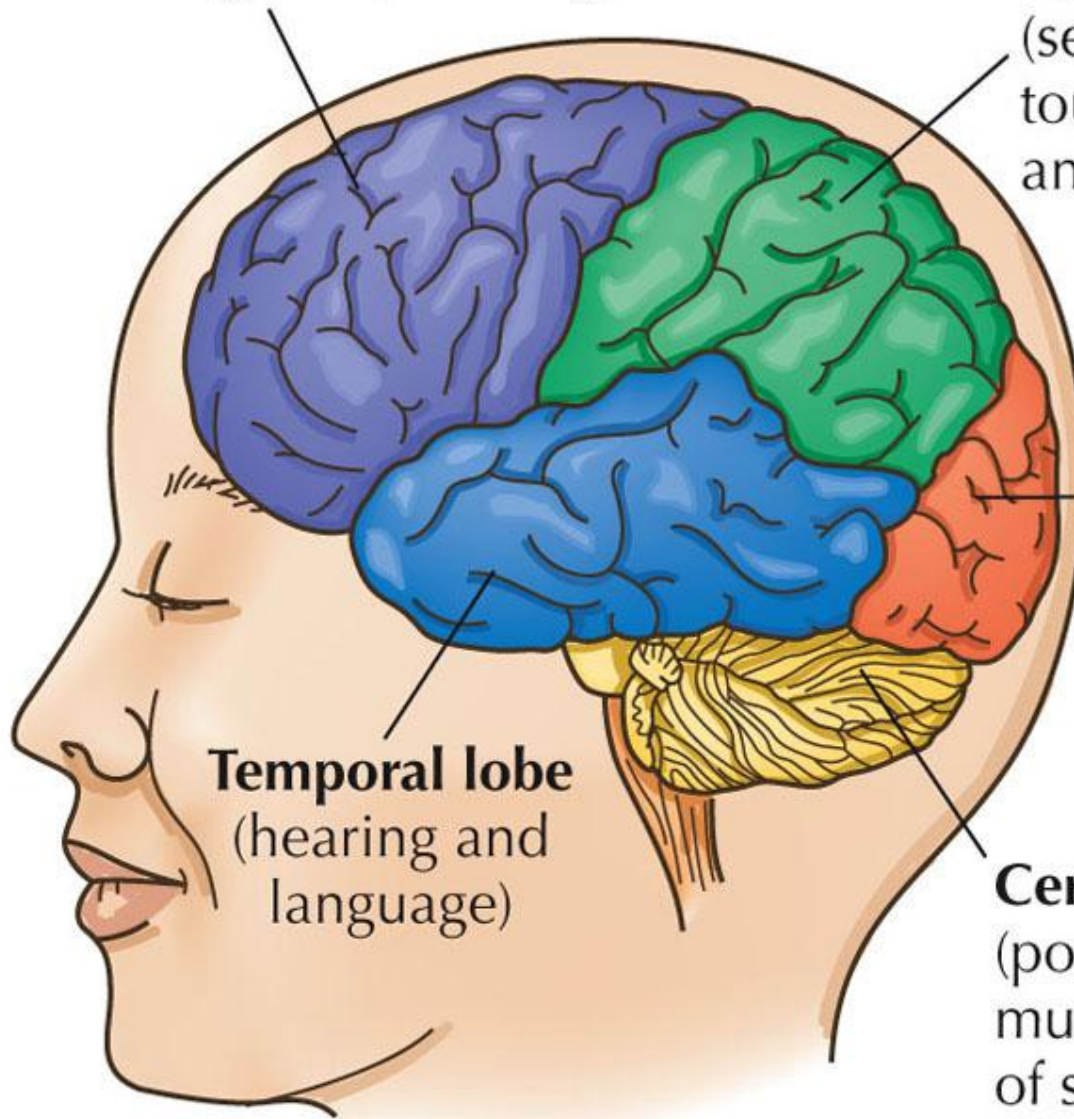
(vision)

## Temporal lobe

(hearing and language)

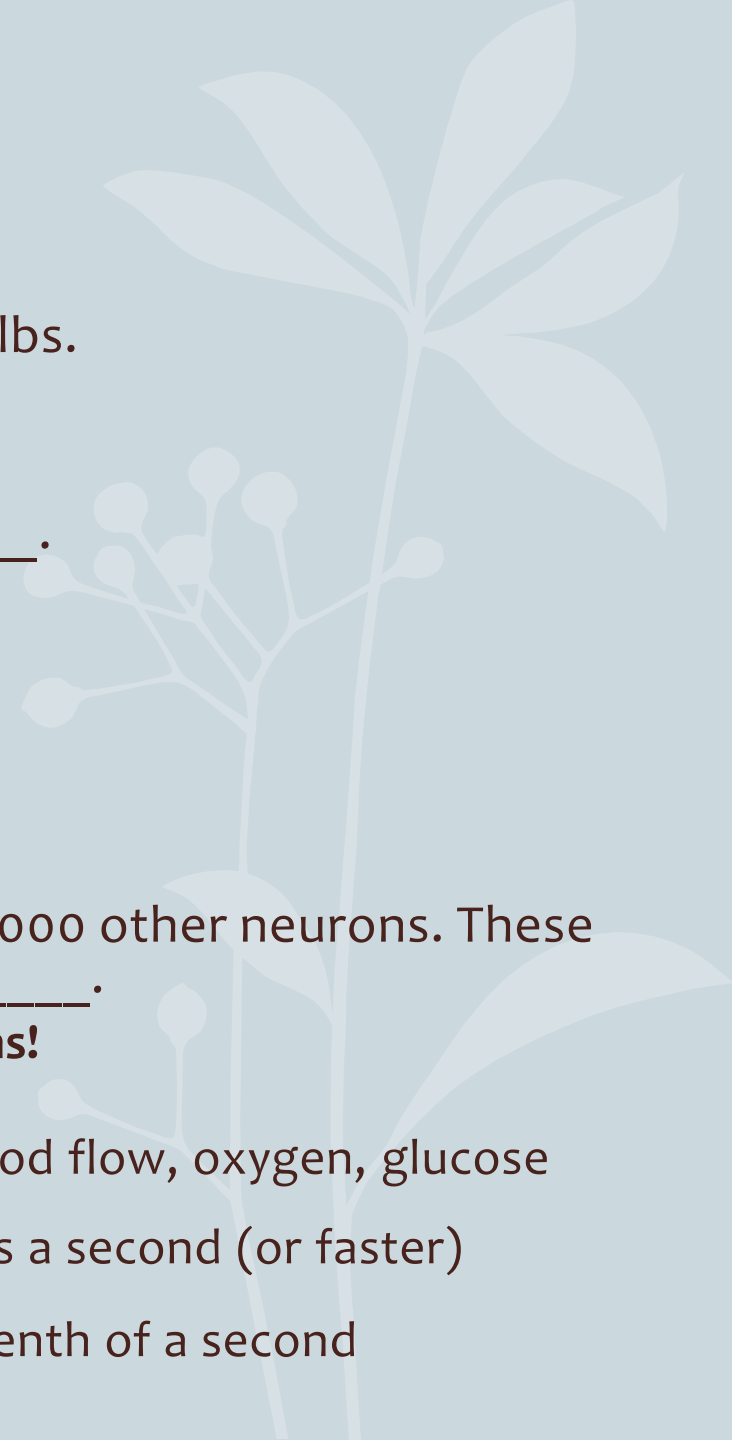
## Cerebellum

(posture, coordination, muscle tone, and memory of skills and habits)

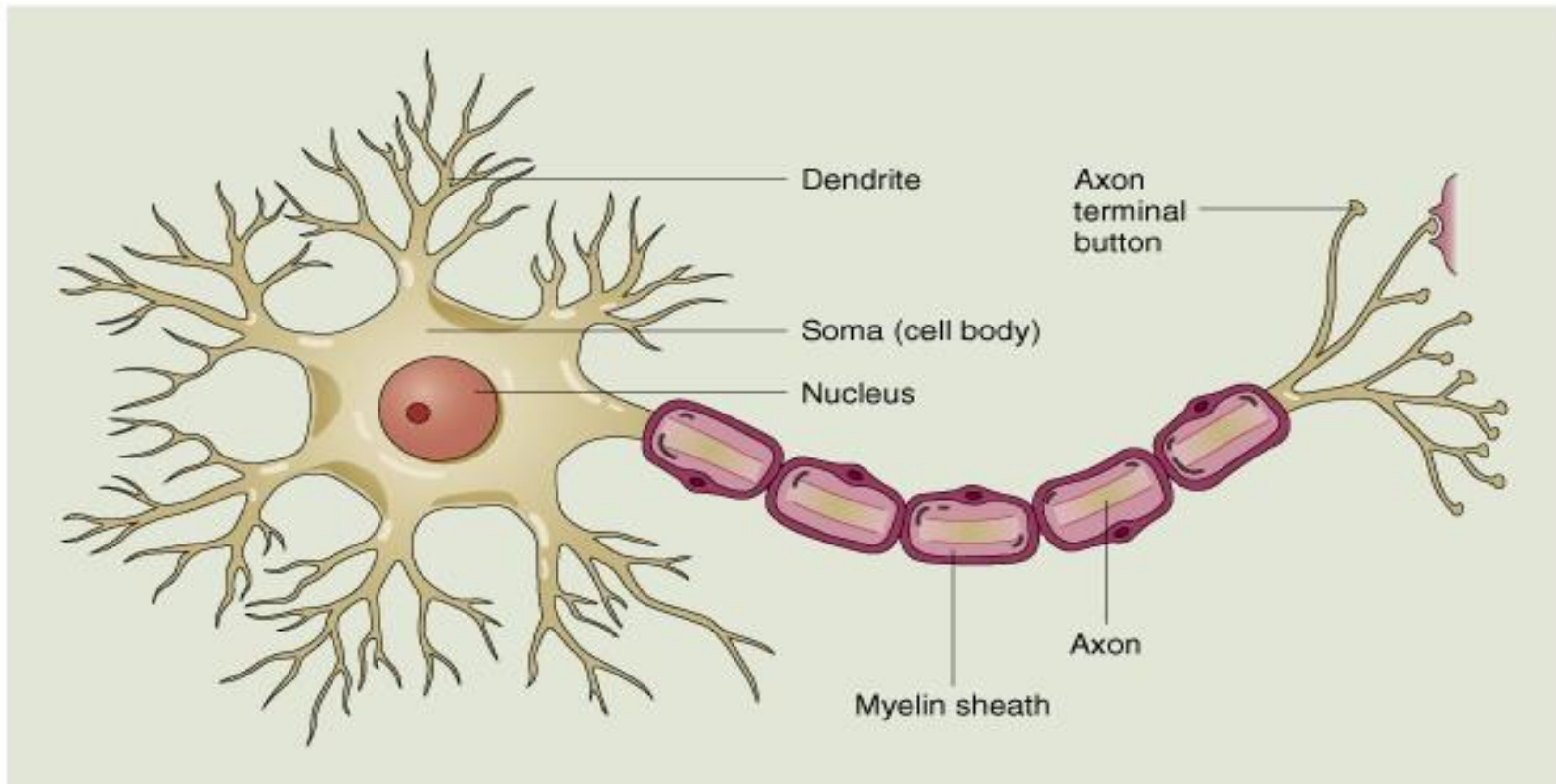




# About the Brain

- This tofu like tissue weighs in at \_\_\_\_\_ lbs.
    - ~3lbs.
  - Comprised of brain cells called \_\_\_\_\_.
    - **Neurons**
  - How many neurons in the brain?
    - **Estimates between 100 billion to trillions.**
  - Each neuron connected to up typically 5000 other neurons. These chains of neurons are called \_\_\_\_\_.
    - **Neural networks, ~500 trillion connections!**
  - **Activity:** Always on 24/7/365. 20-25% of blood flow, oxygen, glucose
  - **Speed:** Neurons firing around 5 to 50 times a second (or faster)
  - **Distance:** signals crossing your brain in a tenth of a second
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# A Neuron



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# Perspectives, Behavior, & Neural Networks

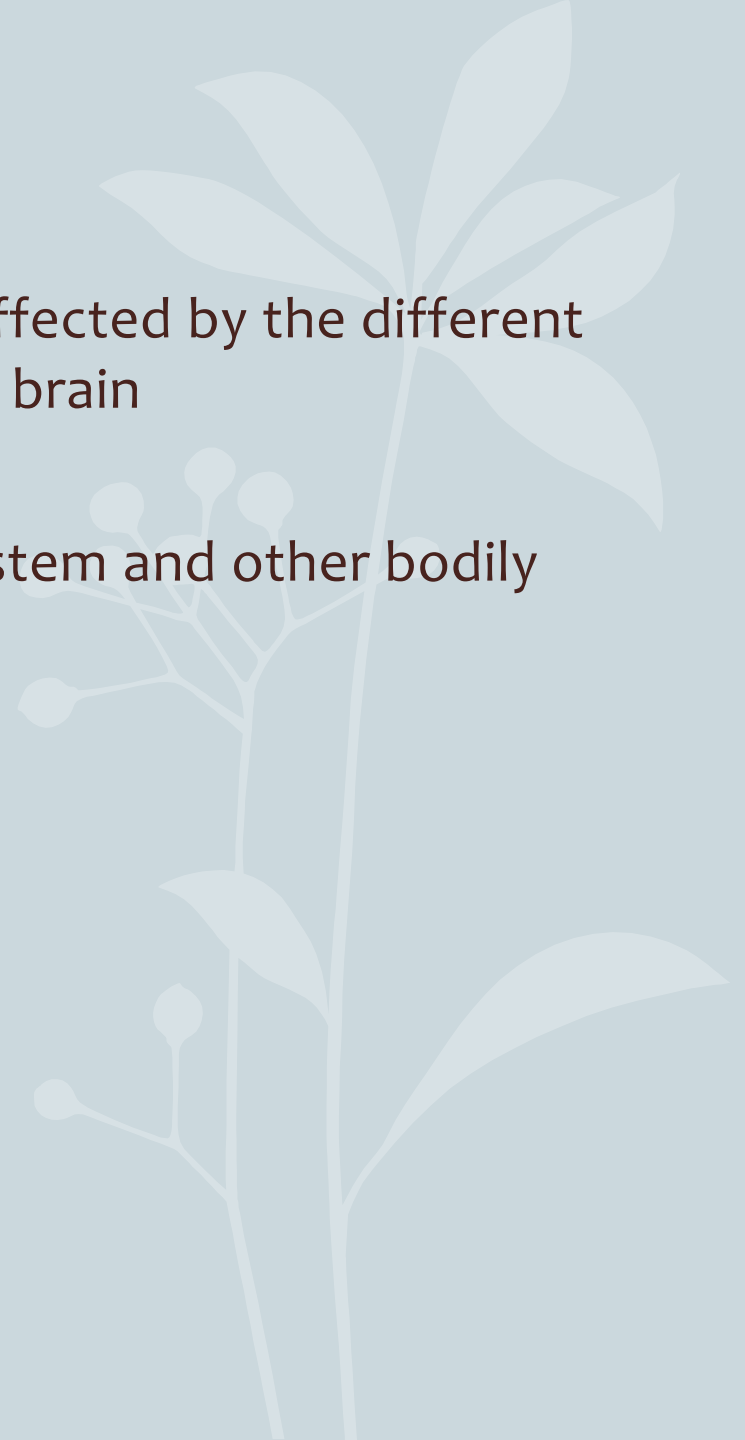


# Neural Network Development

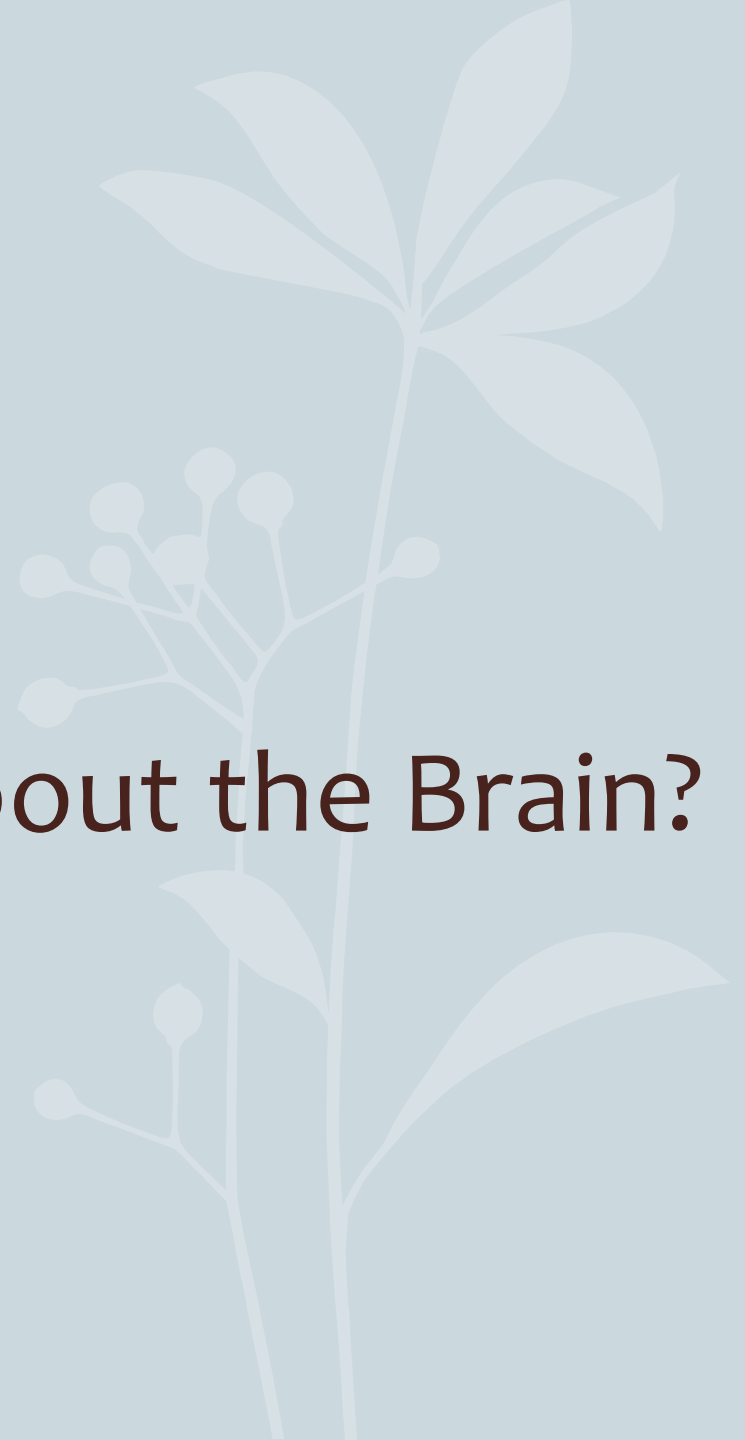


# Key Points

- Our thoughts and perceptions directly affected by the different components and neural networks of the brain
- Brain is intertwined with the nervous system and other bodily systems.



# How Do We Learn About the Brain?

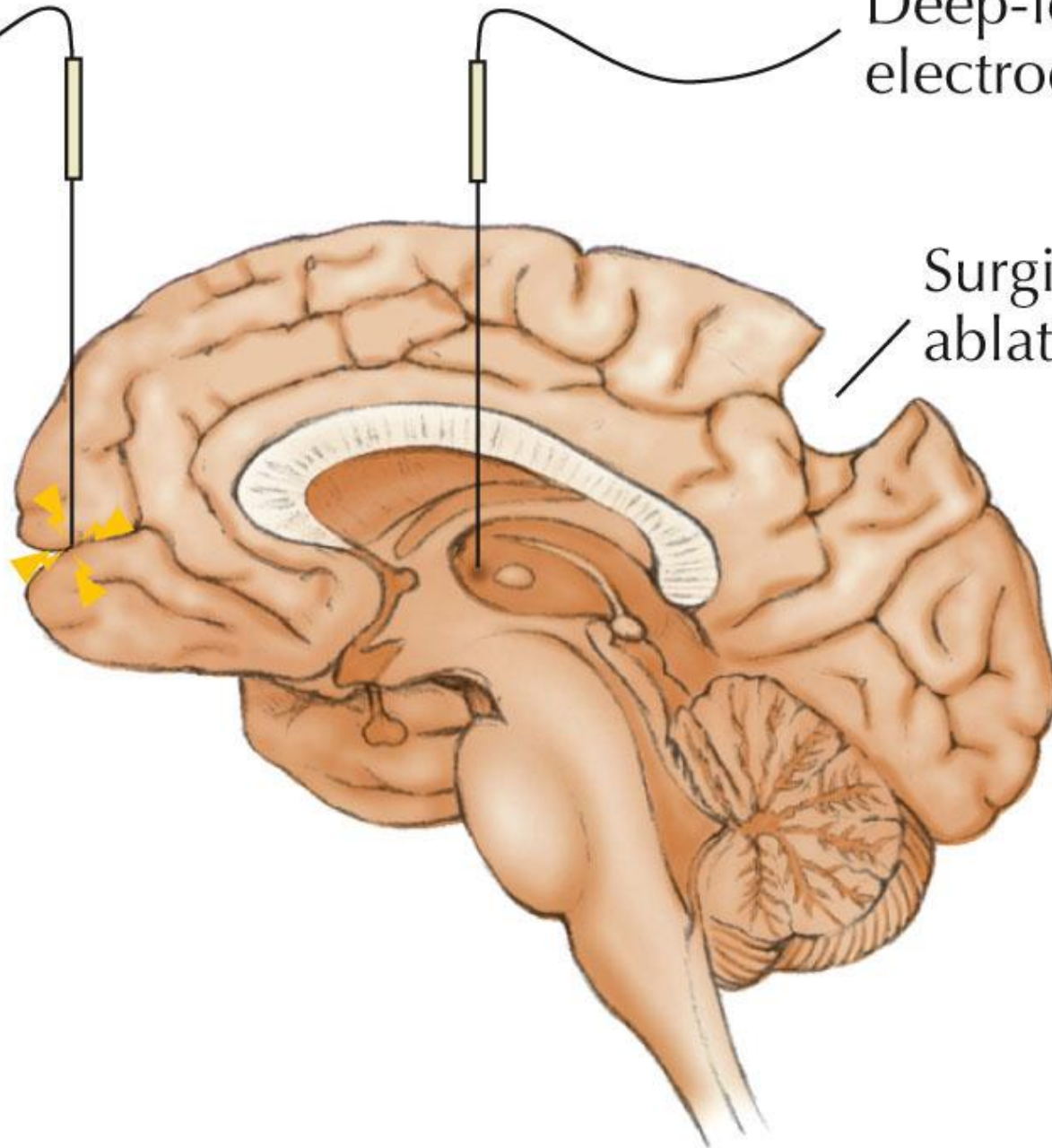




Stimulation  
electrode

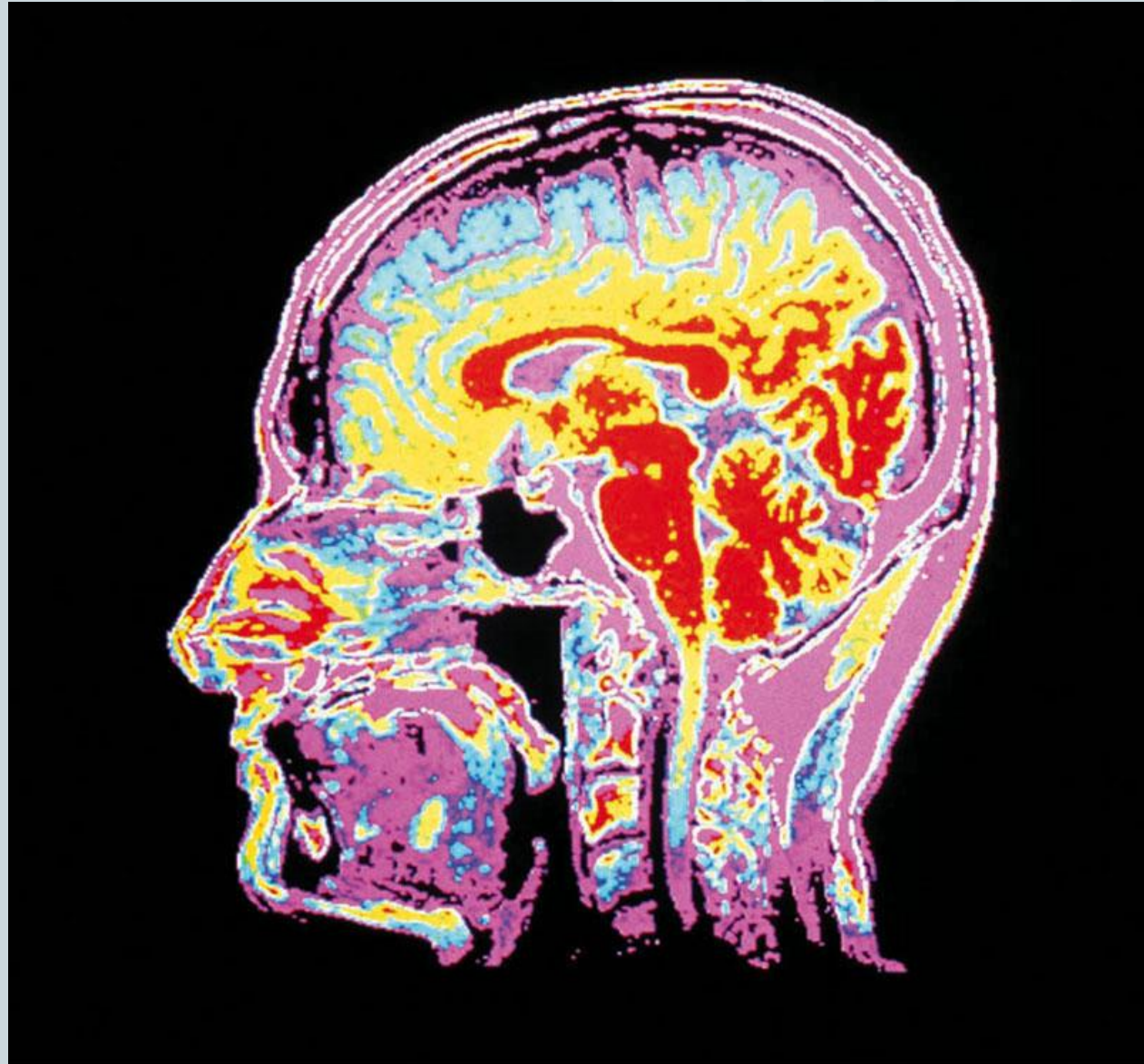
Deep-lesioning  
electrode

Surgical  
ablation



# Magnetic Resonance Imaging (MRI):

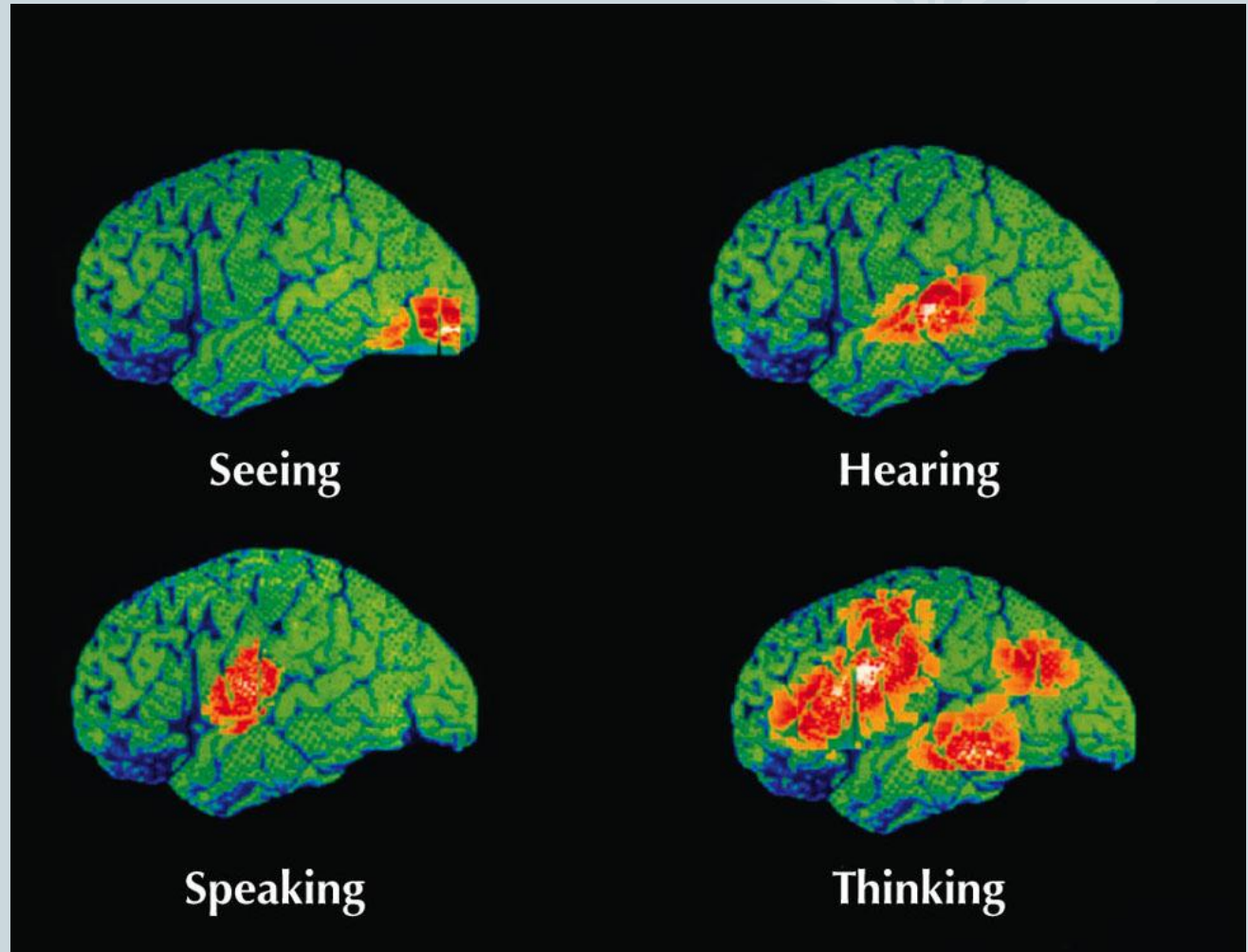
- Uses a strong magnetic field, *not an X-ray*, to produce a 3D image of the brain or body (snapshot)





# Positron Emission Tomography (PET):

- Computer-generated color image of brain activity, based on glucose consumption in the brain



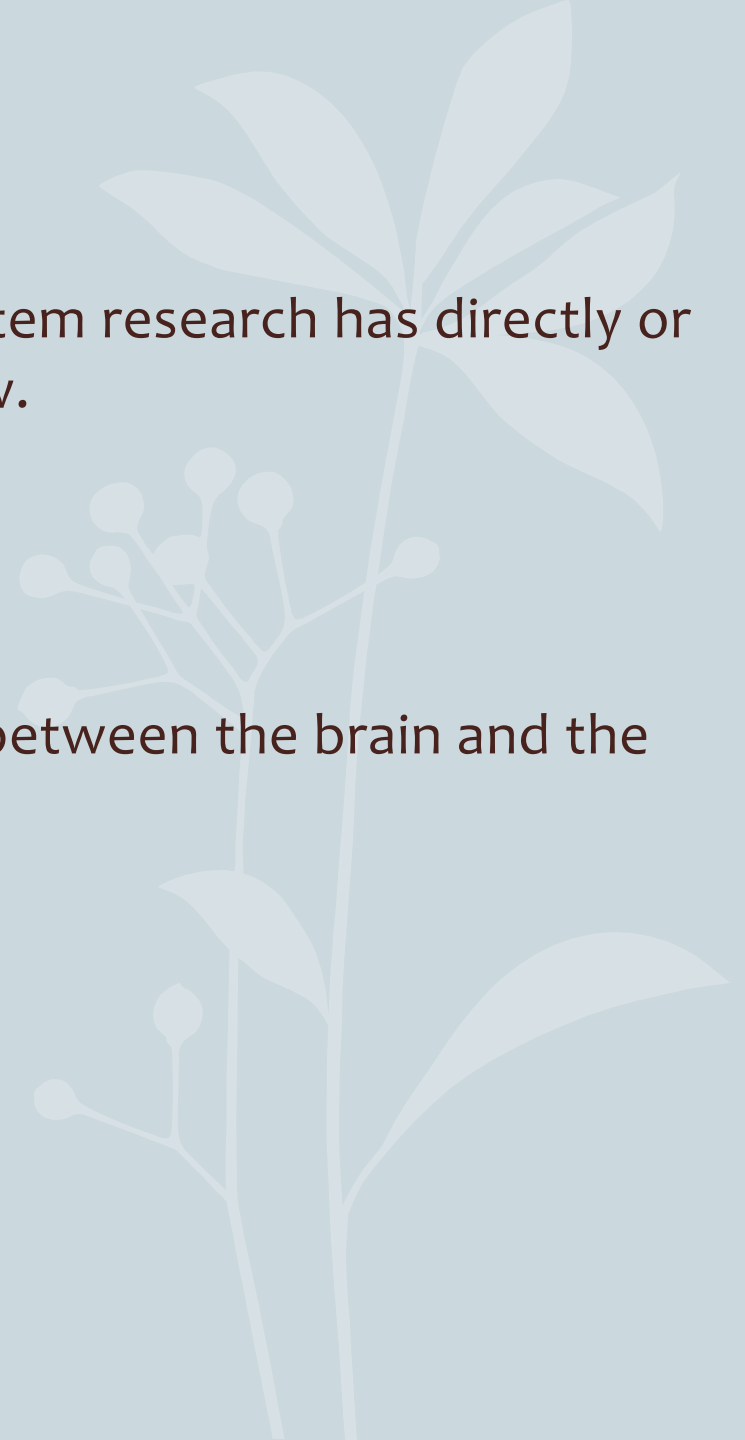
# Electroencephalograph (EEG):

- Detects, amplifies, and records electrical activity in the brain



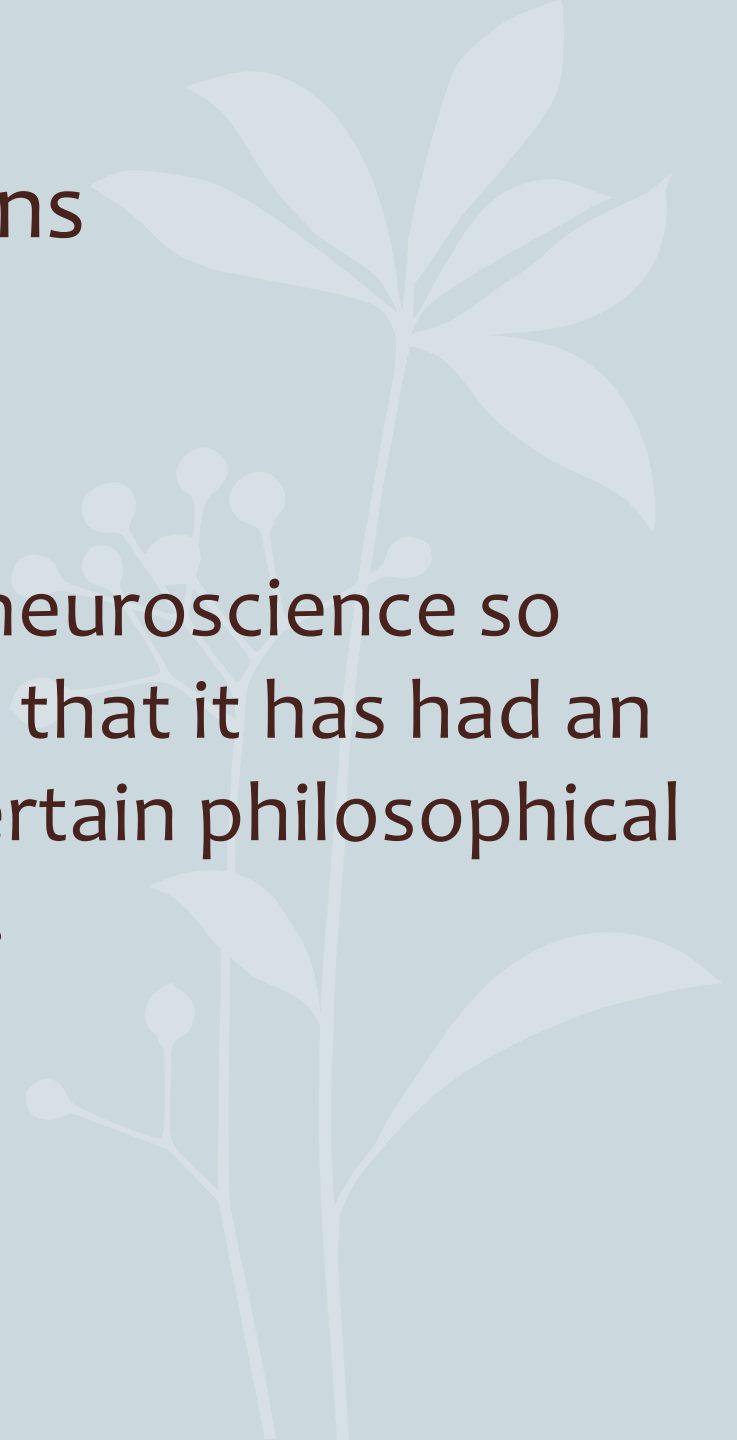
# Group Exercise

- List positive ways brain and nervous system research has directly or indirectly helped you or others you know.
- How would you define the mind?
- What do you believe the relationship is between the brain and the mind?

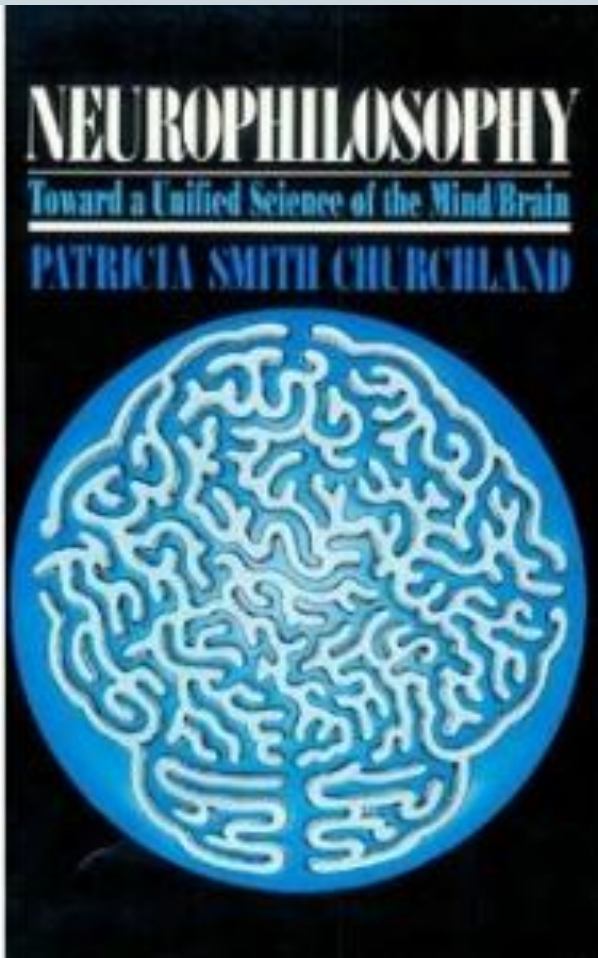


# Challenging Our Perceptions

Knowledge gained from neuroscience so significant and life changing that it has had an impacted our approach to certain philosophical questions.



# History of Traditional Neurophilosophy



Neuroscience not much impact on philosophy, until this book was published (1987).

**Eliminative Materialism and Philosophy “Neuralized”**



# Issues in Traditional Neurophilosophy

- #1 - What is the nature of consciousness and the mind?
  - Is my subjective experience (qualia) merely a product of neural networks?
  - Is my mind merely a product of neural activity? Am I not more?

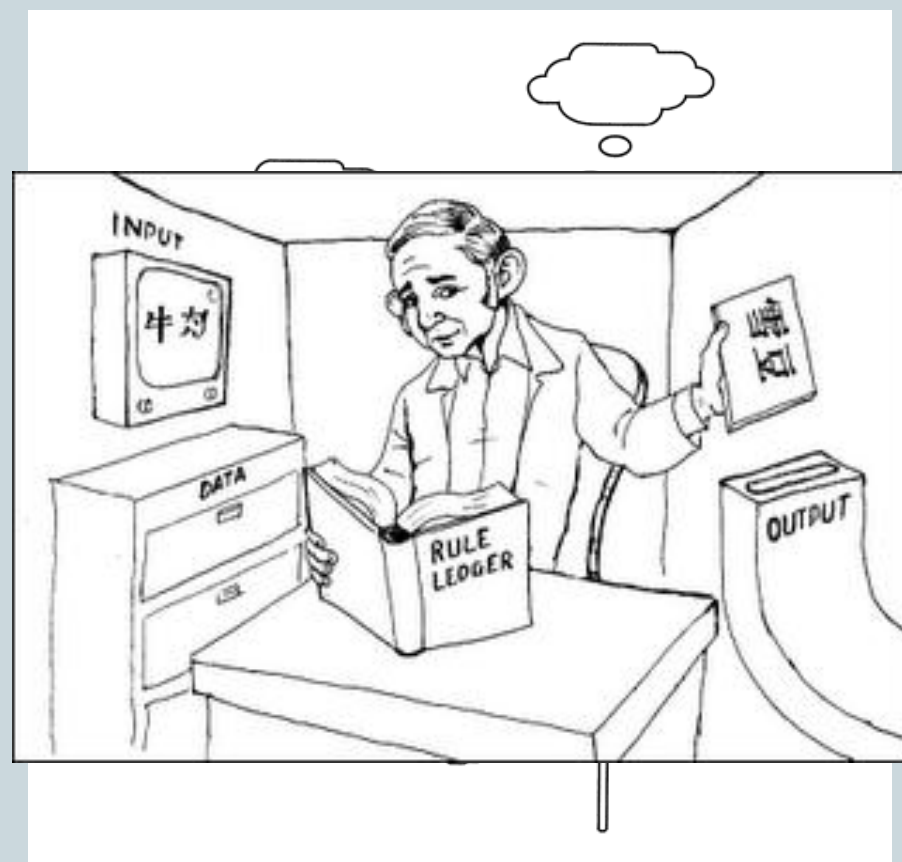


**Questions:**  
**Is she right?**  
**What would it mean if**  
**she were?**



# Issues in Traditional Neurophilosophy

- #2 - Couldn't we then create conscious, artificial intelligence?
- The Turing Test (1950)
  - Is Siri have a little consciousness?
- John Searle and the Chinese Room
  - A computer program cannot give a computer consciousness or a mind.
- Paul and Patricia Churchland
  - Just because you can't imagine it does not make it impossible.
  - Light = Electromagnetic waves.
- Question: What do we then make of the soul or spirit? Can Siri have a soul?



# Issues in Traditional Neurophilosophy

- #3 – Is folk psychology still necessary?
- Folk Psychology:
  - Explaining human behavior based on “beliefs” and “desires”
- Eliminative Materialists:
  - There are no such things as beliefs and desires since there is no “mind,” only brain.
  - It hasn’t evolved with new findings.
  - It isn’t very useful, and certainly not as useful as neurological intervention.
  - It is simply an archaic paradigm, just like all other myths – fatigue from “fatigues”
- Question:
  - How might eliminating FP affect us?





# Issues in Traditional Neurophilosophy

- #3 – Is folk psychology still necessary? - 2:20 minutes Paul's explanation



# Issues in Traditional Neurophilosophy

- #4 – Do we have free will?

The Quandry:

1. If the mind doesn't exist or is only an emergent property of the material brain,
2. And if materials are only governed by natural forces,
3. Then how does free will occur?

Exercise:

I want you to exert your free will by tapping either your left or right index finger at any time you want for the next 60 seconds.

It seems obvious that you had the choice on which finger to tap and when, right? How could I disprove that you had free will?

# Issues in Traditional Neurophilosophy



# Full Disclosure: Our Class Assumptions

- “Folk Psychology” has its place.
  - If nothing else, as a useful language to understand ourselves.
- The body does effect the mind and the mind does effect the body.
  - Even if the mind is not a “thing” or is simply a description of neurological phenomenon.
- Human beings do have free will.
  - That since a lot of our actions are due to unconscious programing it would help to be conscious participants of our unconscious programming.

# Non-Traditional Brand of Neurophilosophy



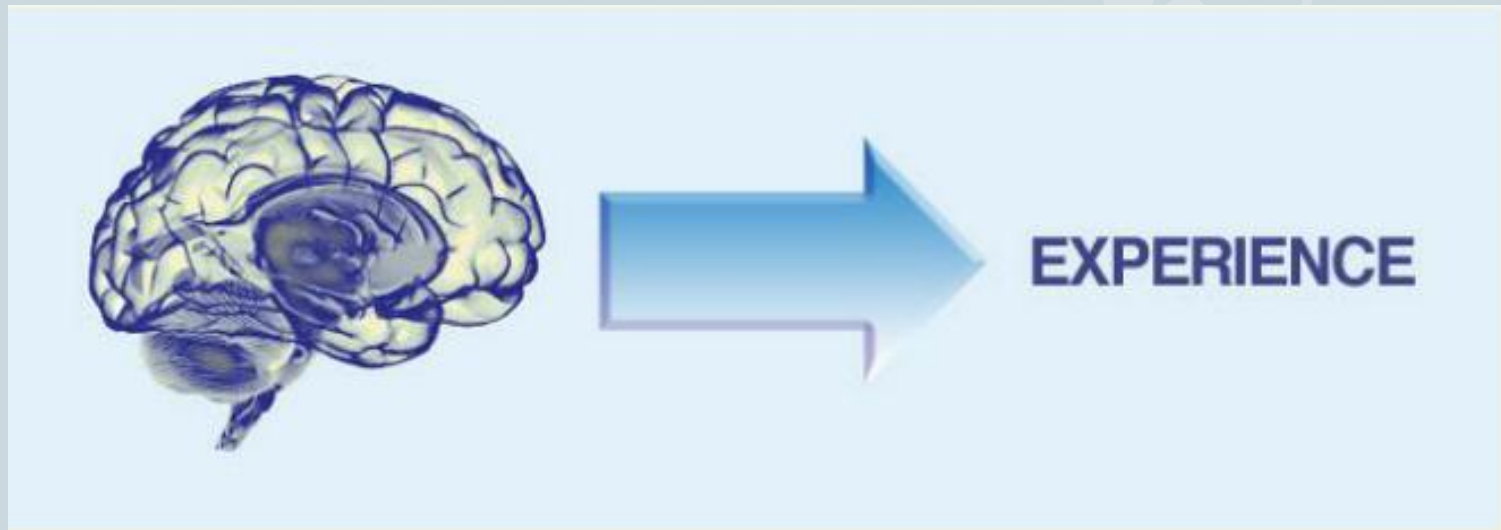
Traditional neurophilosophy delves into several thought provoking questions.

They exercise our ability to access new perspectives and gives us an opportunity to be self-aware of our responses to them.

So, rather than explore traditional neurophilosophical inquiry for its own sake, we will explicitly explore how this type of inquiry can help widen our access to multiple perceptions and help develop self-awareness for the purpose of enhancing personal and collective well-being.

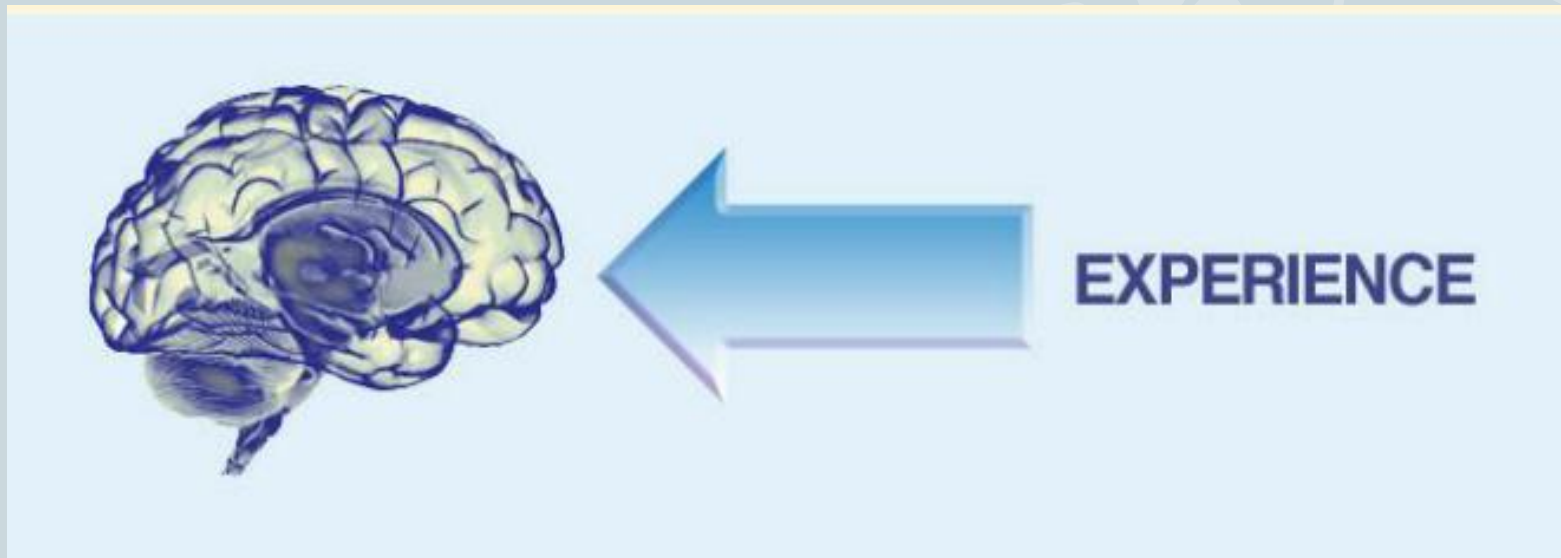
# Back to the Beginning

- The brain shapes every experience we have, and not necessarily in empowering or optimal ways.



# Can we Change Our Beliefs & Thought Habits?

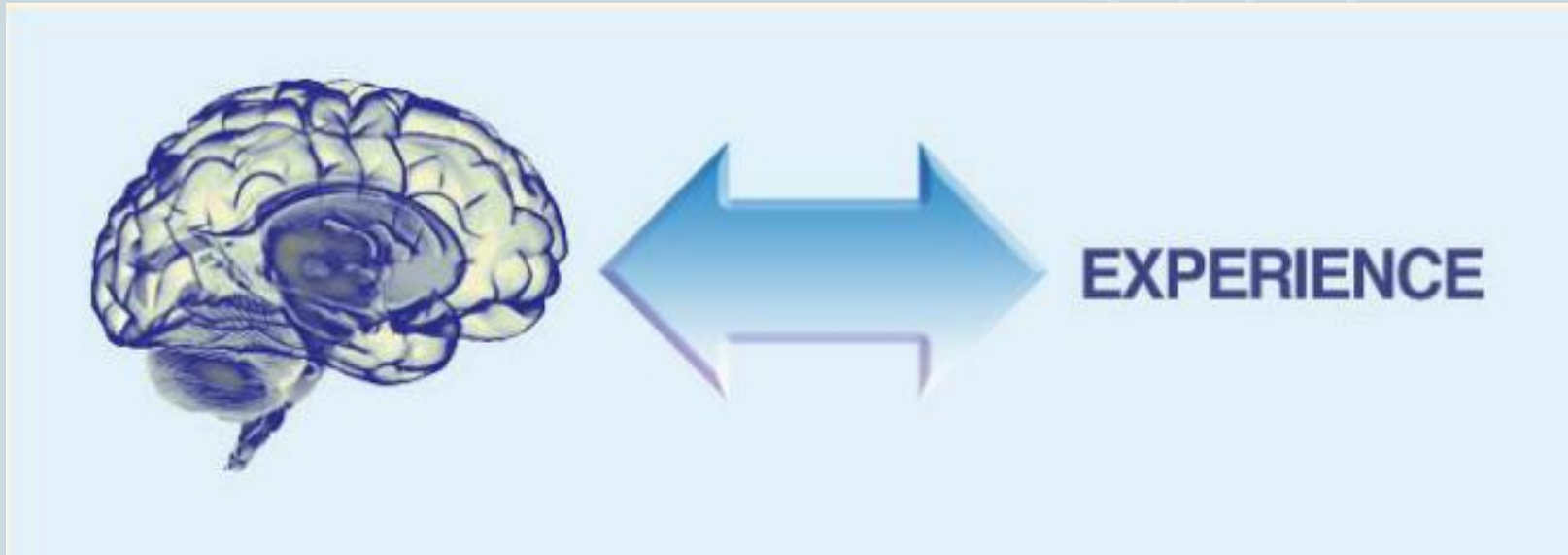
- Every experience shapes and restructures our brain.



**Neuroplasticity & Neurogenesis**

# So Why not be a Conscious Participant

- Why not choose to shape and structure our brains in certain ways in order to have more love, happiness, and wisdom.



**The Power of Attention & Intention**



# HW Week #1

1 to 2 typed pages, double spaced.

- Our textbook makes an assumption about the relationship between the brain and the mind. What is that assumption, and what reasons do we have for believing that that assumption is correct? How might someone challenge that assumption?
- Based on this assumption, how does Hanson propose we take more conscious control over our own levels of happiness, love and wisdom?
- Reflect on any instances this week where you found yourself automatically driven to negative and judgmental thoughts, or lost in thoughts where you were reliving past events or imaginings of future events.