<table>
<thead>
<tr>
<th>Name</th>
<th>Email</th>
<th>Days, Time</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professor Boyle</td>
<td><a href="mailto:mboyle@ucsd.edu">mboyle@ucsd.edu</a></td>
<td>Friday, 2-4 pm</td>
<td>CSB 130</td>
</tr>
<tr>
<td>Tiffany</td>
<td><a href="mailto:tchokry@ucsd.edu">tchokry@ucsd.edu</a></td>
<td>Tuesday, 12:30-1:30pm</td>
<td>PC Theatre Lobby</td>
</tr>
<tr>
<td>Bora</td>
<td><a href="mailto:bmutluog@ucsd.edu">bmutluog@ucsd.edu</a></td>
<td>Wednesday 4-5 pm</td>
<td>PC Jamba Juice</td>
</tr>
<tr>
<td>Jon</td>
<td><a href="mailto:jahern@ucsd.edu">jahern@ucsd.edu</a></td>
<td>Tuesday, 2-3pm</td>
<td>CSB 114</td>
</tr>
<tr>
<td>Bryan</td>
<td><a href="mailto:blt010@ucsd.edu">blt010@ucsd.edu</a></td>
<td>Thursday, 1-2pm</td>
<td>Sequoyah 142</td>
</tr>
<tr>
<td>Corey</td>
<td><a href="mailto:yiz329@ucsd.edu">yiz329@ucsd.edu</a></td>
<td>Wednesday, 1-2pm</td>
<td>CSB 231</td>
</tr>
<tr>
<td>Meri</td>
<td><a href="mailto:myedigar@ucsd.edu">myedigar@ucsd.edu</a></td>
<td>Tuesday, 12:30 - 1:30 pm</td>
<td>PC 4th Floor</td>
</tr>
<tr>
<td>Ilmaa</td>
<td><a href="mailto:ilhaque@ucsd.edu">ilhaque@ucsd.edu</a></td>
<td>Monday, 4-5:30pm</td>
<td>Audrey’s Cafe</td>
</tr>
<tr>
<td>Ana</td>
<td><a href="mailto:achkhaid@ucsd.edu">achkhaid@ucsd.edu</a></td>
<td>Wednesday, 12-1pm</td>
<td>CSB 215</td>
</tr>
</tbody>
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Important Information

● Boyle - OH moved to Monday, March 2 8:30-10:30a

● Midterm 2
  ○ Midterm 2 is on Tuesday, February 25th (Week 8)

● Extra Credit
  ○ EC quizzes are based on assigned readings
    • Taken on Canvas
    • This week reading is on Dr. V. S. Ramachandran - Understanding your Brain
    • EC quiz will be posted by Wednesday at 4 PM
Last Week’s Topics

- Lecture 12 | Dr. Matthew Fulkerson - Embodied Cognition
Review Definitions & Examples (1 of 2)

1. Supervenience
2. Metaphysics
3. Behaviorism
4. Dualism
5. Monism
6. Functionalism
7. Instrumentalism
8. The Mind-Body Problem
9. Type Identity Theory
10. The Language of Thought Hypothesis
11. Embodied Cognition
12. Enactive Cognition
13. Active Externalism
Supervenience is a dependence relation. One set of things depends on another.

- Higher-level (supervenient) things depend on the lower level (base) things.
- A set of things A supervenes on a set of things B so that there can’t be a change in A without a change in B
Metaphysics

- **Metaphysics**: Concerned with everything in the world and how they are connected to each other, such as the mind and body, substance and attribute, and potentiality and actuality.
Behaviorism

The idea that we can study the mind solely by observing the correlation between operant behaviors

- Materialist view on how the mind operates
- The brain is no longer relevant
- For example, *pain is a behavior and saying “ouch” is all it is to be in pain*
- One argument against behaviorism is raised by Hilary Putnam with the idea of **super-spartans**:
  - Spartans that are trained to suppress their behavior and reaction against pain even though they feel the pain in the inside
Dualism

The idea that **the mind and body are two completely distinct & separable substances** that interacted at some level

Two types of dualism:

- **Substance Dualism:**
  - The mind is an independently existing *substance* - the mental does not have extension in space, and the material cannot think

- **Property Dualism:**
  - The brain *has both mental and physical property*, thus they are both the same property of the same body
Monism

The idea **that there is a oneness in everything; there is no duality between concepts.** The mind and body would be unified as one entity.
The mind is a software that is operating in the brain which is a hardware

- The idea is that the brain stores some kind of symbols in a collection of neurons & when the brain is functioning, it is essentially manipulating those symbols in a rule-govern way

- A scientist with the Functionalist view would be interested in finding that specific rules & algorithm run in the brain along with how it generally operates
Instrumentalism

The idea that mental properties (e.g. beliefs, desires, hopes, etc.) do not exist but are useful in explaining things

- Argues that mental properties are theoretical posits made by theorists to make sense of complex behavior and dynamic systems that are going on in the brain.
- Mental properties will probably eventually be replaced by lower level neuroscientific theory.
The debate about whether the mind and body are two separate entities (Dualism) or one unified entity (Monism)

- It is the relationship between our body’s experiences and the physical layout of our body
Type Identity Theory

The theory that **mental properties can be reduced into a discreet state of the brain**

- For example, *mental properties like pain can result in a discreet state of C-fiber firings in the brain*
- Widely discredited in philosophy but have been revived in the recent years because of the use of imaging technique (fMRI) and through research program called Neural Correlates of Consciousness
The Language of Thought Hypothesis

The idea that mental activity is encoded in the brain in a form of its natural language

- The software in the brain is run on its proprietary coding language
- The goal of cognitive science is to discover that mental language and explore its structures, rules, and symbols
Embodied Cognition

- How our body contributes to our cognitive and experiential capacities
- To understand cognition, you must look at the brain and body and how they are constructed to function with one another
- Believes that a brain in a vat is **NOT** conducive of embodied cognition
Enactive Cognition

- Enactive Cognition states that consciousness is a life-regulation process of the body dynamically interacting with its environment.
  - Perception, action, emotion, imagination, memory, and dreaming are modes of self-regulation that depend directly on the living body and not just the brain.
Active Externalism

The idea on how the external environment is an external part of our cognition

Examples:

● Inga who remembers the address of the museum and Otto who uses his notebook to find the address of the museum

● There is no meaningful difference to the two examples
Quiz Time!

- No talking, signaling, or communicating of any kind.
- Put away your books, notes, computers, phones, etc.
- Pen or pencil is okay (just make sure it’s a black pen and you press hard with a pencil).
- Write your name in the “Name” box, write and circle in your PID, and sign the academic integrity agreement.
- Bubble in this section
- Please have your student ID out when you turn in your quiz!
Write and circle in your PID

Write down your name here

Sign and date here

Bubble in the current section

Bubble in the answers