

Psychology Ch 1-2

- Modern psych is full of several sub-disciplines that each have a unique contribution to psychology
- **Clinical psychology**
 - o Perform assessments
 - o Diagnose and treat mental disorders
 - o Conduct research on people with mental disorders
 - o Work in colleges and universities, mental health care centers, and have private practices
- **Counseling psychology**
 - o Counsel individuals who are experiencing temporary or relatively self contained life problems
 - Marital conflict, sexual dysfunctions, occupational stress, career uncertainty
 - o Work in counseling centers, hospitals, and private practices
- **School psychology**
 - o Work with teachers, parents, and children to remedy students behavioral, emotional, and learning difficulties that are adversely affecting their education
 - o Perform assessments in an educational setting
 - o Work for schools or educational service centers
- **Developmental psychology**
 - o Study the change in behavior across time
 - o Conduct research on infants, children, adults, and the elderly
 - o most work for universities and colleges or other research institutions
- **Social psychology**
 - o Interested in social interactions, including their effects on individuals and individuals effects on the group
 - o Also interested in inter-group relations, differences between groups, and differences between individuals inside of a group
 - o Most work for universities and colleges or other research institutions
- **Cognitive psychology**
 - o Interested in information processing
 - How do people think, perceive, remember, speak, solve problems, etc.
 - What affects this processing
 - o Most work for universities and colleges or other research institutions
- **Biological psychologist**
 - o Examines the physiological basis of behavior in both humans and animals
 - o Most work for universities and colleges or other research institutions
- **Forensic Psychology**
 - o Asses and diagnose inmates and assist with their treatment and rehab
 - o Conduct research on eyewitness testimony, jury decision making, etc

- o Apply psychological principles to the law and court systems
- o Work in jails, prisons, courts, univ, colleges, and other research institutions
- o Can be clinically or experimentally trained
- Industrial/Organizational psychology
 - o Work in companies and businesses to help select productive employees, evaluate performance, examine the effects of dif working and living conditions on peoples behavior
 - o Design equipment to maximize employee performance and minimize accidents

Scientific Thinking

- Why is scientific thinking important?
 - o Our common sense about the world is often incorrect
 - o Naïve realism: the belief that we see the world precisely as it is
 - Consider: the world seems flat. The sun seems to orbit the earth, but our common sense is wrong in these cases
- Humans have several cognitive biases that we often fall into
 - o Scientific thinking can help to safe guard us from our own biases

Common Biases

- Confirmation Bias-seeking evidence that supports our position & denying, dismissing and distorting evidence that contradicts
- Belief perseverance-tendency to stick to our initial beliefs even when evidence contradicts them
- Emotional Reasoning Fallacy (aka affect heuristic)- the error of using our emotions as guides when valuing the validity of a claim
- Bandwagon Fallacy- error in assuming a claim is correct just because lots of people believe it
- Not Me Fallacy- error of believing we are immune from errors and thinking that effect others
- Patternicity- tendency to see patterns, even when no actual pattern exists
- Hot-hand fallacy
 - o Because we are meaning seeking organisms, and experience patternicity, we can sometimes confuse random events as “streaks”
- Scientific theory: an explanation for a large number of findings in the natural world
- Cannot be “proven”
- This does NOT mean they are just random or educated guesses
- Hypothesis: a testable predictions that is derived from a theory
 - o Must be falsifiable!

Framework for Scientific thinking

- Critical thinking: set of skills for evaluating all claims with an open mind, but in a careful and logical manner
- 1) Ruling out rival hypotheses
- 2) Correlation isn't causation

- 3) Falsifiability
- 4) Replicability
- 5) Extraordinary claims require extraordinary evidence
- 6) Occam's Razor (parsimony): how simple is your hypothesis/explanation?
- Watch out for:
 - o Metaphysical claims
 - Beyond the realm of science
 - Cannot be tested using scientific means
 - Does not necessarily mean they are wrong, just tread with caution
 - o Pseudoscience
 - A set of claims that seem scientific, but are not
 - Common signs
 - 1) overuse of ad hoc immunizing hypotheses
 - 2) exaggerated claims
 - 3) overreliance on anecdotes
 - 4) lack of review by other scholars
 - 5) lack of self-correlation when contrary evidence is provided
 - 6) meaningless scientific terms thrown together
 - 7) talk of proof instead of evidence
- Science vs. Pseudoscience
 - o Why is it important to distinguish them?
 - Pseudoscience can lead people to forgo traditional medical opportunities when trying to treat a disease or mental disorder
 - Pseudoscientific treatments are often unregulated and untested which could lead to direct harm
 - It inhibits scientific thinking among citizens

Research Methods

- Why is the way we conduct research important?
- Story time
 - o Facilitated communication
 - o Prefrontal lobotomy
- Like scientific thinking, good research designs protect against several cognitive biases
- Two modes of thinking:
 - o System 1 (intuitive)
 - Fast
 - Utilizes heuristics- mental short cuts or rule of thumb that helps us to streamline our thinking
 - o System 2 (analytical)
 - Slower and deliberate
 - Often thought to "over ride" system one