Psychology Notes for January 9th

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What is Psychology? Science vs. Intuition

- Although common sense can be enormously useful for some purposes, it's sometimes completely wrong.
- Psychology- The scientific study of the mind, brain, and behavior
- Levels of Analysis- Rungs on a ladder of analysis with lower levels tied most closely to biological influences and higher levels tied most closely to social influences.
    - Lower rungs are more closely tied to "the brain."
    - Higher rungs are tied to what is called "the mind"
    - We can't understand psychology by focusing on only one level of analysis.
- Multiply Determined- Caused by many factors
- Five challenges:
    - Human behavior is difficult to predict because almost all actions are multiply determined.
    - Psychological influences are rarely independent of each other, making it difficult to pin down which cause or causes are operating.
    - People differ from each other in thinking, emotion, personality, and behavior.
        - Individual Differences- Variations among people in their thinking, emotion, personality, and behavior.
    - People often influence each other.
        - Reciprocal Determinism ^
    - People's behavior is often shaped by culture.
- Emic Approach- Investigators study the behavior of a culture from the perspective of a "native" or insider.
- Etic Approach- Investigators study the behavior of a culture from the perspective of an outsider.

Why we can't always trust our common sense

- Naïve Realism- The belief that we see the world precisely as it is.

Psychology as a science

- Science begins with empiricism, the premise that knowledge should initially be acquired through observation.
- Scientific Theory- Explanation for a larger number of findings in the natural world.
- Hypothesis- Testable prediction derived from a scientific theory.
- Theories aren't just guesses.
- Two traps in which scientists can fall unless they're careful:

    - Confirmation Bias- The tendency to seek out evidence that supports our belies and deny, dismiss, or distort evidence that contradicts them.
    - Belief Perseverance- The tendency to stick to our initial beliefs even when evidence contradicts them.

Metaphysical Claims: The Boundaries of Science

- Metaphysical Claims- Assertions about the world that we can't test.

Recognizing That We Might Be Wrong

- Scientific knowledge is almost always tentative and potentially open to revision.

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Scientific Skepticism

- Scientific Skepticism- Approach of evaluating all claims with an open mind but insisting on persuasive evidence before accepting them.
    - Unwillingness to accept claims on the basis of authority alone.

A Basic Framework for Scientific Thinking

- Critical Thinking- Set of skills for evaluating all claims in an open-minded and careful fashion.
- Scientific thinking principles:
    - #1 – Ruling out rival hypotheses
    - #2 – Correlation isn't causation
        - Correlation-Causation Fallacy- When we conclude that correlation means causation.
        - Variable- Anything that can vary.
    - #3 – Falsifiability- Capability of being disproved; if a theory isn't falsifiable, we can't test it.
    - #4 – Replicability- When a study's findings are able to be duplicated ideally by independent investigators.
    - #5 – Extraordinary claims require extraordinary evidence.
    - #6 – Occam's Razor- If two explanations account equally well for a phenomenon, we should generally select the more parsimonious one.