

Scientific Psychology (Lecture 3)

II. Why IEs are not scientific

A. IEs are poor scientific accounts.

- While effective as explanations of human behavior, IEs are considered poor “science”.
 - Few scientists use IEs as a way to explain, preferring Physical or Design Explanations.
 - There are two reasons for scientists’ tendency not to explain human behavior with IEs.
 1. IEs violate good scientific (critical) thinking.
 2. Assumptions of IEs may be incorrect.
- IEs are best thought of as a useful way of *talking* about human behavior, but they are an inadequate *explanation* of it.

II. Why IEs are not scientific

A. IEs violate scientific thinking.

- IEs fail the test of critical and scientific thinking as defined in the textbook.
 - **Critical thinking:** Thinking that precludes blindly accepting ideas by asking questions, defining terms, examining evidence, seeking falsification, avoiding emotions, not simplifying (*Myth Busters*)
 - **Ask Questions:** Be inquisitive and curious
 - *Are we really in conscious rational control of our behavior as assumed by IEs?*
 - **Define Terms:** Identify the problem in clear concrete terms.
 - *Mental states can not be objectively define.*

II. Why IEs are not scientific

A. IEs violate scientific thinking.

- IE fails critical and scientific thinking:
 - **Examine Evidence:** Assess evidence for claims.
 - *Is there evidence for the idea that conscious mental states underlie our behavior?*
 - **Evaluate by Falsifying.** Try to prove claims false.
 - *Can the assumption of mental states be proved false?*
 - **Avoid Emotions.** Be unemotional about evaluation
 - *Do we emotionally hold onto the belief that we are in conscious rational control of our behavior?*
 - **Don’t oversimplify.** Reject “either/or” thinking.
 - *Do factors other than conscious mental states influence our behavior?*

II. Why IEs are not scientific

B. IE assumptions tested and proved false.

- All the assumptions of IE can be challenged on the basis of scientific psychology.
 - **Mental States:**
 - Conditioning & Learning (Chap. 7); Neuroscience (Chap. 2); Nature vs. Nurture (Chap. 3).
 - **Perfection Perception:**
 - Sensation and Perception (Chap. 5)
 - **Awareness:**
 - States of Consciousness (Chap. 6); Memory (Chap. 8), Emotions (Chap. 10); Motivation (Chap. 11)
 - **Rationality:**
 - Thinking (Chap. 5); Social Psychology (Chap. 15)

II. Scientific Perspectives in Psychology

A. Theoretical Perspectives

- The 7 theoretical perspectives in scientific psychology explain human behavior by making assumptions other than that behavior is under conscious and rational control.
 - A theoretical perspective is a general set of assumptions that are held by scientists who use similar methods and techniques to study a range of phenomena. A perspective in psychology may contain multiple related *theories*
 - A theory in psychology is the network of beliefs and concepts used to predict and explain specific phenomena.

II. Scientific Perspectives in Psychology

B. Behavioral Perspective

- The Behavioral perspective rejects the assumption that people's behavior is explained by reference to mental states.
 - The Behavioral Perspective assumes that people are designed to learn from the environment
 - Indeed, all behavior (from simple emotional reactions to complex actions) can be explained by conditioning, with no reference to mental states.
 - The perspective has been influential in the areas of
 - Clinical Psychology (treating phobias)
 - Educational Psychology (classroom management).

II. Scientific Perspectives in Psychology

C. Neuroscience Perspective

- The Neuroscience perspective also rejects the assumption that people's behavior is explained by mental states.
 - The perspective holds that how our brain works explains our behavior, thereby employing a physical explanation of behavior.
 - The study of physical basis of behavior has been based on studies of brain damaged individuals and studies of normal brain function.
 - The perspective has been influential in the areas of
 - Clinical Psychology (explanation of depression)
 - School Psychology (learning problems)

II. Scientific Perspectives in Psychology

D. Cognitive Perspective

- The Cognitive perspective rejects the IE assumption that people's behavior is explained by mental states and that they are rational.
- In the Cognitive Perspective, the mind is likened to a computer that is **designed** to process information.
- People do not always process information rationally. They defy the rule of logic, sometimes demonstrating magical thinking.
- The perspective has been influential in the areas of
 - Clinical Psychology (cognitive therapy)
 - Educational Psychology (memory and learning)

II. Scientific Perspectives in Psychology

E. Psychodynamic Perspective

- Psychodynamic or Psychoanalytic perspective rejects the IE assumption that behavior is under conscious and rational control.
- Sigmund Freud, the father of the Psychoanalytic perspective, claimed that behavior is explained by unconscious and irrational processes. He assumed that people are **designed** with instinctual and unconscious desires that need to be controlled.
- Psychoanalytic perspective has been influential in
 - Clinical Psychology (neurotic and psychotic behavior)
 - Personality Psychology (individual differences)
 - Developmental Psychology (stages of development)

II. Scientific Perspectives in Psychology

F. Socio-Cultural Perspective

- The Socio-cultural perspective rejects IE's assumption of conscious control of behavior because we act, feel, think, and behave in part due to our socialization into a culture.
- Behavior considered appropriate in a context (e.g., eye contact) varies according to culture. Cultures may be broad (e.g., Western Culture) or narrow (e.g., neighborhood).
- We are **designed** to be part of a social collective
- This approach has been very influential in
 - Clinical (therapy)
 - Education (cultural context)

II. Scientific Perspectives in Psychology

G. Genetic Perspective

- The Genetic perspective rejects IEs by assuming that we are **design** by our genes in interactions with the environment.
- The Genetic Perspective includes theories of Behavioral Genetics and Evolutionary Psychology.
 - **Evolutionary Psychology** holds that we are **designed** to behave due to specific genes which we all share due to evolution (e.g., dating behavior).
 - **Behavior Genetics** holds that **genetic differences** between people may explain differences in intellectual abilities, personality traits, and social interactions
- This perspective has influenced virtually all aspects and areas of psychology.

II. Scientific Perspectives in Psychology

H. Biopsychosocial Model

- While fundamentally different, these perspectives can be integrated into a single Bio-Psycho-social account of a topic (anger).

