

# FOUNDATIONS OF PSYCHOLOGY A

## PSYCHOLOGICAL PSEUDOSCIENCE

- Imposters of Science

To understand people and their behaviour you need to think scientifically.

For example, the face on mars.

### Signs of Pseudoscience

- Overuse of ad hoc immunising hypotheses
- Exaggerated claims
- Over-reliance on anecdotes
- Absence of connectivity to other research
- Lack of review by other scholars (known as 'peer review') or replication by independent labs
- Lack of self-correction when contrary evidence is published
- Meaningless 'psychobabble' that uses fancy scientific-sounding terms that do not make sense
- Talk of 'proof' instead of 'evidence'

*The dangers of Pseudoscience: Why care?*

### Three key reasons:

1. Can lead people to forgo effective treatment aka opportunity costs
2. Direct harm
3. An inability to think critically

### *Scientific Thinking*

- Scientific scepticism
- Critical thinking

### **Key Features of Scientific Scepticism**

1. *Two attitudes:*
  - An open mind; and
  - Only accepting claims after rigorous research
2. *Unwillingness to accept claims on the basis of authority alone.*

## SIX PRINCIPLES OF SCIENTIFIC THINKING

### **1. EXTRAORDINARY CLAIMS**

*"Is the evidence as strong as the claim?"*

*E.g. Bigfoot*

### **2. TESTING PREDICTIONS**

*"Can the claim be tested?"*

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## 3. OCCAM'S RAZOR

*"Does a simpler explanation fit the data just as well?"*

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## 4. REPLICABILITY

*"Can the results be duplicated in other studies?"*

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## 5. RULING OUT RIVAL HYPOTHESIS

*"Have important alternative explanations for the findings been excluded"*

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## 6. CORRELATION VS CAUSATION

*"Can we be sure that A causes B?"*

### Theoretical Perspectives

- Psychodynamic
- Behaviourist
- Humanistic
- Cognitive
- Evolutionary

### Types of Psychologists

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## PARADIGMS

"A broad system of theoretical assumptions employed by a scientific community that includes shared models, metaphors and methods" (Weston et AL., 2015)

### Components

1. Theoretical components (models)
2. Set of shared metaphors
3. Agreed set of methods

### Perspectives in Psychology

- Any psychological issue can be approached using a number of perspectives.
- We can be biased in our perspectives
- A paradigm is a broad system of theoretical assumptions employed by a scientific community.
- Psychology lacks a unified paradigm but has a number of schools of thought or "ism's"
- An example: addiction and the perspectives

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## PSYCHODYNAMIC PERSPECTIVE

The psychodynamic view posits that **conscious** and **unconscious** forces interact to control our thoughts and behaviours.

- Thoughts, feelings and wishes.
- Some mental events are unconscious

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- **Metaphor:** Awareness is like an iceberg
- Speech and dream analysis
- **Data:** Case studies in which a therapist seeks understanding of the thoughts, feelings and actions of the client.
- Criticisms
- Example: Psychodynamic perspective and addiction

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## BEHAVIOURIST PERSPECTIVE

- The behaviourist view is that environmental stimuli control behaviour through learning.
- The behaviour of humans and animals can be understood without reference to internal states such as thoughts or feelings.
- Stimuli become associated through conditioning,
  - Classical conditioning
  - Operant conditioning

Two main contributions to psychology:

1. Reward and punishment in learning
2. Emphasis on empiricism

### **Behavioural consequence:**

1. Positive consequences are reinforcing
2. Negative consequences are punishing

### **Key Theorists:**

- Metaphor for the behaviourist view is that humans and other animals are mechanistic; we show responses that can be elicited (or made more likely) by external stimuli.
- Seeks to understand the relations between stimuli and behaviour through the experimental method.
- Data is quantitative empirical data that can be analysed statistically and replicated.
- **Criticism:** Dismisses internal workings of humans
- **Example:** The behaviourist perspective and addiction