

# Lecture 2

PSY1101

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What do you think of when you think of 'psychology'?

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## Two Main Branches in Psychology

Clinical Psychology

help with behavior problems

Experimental psychology

Researches behaviour & Nervous System

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Questions asked in Experimental Psychology

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- Genes ?
- Childhood experience ?
- mood triggered by ?
- best way to study ?
- Shyness ?
- discriminating different illness ?
- ...

- Psychology hasn't always been a science...
- Originally, it was more of a philosophical discussion than a controlled scientific field that laid out testable hypotheses

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Concepts and approaches in early psychology

- A. Dualism
- B. Phrenology
- C. Structuralism
- D. Empiricism
- E. Nativism
- F. Behaviourism

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## A. Dualism

- Dualism (1600's): humans consist of a material body and an immaterial soul
  - Soul controlled most abilities
- René Descartes: the body actually drives most behaviours; the soul controls only thought

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## Dualism

- The mind and body are separate – there are 'threads' in the body that control movement
  - now we call these nerves
- Some behaviours happen without thought
  - now we call these reflexes

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What's the problem with introspection?

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Different experience  
 language/linguistic ability.

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D. Empiricism

- The mind as a 'blank slate'
- Experience is everything
- *Supported the argument that science should focus on observation and experimentation with experience*

John Locke, 1600's 14

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E. Nativism

Some knowledge or rules of operation are inborn in humans

- *a priori* knowledge → born with → infants can tell the difference btw
- *a posteriori* knowledge → gained

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difference languages

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Evidence for a posteriori effects on a priori ability  
experience

Our visual system is prepared to organize visual input, but this is influenced by experience

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- People with different perceptual experiences show differing effects

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People who are used to live in many corner setting, tend to see  $\downarrow$  longer than  $\uparrow$

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### F. Behaviorism

- Focused on *observable* behaviour
- Behaviours develop through their consequences
  - +ive consequences: behaviour increases
  - -ive consequences: behaviour decreases
- Absolutely no focus on mental processes

Watson, Skinner (mid-1900's)

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### Cognitive revolution

- Behaviorism was eventually abandoned because it too strictly excluded mental processes
- The cognitive revolution brought psychology to a stage where it was acceptable (and in fact desirable) to study mental processes, but to do so in a scientifically controlled manner
- Present-day psychology: 'the scientific study of **behavior** and **mental processes**'

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### Talk with your neighbour...

- What is behaviour? *action / reaction / reflexes involuntary*
- What are mental processes?  
*. study scientifically*

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### Psychology's three main levels of analysis

How are our **behaviours and mental processes** influenced by:

- Biology
  - Genes, evolution, hormones, physiological structure of body/brain
- Socio-cultural influences
  - Other people, expectations of culture, family, etc., models (e.g., media)
- Psychology
  - Learning, emotions, perceptions of reality

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### Many current fields of psychology

- Evolutionary
  - Natural selection, evolution, animal behaviour
- Neuroscience
  - Brain, nervous system in behaviour, learning, emotions
- Behavioural
  - Learning responses to stimuli
- Cognitive
  - Encoding, processing, retrieving information
- Sociocultural (personality, social)
  - Influences of social and cultural settings
- Developmental
  - Age-related changes in behaviour, understanding, emotions
- Clinical
  - Treating people with a variety of problems

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### Thinking critically

- Today's psychology is a science
- Scientists form hypotheses based in logical theory and evidence
- Scientists demand rigorous evidence to support hypotheses before they believe them

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- Science revolves around questions
  - Systematic asking and answering of questions
    - Logical
    - Evidence-based
- Goal of psychological science: to gain new insights in our understanding of human behaviour/mind/thoughts
- Importance of skepticism and curiosity

*x cynical x gullible*

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Scientists try to limit bias

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Conflicting hypotheses

• need evidence

- Often our intuitions are correct (and then we're not too surprised – hindsight bias)
  - but just as often, they might not be!

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argument & explanation without evidence is unreliable

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Methods of knowledge acquisition

- Tenacity: "it's always been that way" *eg: sexism.*
- Intuition: "it feels true"
- Authority: "the boss says it's true"
- Rationalism: "it makes sense logically" } *sole statement with no evidence isn't always true.*
- Empiricism: "I observed it to be true" } *don't base on surface*
- Science: a combination of rationalism & empiricism

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### Science

- Scientists are *skeptical*, but not cynical
- They work to be *curiously open to ideas*, but not *gullible*
- They base their beliefs on *empirical data*, not unsupported claims
  - Cathy with cured 'lung cancer' (Dr. Oz)
- Check out another test  
<http://www.youtube.com/watch?v=OZeQGld5QBU&feature=related>

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### For next class

- Read Prologue if you haven't already
- Read Chapter 1
- Login to Brightspace if you haven't already

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