

### ***History of modern Psychology***

- Wundt and structuralism
- Titchener in the USA - structuralism
- Introspection as a tool
- James (Harvard, USA) and functionalism
- Gestalt movement
- Perceptual organisation
- Gestalt law
- The start of behaviourism and the role of animals
- Pavlov
- Watson and Little Albert
- Thorndike and his puzzle box
- Skinner and his Skinnerbox
- Freud and psychodynamic approaches
- Cognitive revolution
- Emergence of Cognitive neuroscience

### Structuralism

- Search for the primitive experiences that constitute thought
- Building blocks of our conscious experience
- Introspection as a technique to look into the brain
- Auditory sensations, visual (colour, form), tactile (pressure, temp, pain), time
- The brain puts them together = synthesis, apperception
- Wundt was a structuralist

### Edward Titchener - 1800s

- A student of Wundt
- Based on introspection
  - Look at own conscious experience in search for basic elements of the experience
  - Subjective - self reports on sensations, feelings, emotions
  - Raw data of what subject was experiencing
  - Hoping to find ultimate building blocks
  - Rejected → functionalism, Gestalt movement

### Functionalism

- Rejection of structuralist ideas
- USA

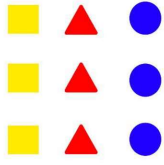
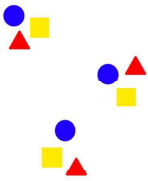
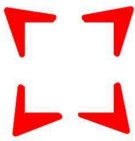
### William James - 1800s

- The 'godfather' of psychology
- Problem with structuralist approach is the stream of consciousness - continuous arrival of new thoughts → can't analyse current thoughts into basic components

### Gestalt psychology

- Rejection of structuralist ideas
- Europe
- Founders - Max Wertheimer, Kurt Koffka, Wolfgang Kohler
- The whole is other than the sum of its parts - the whole exists independently of its parts
- Perceiving is not just sensations - it is a process of organising by the brain
  - Perceptual organisation - a stimulus organises itself

## Gestalt laws

Similarity	Proximity	Closure
		
Things which share <b>visual characteristics</b> will be seen as <b>belonging</b> together	Things which are <b>closer</b> together will be seen as <b>belonging</b> together	We tend to see <b>complete</b> figures even when part of the info is <b>missing</b>

## Movements based on animal research

- About learning - any process through which experience at one time can alter an individual's behaviour at a future time
  - By reinforcement, punishment
- Stimulus → response - both are observable
- Animals = good subjects for experiments
  - Easy access
  - Don't have thoughts interfering with task
- Ultimately led to behaviourism

## Ivan Pavlov - 19th C, Russia

- Classic conditioning

**Before conditioning**

*neutral stimulus*  
(bell) → *no consistent response*

*unconditioned stimulus* (food)  $\xrightarrow{\text{unconditioned reflex}}$  *unconditioned response* (salivation)

**During conditioning**

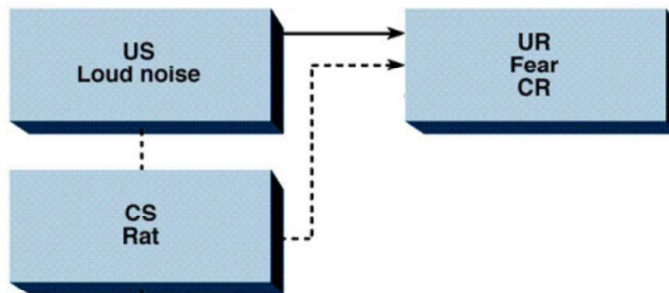
*neutral stimulus* (bell) + *unconditioned stimulus* (food) → *unconditioned response* (salivation)

**After conditioning**

*conditioned stimulus* (bell)  $\xrightarrow{\text{conditioned reflex}}$  *conditioned response* (salivation)

## John Watson - USA

- The behaviour of a person is the product of everything they have learnt in the past
- Little Albert → conditioned emotional response



## Edward Lee Thorndike

- Operant conditioning
- Puzzle box
  - Cat trapped in box
  - Time required to escape ↓ for successive trials

## Burrhus Frederic Skinner - USA

- Operant conditioning
- Trained Barnabus the rat to do a series of tasks before getting food

**The Cognitive Revolution - 1950-1970**

- Broadbent → information theory
- Newell and Simon → human problem solver
- Chomsky → psycholinguistics
- Neisser → cognitive psychology
- Miller →  $7 \pm 2$  (if people are shown a list they will only remember 5-9 things, limit of short term memory)

## Influences

1. Research on human performance - under pressure of WWII - Broadbent, Miller
  2. Developments in computer science esp. artificial intelligence - Newell, Simon
  3. Developments in linguistics - Chomsky
- 11 Sept 1956
- Important conference at MIT
  - Neisser wrote a book on the findings - 'Cognitive Psychology' → changed thinking of many scientists