

PSYC1001 Notes

THE HISTORY AND PHILOSOPHICAL FOUNDATIONS OF PSYCHOLOGY

What is psychology? -

- Psycho - mind, mental
- -logy - to reason, a ground, an account
 - > **Psychology** (greek) = scientific study of:
 1. Brain - neurobiological processes that generate mental process/states
 2. Mind - individual sensations, perceptions, memories, thoughts, dreams, emotions
 3. Behaviour
 - + relations between them —> it's a NETWORK
- What is 'intelligence'? Do you actually need a brain + intention?
 - Moth - each antennae controls opposite wing —> doesn't need complex brain
 - Braitenberg vehicle
 - Robots
- Many different ways to approach psychology
- Why study psychology? To
 - Describe
 - Understand
 - Explain
 - Predict
 - Control
 - Influence behaviour
- NOTE; psychology about general rules, NOT individual cases

Why study the history of psychology? -

- Santayana - 'those who do not know history are doomed to repeat it'
- Camera - neutral, but registers only specific moments from a specific angle
- History - consensus between scientists we believe are smart + trustworthy → NOT a fact → we perceive things differently, forget
- E.g. Berlin wall - west (allies - democracy) vs east (soviet union - communism)
- E.g. Australia Day VS Invasion Day
- **Presentist bias** - analysing historic events using modern perspective/ideas
- **Western bias** - analysing historic events through our own cultural lens
- **Confirmation bias** - only paying attention to facts that support our ideas

WHY ARE HISTORICAL EVENTS SIGNIFICANT?

- Hard to understand present without some understanding of the past
- Give insight into why/how certain questions were considered relevant + answered at the time
- Need to know how a field developed, i.e. what they did + why - mistakes?
- E.g. Bronze Age - called that in retrospect
- E.g. WW1 was called 'The Great War' until we had WW2

WHERE DOES HISTORY OF PSYCHOLOGY START?

- **Zeitgeist** = spirit of the times (German)
 - Hugo - 'nothing is as powerful as an idea whose time has come'
 - E.g. on/off VS 1/0 → started modelling brain off computers (action potentials)
- Most books: **Wundt** started scientific psychology → established first psychological lab in Leipzig (1879)
- Earlier beginnings:
 - **Alhazen, a.k.a. Ibn Al-Haytham**
 - Born in Iraq, died in Egypt (approx. 1000AD)
 - Sabra - translated his work
 - Start of psychology?
 - **Trepanation**
 - Involves putting hole in skull to release pressure/demon (headache)
 - Done using trypanon - borer turned by hand or with string
 - Skulls found as far back as 6500BC in France
 - **Egypt**
 - Heart = seat of soul
 - Feelings from heart, NOT brain → thought because heart bled when wounded
 - Heart stayed in body - liver, kidney, lungs + stomach stored in jars next to body (brain was DISCARDED before mummification)
 - Imhotep
 - Realised brain important - problems with head led to problems with rest of body
 - Thought to have written **Edwin Smith Papyrus** -
 - About head wounds of soldiers
 - Brain lesions → distal symptoms → left side of brain controls right side of body + vice versa
 - Damage to left hemisphere inhibited speech
 - Touching brain → epileptic seizures
 - Told us that seat of soul was different from source of behaviour → specific functions localised in brain → 'cerebral localisation'

Thinking about brain functions/cerebral specialisation -

- Thinking in terms of localised functions - discovery of ventricles
 - Holes filled with fluid; first described by Herophilus; da Vinci figured out by pouring wax in
 - Consists of:
 - 2 lateral
 - 3rd
 - 4th (discovered later on)
 - Gave rise to **3 cell theory** -
 - Cell 1 - collection of info from senses
 - Cell 2 - cognition/thinking
 - Cell 3 - memory
 - Ideas about localised functions + careful look at form of brain
- **Phrenology**
 - Gall + Spurzheim
 - Classification of mental faculties/abilities based on how well specific brain areas were developed
 - Find 'math bump', 'language bump', etc.
 - British Phrenological society only disbanded in 1967
 - Flourens - tested Gall's ideas by creating lesions in living animals; removed:
 - Cerebral hemispheres - perception + judgement gone
 - Cerebellum - problems with coordination
 - Brain stem - death
 - Neuro-imaging - modern day phrenology? Scans show which areas of brain light up - identifies highly specialised areas but doesn't tell us much about how brain works
- **Phineas Gage**
 - Iron rod through head (frontal lobe)
 - Personality change from nice/organised → cursing, not organised
 - Showed that function localised to specific areas + brain able to adapt + compensate for injury (cerebral function + specialisation)
- **Lobotomy** (Freeman)
 - Trans-orbital/ice-pick lobotomies - popular treatment for mental illness
 - Typically done w/o anaesthesia
 - Instrument inserted via patient's eye socket with hammer, + scraped back/forth along frontal lobe of brain
 - Lobotomy patients said to become calm + docile
 - Rosemary Kennedy - one of first to have it done - left her permanently incapacitated
- **Broca**
 - Patient 'Tan'
 - Lost speech + motor function but language comprehension was intact
 - Broca's area = involved in answering + communicating
- **Wernicke**
 - Patient talked + talked - but it made no sense
 - Speech intact but language comprehension gone
 - Wernicke's area = involved in understanding
- Conclusion - highly specialised areas in brain

How do we gain knowledge? -

NATURE VS NURTURE

- Extremes of continuum are:

2. **Nature** - knowledge present at birth (nativism)

- Nativists include:

• Chomsky

- Modern day nativism (cognitive revolution)
- 'Language is an innate faculty of the human mind'
- Everyone born with ability to learn language - where you are determines what language you use → 'activation'
- Critical/sensitive time periods for knowledge acquisition → how do we know?
- *E.g. chicks, Genie, Wild Boy of Aveyron (Victor)*
- Piaget conceptualised childhood development as occurring through series of discrete stages

• Kant

- 'The human mind knows objects: it is innate!'

• Descartes

- Refused to trust his own senses (dreams)
- 'the very same thoughts which we experience when awake may also be experienced when we are asleep, while there is at that time not one of them true, I supposed that all the objects that had ever entered into my mind when awake, had in them no more truth than the illusions of my dreams'
- 'I think, therefore I am'
- Can doubt everything except your own existence

3. **Nurture** - everything learnt during life

- **Empiricism** - acquire knowledge through what we perceive/sense

- Empiricists include:

• Aristotle

- Tabula Rasa = blank slate

• Locke

- 'Nothing is in the mind which was not first in the senses'
- NOTE: Molyneux's question (to Locke) - 'would a man who has been born blind + learnt to distinguish/name a globe + a cube by touch, be able to distinguish/name these objects simply by sight, once he had been enabled to see?'
- Knowing one = knowing all?
- *E.g. Dalmatians*

• Berkeley

- HOWEVER who 'taught' babies to do certain things, *e.g. rooting reflex, breathing, gripping?.....*

- **Rationalism** - thinking/reasoning is foundation of knowledge, rather than experience

- Rationalists include:

• Plato

- Not just passive registering - it's an act
- Some info is innate + we can reason on it
- Perception doesn't help find 'real' knowledge about world
- Plato's cave: rationalism - which 'world' will prisoners prefer?
- Plato's triangle - can't only be perception - can't store memories of every triangle (infinite triangles) → can look at any 1, + by reasoning, know all