

# PSYC1001



# PSYC1001: The history and philosophical foundations of psychology- Lecture 1 + 2

## LECTURE 1 (introduction):

- **Psychology**= scientific study of mental processes, brain, and behaviour + relations between them, don't see them as 'boxes', it is a network e.g. problems with memory is linked to all areas
- Psycho=mind/mental + logy= from, an account, to reason
- Study of the brain= neuro-biological processes, generate mental processes/states
- Study of the mind= individual sensations, perceptions, memories, thoughts, dreams, emotions, etc.
- Study of behaviour= Often study animals to relate processes and behaviours to humans
- What is intelligent behaviour, do you actually need a brain, have action intentions? - does having a physical brain make you smart or is it the intention to do an action then performing that action that makes you smart
- Hard to define 'intelligent' therefore we have other ways to 'measure' intelligence or 'smart' behaviour, as some animals such as moths, and also robots, are automated and appear to be intelligent yet are different to humans therefore we need to define intelligence differently
- Psychology is about general rules not individual cases- we like to know principles/laws of the mind, brain and behaviour, these help us understand problematic cases, say something about the general population using these principles during individual cases
- Ways to gain insight into mental states: experiments, observation, etc.
- Insight in the role of genes and environment- In twin studies, due to genetic similarity, interesting psychological similarities, nature vs nurture
- Ways to look at the brain in action= neuro-imaging, electrophysiological measurements
- We study psychology to gain an insight into mind and behaviour
- Study psychology to describe human + animal behaviour, to understand and explain this behaviour and very importantly to predict future behaviour e.g. predicting who will take the stairs and who will take the escalators, if you know about personal space, can predict where people will sit on a bus if there are 10 people with one seat next to them and one seat with 2 seats free for example, they will sit in the completely free seat
- Also, study psychology to control and influence behaviour
- Psychology is a very broad field, many different types e.g. experimental, forensic, biological, economic, social, etc.

## LECTURE 2:

- History is often based on the information from powerful people/people with influence, the 'victors' in the case of history, history is made by people about people
- In history, authoritative people say something, therefore it must be true and is therefore regarded as part of history
- Why study the history of Psychology?
  - A camera is neutral but registers only specific moments from a specific angle but memory is far from perfect, inference by time, discussion + other later information, even perceiving can be deceptive
  - **We forget!** So even if we stored the information perfectly, could disappear

- The written/accepted history is pretty much a **current consensus** between scientists we believe are smart + trustworthy
- **Presentist bias**: the tendency to discuss and analyse past ideas, people and events in terms of the present, e.g. Berlin Wall and demilitarised zone, history books on different sides of the wall will give a completely different view on what happened in history in terms of that event for example
- Need to know how the field developed, especially why the field developed in a certain direction- often related to Zeitgeist
- In history, you need to know the 'facts'/facts!
- It is hard if not impossible to understand the present without (some) understanding (of) the past
- Sometimes history is in different languages and have only recently been translated, they can then sometimes change our known history or even small parts of it
- **Zeitgeist**= spirit of the times, is the dominant set of ideals and beliefs that motivate the actions of the members of a society in a particular period, German word= "Time spirit or ghost"
- Philosopher Georg Wilhelm Friedrich Hegel wrote: "no man can surpass his own time, for the spirit of his time is also his own spirit"
- Victor Hugo wrote: "Nothing is as powerful as an idea whose time has come" e.g. of this: on/off vs 1/0
- What makes historical significant events?
  - The first world war was 'The Great War' until we had WWII
  - Start using bronze-> 'Bronze Age', using bronze was a big discovery that changed the way of life at the time, therefore deemed significant + period is named after the metal
- In most books, history of psychology starts with **Wilhelm Wundt** (1832-1920), establishing the **first psychological lab in Leipzig in 1879** (considered the start of Scientific Psychology)
- The Inca's in Peru used **trepanation** to cut holes in people's heads, suggests they thought something was in that wanted out, **idea of a brain and thoughts/something inside the head**, skulls with trepanation evidence found as far back as 6500BC in France
- Ancient times: Brain vs soul, Egypt:
  - Heart was the seat of the soul, soul= main concern of the Egyptians
  - Feelings, thinking, etc. thought to come from heart not brain, brain discarded during mummification by the process of excerebration
  - Heart stayed in body while many other important organs when alive were stored in jars next to the body but brain still discarded
- **Imhotep**= high priest under Seti I, architect of pyramid of Sakkara + medical doctor
- Imhotep supposedly, (very debatable) wrote **Edwin Smith Papyrus**: about the head wounds of soldiers, found out left side of brain controls right side of the body + vice versa + brain is responsible for speech
- Egyptians therefore knew value + some function of the brain yet valued the soul due to their belief system
- Edwin Smith Papyrus told us the seat of the soul was clearly different than the source of our behaviour, was overall about the specific functions that are localised in the brain
- **Cerebral localisation**= determination of areas of the cortex involved in performance of certain functions

- Today we know that in the brain there is: frontal lobe (thought, planning movement), parietal lobe (touch, spatial relations), temporal lobe (hearing, memory), occipital lobe (vision)- work together e.g. that's why you don't bump into people while walking and texting
- Thinking in terms of localised functions lead to → discovery of the ventricles and specific parts of the brain
- Lateral ventricles (on the left and right sides), third ventricle in the centre + fourth near the bottom (discovered later)- **earliest description of the ventricles- Herophilus of Chalcedon, 300BC**
- **Discovery of Ventricles→ 3-Cell theory/Doctrine:** Cell 1= collection of information from senses, Cell 2= cognition/thinking, Cell 3= memory
- Ideas about localised functions and careful look at the form of the brain instead of just simple model in form of drawing, came after
- Franz Josef **Gall** (1757-1828) and his student **Spurzheim** (1775-1832) felt brains to look for certain 'talent' bumps, called **phrenology**
- Bumps represented different things in that time e.g. friendship, colour, memory, maths, English
- The Lavery Electric Automatic Phrenometer- automated bump feeling process, disbanded as stupid ideas don't last forever
- Jean Pierre **Flourens** (1794- 1867)- Tested Gall's ideas of localizationism by **lesions** in living animals, he found: removing cerebral hemispheres (perception + judgement gone), removal of cerebellum (problems with motor coordination), removal of brain stem=death
- In 1848- iron rod went through **Phineas Gage**, took out some of brain, frontal lobe, due to thinking at the time about localised regions, thought this removal of the frontal lobe caused personality changes→ from this came lobotomy to take out parts of the brain they thought were responsible for bad things e.g. aggression, left first patient incapacitated
- Paul **Broca** (1824-1880) + **Broca's area:** highly specialised, his patient lost speech and motor function BUT language comprehension was intact
- Karl **Wernicke** (1848-1905): his patient had speech intact but language comprehension gone
- Their discoveries led to the conclusion that there were highly specialised areas in the brain
- Today- Functional Magnetic Resonance Imaging + Neuro-imaging, shows how brain is a system!

- **Summary:**

- History has different perspectives, some might be ignored that are significant contributions and truth, due to lack of influence
- 'Zeitgeist'
- Wilhelm Wundt's lab in Leipzig
- Trepanation + what it might tell us about the brain
- Edwin Smith Papyrus + Egypt's idea of brain vs soul
- 3 Cell Doctrine
- Thinking about localisation in the brain
- Phrenology- 'bump feeling' (Gall and Spurzheim)
- Lesion studies on animals- Flourens
- Phineas Gage
- Lobotomy- idea of removal of undesirable sections of the brain
- Broca + Wernicke→ highly specialised areas in brain
- Brain is a network