

# Introducing Psychology

Foundations of Modern Psychology

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## NATURE-NURTURE DEBATE

- What is the nature-nurture debate?
- What implications does the debate have on research?

Examples : Personality  
Intelligence

## N-N Debate Historical perspective

### Charles Darwin (1809 – 1882)

- **Origins of the Species** had major implications for psychology:
  - Important similarities between human species and other species.
  - Human psychology can be learned by studying and observing other species.
  - Emphasis on heredity - Offspring usually resemble their parents.
    - If heredity is as important in the human species as in other species, then a study of genetics will be of value in the task of predicting and understanding human behaviour.



## N-N Debate Historical perspective

### Individual differences

- Argued the case for 'survival of the fittest', meaning that some members of a species are better equipped than others to cope with the demands of the environment in which they are living.
- The importance within psychology relate to the function of **thought**, **behaviour**, and **consciousness** in allowing the individual animal or human to adapt to its environment.

## THE PHILOSOPHICAL ORIGINS OF PSYCHOLOGY

True origins of Psychology from Ancient Greeks, though some argue origins from the application of scientific method to Psychological issues.

i.e. Psychology emerged as a scientific discipline only after proper experiments were conducted under well controlled conditions so that the findings obtained may be repeated or replicated by other researchers.

See 19th Century Germany :

- **Ernst Weber**
- **Gustav Fechner**
- **Johannes Muller**
- **Hermann von Helmholtz**

## THE PHILOSOPHICAL ORIGINS OF PSYCHOLOGY

**Plato (427 – 347 BC)**

- Not convinced by the value of science, dismissing it as “a *game and a recreation* ...presumptuous prying of man into the divine order of nature”. Plato believed that scientific observations provide limited and sometimes misleading information. In contrast, thought allows true knowledge to be attained. However...
- **Mental Health** - Attached strong value, arguing that mental health depends on the body and on the mind :  
“*mens sano in corpore sano*”  
(A sound mind in a sound body)

For example, physical training is valuable to ensure that the body is healthy, whereas a study of the arts, mathematics, and philosophy is useful for a healthy mind.

## THE PHILOSOPHICAL ORIGINS OF PSYCHOLOGY

**Aristotle (384 – 322 BC)**

- Argued that there is an intrinsic distinction between the soul/mind, and the body, with the soul effectively corresponding to the body in action. Therefore, there being a close link between biology (body) and psychology soul/body.
- Important contribution – The notion that patterns of thought depend on three laws of association :
  - **Law of Contiguity** (Closeness) – Thinking of one thing can make us think of something else that we have encountered at the same time (e.g. Fridge – Oven).
  - **Law of Similarity** – Thinking if one thing may lead us to think of something similar (e.g. Apples – Oranges)
  - **Law of Contrast** – Thinking of one thing may make us think of something very different (e.g. G-d - Devil).

## THE PHILOSOPHICAL ORIGINS OF PSYCHOLOGY

- Plato had previously proposed that contiguity and similarity are important factors in determining thought patterns, but Aristotle developed the proposal.

## THE PHILOSOPHICAL ORIGINS OF PSYCHOLOGY

### **René Descartes (1596 – 1650)**

- Humans – Radical difference between the body and the soul/mind (consciousness)
- Animals – Do not have a soul or mind, therefore can be regarded as machines which behave in predictable ways.
- Theory rejected psychology as a scientific discipline – argues that the soul is the key part of a human; to understand human thinking and behaviour, we need to understand the soul. The soul does not have any biological reality therefore not possible to study using scientific method.

## THE PHILOSOPHICAL ORIGINS OF PSYCHOLOGY

### **Baruch Spinoza (1632 – 1677)**

- Double aspect theory – Mental and physical are both part of the same underlying reality :  
*“the order and connection of ideas is the same as the order and connection of things.”*
- Vague though provides a philosophical underpinning for scientific psychology.

## PSYCHOPHYSICS

- Psychophysics – the relationship between the mental and physical realms.

### **Weber (1834) and Fechner (1860)**

- Research into the relationship between physical intensity and subjective intensity, specifically :
  - Does doubling the intensity of sound double the subjective experience?
- The physical intensity of a sound needs to be increased eight-fold in order to double the perceived loudness. Varies with stimuli e.g. electric shock does not even need to be doubled in order for the perceived intensity to double.
- Weber and Fechner discovered a straightforward relationship between the physical and perceived intensities of stimuli, therefore demonstrating that scientific experiments can play a valuable role in the development of psychology.

## PHYSIOLOGY

### **Johannes Muller (1801 – 1858)**

- Physiologist interested in the fact that visual perception is very different from auditory perception, and both differ considerably from the perception of taste or smell.
- Made basic assumption :
  - Specialised nerves for vision, hearing, taste, and smell.
  - Different parts of the brain might be specialised for each of these modalities.

## PHYSIOLOGY

### **Herman von Helmholtz (1821 – 1894)**

- Theory of colour vision – Argued that there are three basic colours (RGB), each of which has its own receptor mechanisms in the eye. Recent evidence indicates that information from the three receptor mechanisms combine in a more complex fashion than assumed by Helmholtz.
- Represented a meeting point between the disciplines of physiology and psychology. In his own words :  
““*The physiology of the senses is a broader land in which the two great divisions of human knowledge, natural and mental science, encroach on one another's domain; in which problems arise which are important to both, and which only the combined labour of both can solve.*”

## BIOLOGY

- See **Charles Darwin's** *Origins of the Species*

## PSYCHOANALYSIS

### **Sigmund Freud (1856 – 1939)**

- Responsible for the contemporary richness and diversity of Psychology.
- Argued that abnormal behaviour should be regarded as mental illness, i.e. it is caused by disturbed functioning of the mind. Therefore, Psychology is of importance in the task of understanding and treating patients with mental disorders (see early examples of treating mental illness), and therefore developed the idea of Psychoanalysis.
- Psychoanalysis consists of two approaches :
  - A range of theories about human and emotional development.
  - A form of treatment for mental disorders which is based in part on those theories.

## PSYCHOANALYSIS

- Freud developed a systematic psychological approach to therapy leading to the development of subsequent forms of therapy.
- Before Freud, Psychology was limited to aspects of cognitive process of thinking and behaviour through cognition (e.g. sensation, perception, associative thinking, and memory). Freud extended psychology to include interpersonal processes such as :
  - Developmental processes
  - Social processes
  - Motivation
  - Personality Sexual behaviour

# BEHAVIOURISM

## **John Watson (1878 – 1958)**

- Founder of behaviourism, concerned that too much of psychology was subjective and unscientific, relying on individual reports of their own experiences (Introspective approach).

*“Psychology as the behaviourist views it is purely objective, experimental branch of natural science. Its theoretical goal is the prediction and control of behaviour. Introspection forms no essential part of its method.”*

- Watson advocated experimental psychology, with measures of behaviour being obtained under controlled conditions.

# BEHAVIOURISM

**Theory of Behaviour** – learning mainly involves simple stimulus-response associations (S-R associations) formed by conditioning, where nearly all human behaviour depends on environmental factors, because heredity is of little or no importance.

*“There is no such thing as an inheritance of capacity, talent, temperament, mental constitution and characteristics. These things depend on training that goes on mainly in the cradle.”*

(Watson, 1924)

**Substantial over-simplification!**

# GESTALT PSYCHOLOGY

## **Max Wertheimer, Kurt Koffka, Wolfgang Köhler (1912)**

- Discovered several interesting and important phenomena in perception and problem solving, though theoretical explanation of these phenomena have not stood the test of time.
- **Phenomenology** – Whereas Behaviourist rely on observable behaviour, Gestaltist made extensive use of subjective experience involving direct description of conscious experience.

# HUMANISTIC PSYCHOLOGY

- Developed by **Carl Rogers** and **Abraham Maslow** in the 1950's, similar phenomenological approach.
- People can be seen as striving for personal growth and **self-actualisation** (fulfilling one's potential and accepting oneself).
- **Client-centred Therapy** – Therapy developed by Rogers where the therapist provides a positive and encouraging environment designed to foster growth and to facilitate self-actualisation.

## Top 10 Psychology Icons

## ***Wilhelm Wundt (1832 – 1920)***

- The founder of the world's first psychology laboratory at Leipzig, Germany, in 1879, and the writer of numerous books on different areas of psychology.



## ***William James (1842 – 1910)***

- A US psychologist who made many contributions to our understanding of attention, memory and other topics, and helped to establish scientific psychology in North America.



## ***Sigmund Freud (1856 – 1939)***

- An Austrian psychologist who was the founder of psychoanalysis, and a central figure in the development of psychological forms of treatment for mental disorders; he extended enormously the range of psychology.



## ***John Watson (1878 – 1958)***

- The US founder of behaviourism, who was very influential in persuading American and other psychologists to focus on the principle of conditioning.



25

## ***Ivan Pavlov (1849 – 1936)***

- A Russian psychologist who made systematic studies in classical conditioning in dogs, and who won the Noble Prize for his research on the digestive tract.



26

## ***Herman Ebbinghaus (1850 – 1909)***

- A German psychologist who was the first person to carry out detailed experimental studies into human memory, using himself as a subject.



27

## ***Jean Piaget (1896 – 1980)***

- A Swiss psychologist who was enormously influential in establishing developmental psychology and showing how cognition and intelligence develop during the years of childhood.



28

## ***Burrhus Fredric Skinner (1904 – 1990)***

- A US psychologist whose work on operant conditioning had a great impact on education (e.g. programmed learning) and on clinical psychology (e.g. behaviour modification).



29

## ***Alfred Binet (1857 – 1911)***

- A French psychologist who constructed the first proper intelligence test (with Theodore Simon) in 1905; most subsequent intelligence tests resemble Binet's to some extent.



30

## ***Gustav Fechner (1801 – 1887)***

A German scientist whose psychophysical studies on the relationship between the actual and the perceived intensities of stimuli were among the first proper experimental studies in psychology; it could be argued that he was the first experimental psychologist.



31

## **CONTEMPORARY PERSPECTIVES IN PSYCHOLOGY**

32

## CONTEMPORARY PERSPECTIVES IN PSYCHOLOGY

- Each phase of psychological history left its mark, not just on the subject matter, but also on psychological methodology. Psychologists try to look at human behaviour from a range of different angles to get as complete picture as possible. As a result there are many branches of psychology and areas of interest. These have been categorised for convenience sake and are not all exclusive.
- e.g. Emotion has a physiological dimension, social dimension, personality dimension, and several more.

## COGNITIVE PSYCHOLOGY

- The general term given to higher mental activities i.e. forming concepts, using language, attending to things).
- **Wilhelm Wundt** (1862) – Studied memory, attention, and the process of thinking.
- Major areas are :
  1. **Perception** – How information is received, interpreted and understood, used and stored..
  2. **Memory** – Real-life implications such as revising for exams or remembering what happened in an accident.
  3. **Language** – forms an important part of most human activity, involving both **Cognitive** and **Social** Psychology. Language helps us to develop and communicate sophisticated concepts and ideas, playing a significant role in organising and structuring human thought.

## INDIVIDUAL PROCESSES AND ABNORMALITY

- Deals with individual differences, relying substantially on **Psychometric testing** (devising ways of measuring differences between people in a reliable, standardised way.
- Research attempts to answer :
  - What do we mean by intelligence? Is it something we can teach people?
  - How can we identify people's talents and aptitudes?
  - How can we identify jobs that people will enjoy doing and would be best at?

## INDIVIDUAL PROCESSES AND ABNORMALITY

- **Personality** – The psychoanalytic theories of **Freud**, **Skinner's** behaviourist model of personality, and the humanistic approach put forward by **Carl Rogers**, contribute to the psychological understanding of Personality.
- **Abnormal Psychology** – Developing ideas about what constitutes human personality by working directly with the concepts of normality and abnormality.

## PHYSIOLOGICAL PSYCHOLOGY

- Involves looking at how the brain and the nervous system operate, and how our experience can be affected by physiological processes and mechanisms.
- Research investigates :
  - **Stress** – Developing an understanding so that we may be better placed to cope when stress arises.
  - **Clinical Neuropsychology** - Different parts of the brain are involved in different functions; Clinical Neuropsychologists use data from people with brain damage or abnormalities to study how these different parts of the brain interact.

## SOCIAL PSYCHOLOGY

- The study of how people interact with one another and how they come to make sense of what is going on in their social worlds.
- Research areas include :
  - Non-verbal interaction
  - Conformity to social norms
  - Obedience to authority
  - Group behaviour
  - Attraction
  - Cultural beliefs
  - Developing social identities
  - Social representation

## DEVELOPMENTAL PSYCHOLOGY

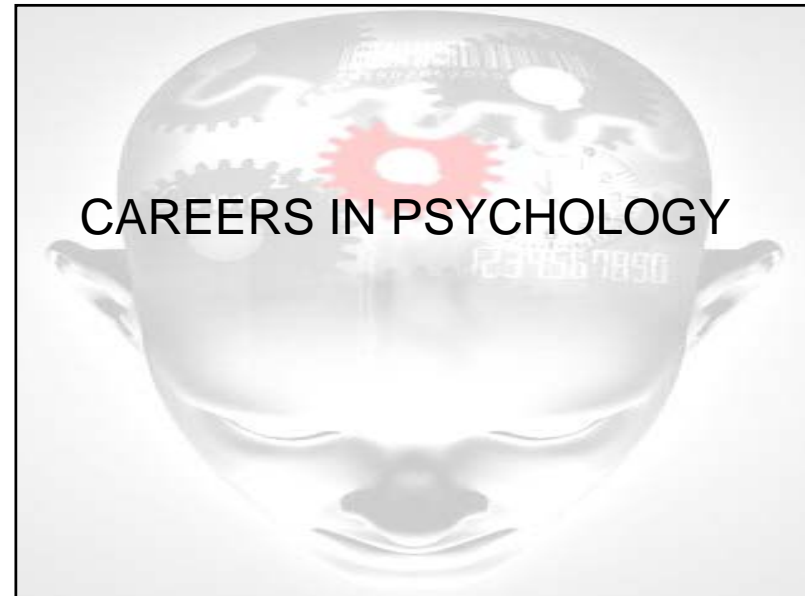
- Concerned with how people develop throughout their lives from infancy to old age. Major psychologists include **Freud** and **Piaget**
- Developmental Psychology includes branches from other fields such as :
  - Development of Intelligence
  - Development of social understanding
  - Individuals do not stop developing once they reach adolescence – they continue to develop throughout their lives. People change a great deal as they grow older, and different phases of the lifespan make different psychological demands on people.

## COMPARATIVE PSYCHOLOGY

- Involves studying animals, making comparisons between animals and human beings, or between humans and humans, in order to find out more about underlying mechanisms.
- By studying how other animals react to different stimuli, or how they learn tasks, we can find out about basic processes which human beings and animals have in common. Studies of maternal and social behaviour in higher animals too have contributed to theories about human nature.

## COMPARATIVE PSYCHOLOGY

- However, controversial :
  - Use of laboratory animals
  - Theories of aggression or sexual stereotyping.
  - The assumption made of human beings are seriously over-simplified.
- **Note** : Most Comparative psychology is now **ethological**, concerned with how animals behave in their natural environment.



## CAREERS IN PSYCHOLOGY

Psychology as a profession and a higher education subject is steadily increasing in popularity. With a psychology degree, graduates can choose from a wide range of possible careers.

### Clinical Psychologists

- From working with children with learning difficulties to counselling people with HIV/AIDS, clinical psychologists use a variety of techniques to diagnose and treat emotional and behavioural problems, often working as part of a team within the community or in hospital settings.

### Counselling Psychologists

- May work with individuals or groups, using psychological theories to enable people to overcome their problems and take control of their lives. They may be employed by general medical practitioners, large organisations or businesses, or may work privately.

## CAREERS IN PSYCHOLOGY

### Educational Psychologists

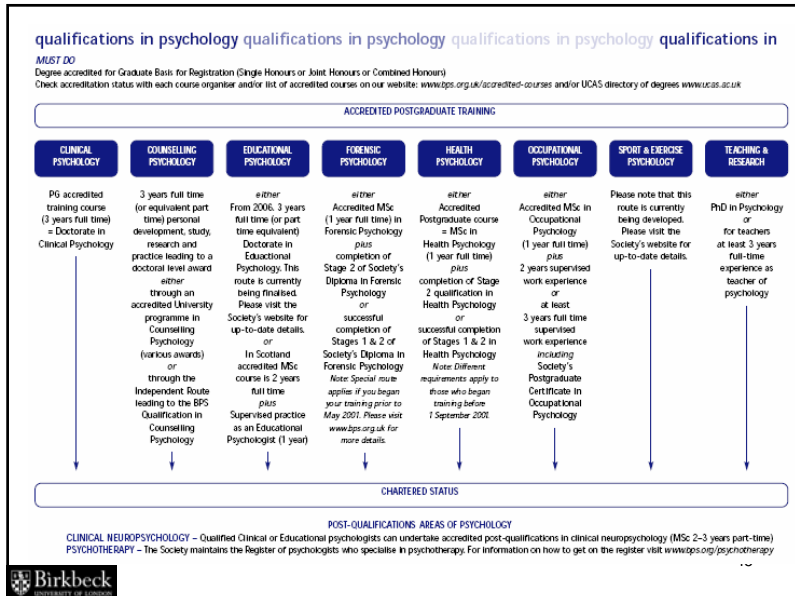
- Employed in schools, colleges, nurseries and special units to diagnose and solve learning difficulties, social or emotional problems. They can work independently or through local authorities.

### Health Psychologists

- Using psychological principles to promote healthier living. Employed in hospitals, academic health research units, health authorities and university departments.


### Occupational or Industrial Psychologists


- Work within industry, helping in selecting suitable programmes, ergonomics, and the development of health and safety strategies and procedures.



# ETHICAL CONCERNS IN PSYCHOLOGY

## What should Psychologists do to ensure that their research is ethical?






46

# ETHICAL CONCERNS IN PSYCHOLOGY


- Ethical issues become increasingly important in psychology. The key feature of ethical research with humans is voluntary informed consent, but other important features are the right to withdraw, debriefing and confidentiality.
- Special issues :
  - Clinical Therapy** – It can be very difficult to know whether a specific form of treatment should be given to a particular individual.
  - Animal Research** – Voluntary informed consent and the right to withdraw are not applicable. It is important that the likely benefits of any proposed animal research clearly outweighs the cost to the animal participants.



47

# ETHICAL CONCERNS IN PSYCHOLOGY

However, it can be hard in practice to predict ahead of time what the benefits and costs of a study are likely to be.



48

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  - Neumann, E. et al (1992) *The Origins and History of Consciousness*. Princeton University Press.
- **\*Books available at the Birkbeck library**

## Internet links

- [www.studyweb.chemek.cc.or.us](http://www.studyweb.chemek.cc.or.us) - Useful tips on time management for struggling students.
- [www.sccu.edu/programs/academic/psch/amoebaweb.html](http://www.sccu.edu/programs/academic/psch/amoebaweb.html) - Links to pages on all aspects of Psychology.
- [http://www.bps.org.uk/careers/areas/areas\\_home.cfm](http://www.bps.org.uk/careers/areas/areas_home.cfm) – BPS Career advice
- [www.york.ca/dept/psych/orgs/apa26/resource.htm](http://www.york.ca/dept/psych/orgs/apa26/resource.htm) - good links to web pages with details of the history of Psychology.
- [www.treasure-troves.com/bios/bios0.html](http://www.treasure-troves.com/bios/bios0.html) - Information on scientists with biographies and major publications listed.

## Review Questions

- What is Psychology? How does it differ from common sense?
- What were some of the key developments in the history of Psychology?
- Discuss some of the major perspectives within contemporary Psychology.
- What should Psychologists do to ensure that their research is ethical?

## Further background reading

### Psychological Perspectives :

- Free will and determinism
- Reductionism and interactionism
- Nature-Nurturer debate
- Nomothetic, idiographic and hermeneutic research