AQA Psychology AS-Level

Approaches in Psychology

Summary Notes

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Part 1 — The Learning Approach: Behaviourism

Introduction and Assumptions

The **behaviourist approach** explains behaviour as being **learned through interactions with the environment**. It focuses on **classical conditioning** and **operant conditioning**, which explain how behaviour can be acquired and maintained.

- Behaviourists only study **observable and measurable behaviour**, making the approach more **scientific**. They believed psychology should identify **general laws of behaviour** that could be objectively tested and replicated.
- Behaviourists also assume that the **same basic principles of learning apply to humans and animals**. Therefore, animals can be used in behaviourist research to investigate learning and behaviour.

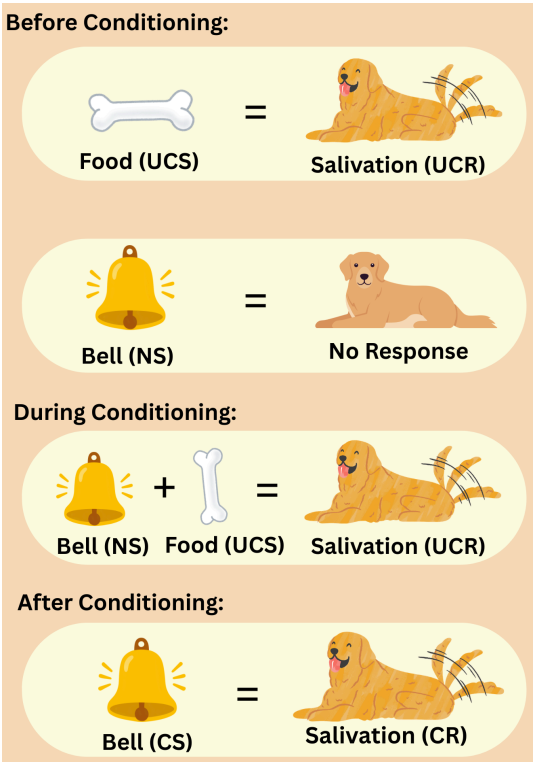
1. Classical Conditioning

Classical conditioning is learning through **association**

- Before conditioning, the unconditioned stimulus (UCS) produces the unconditioned response (UCR).
- During conditioning, the neutral stimulus (NS) is repeatedly paired with the UCS, producing an UCR.
- After conditioning, the neutral stimulus becomes the conditioned stimulus, producing the conditioned response.

Pavlov (1927) demonstrated classical conditioning by studying **salivation in dogs**.

1. **Before conditioning**, the **unconditioned stimulus (UCS)** of food naturally produced an **unconditioned response (UCR)** of salivation. The bell was a **neutral stimulus (NS)** because it did not naturally produce salivation.
2. **During conditioning**, the **neutral stimulus (NS) (i.e bell)** was repeatedly paired with the **unconditioned stimulus (UCS) (i.e food)**, producing salivation **(UCR)**.
3. Through repeated pairings, the dogs **learned an association between the bell and food**.
4. **After conditioning**, the bell became the **conditioned stimulus (CS)** and produced salivation, now called the **conditioned response (CR)**, even when no food was present.



There are several other **features of classical conditioning** that explain how conditioned responses can change over time:

- **Extinction** occurs when the **conditioned stimulus (CS)** is repeatedly presented without the **unconditioned stimulus (UCS)**, causing the **conditioned response (CR)** to gradually disappear.
- **Spontaneous recovery** occurs when an **extinguished conditioned response (CR)** returns after a period of rest.
- **Generalisation** occurs when stimuli that are **similar to the conditioned stimulus (CS)** also produce the conditioned response. For example, a dog conditioned to salivate to one bell may also salivate to bells with different pitches.

2. Operant Conditioning

Operant conditioning is learning through the **consequences of behaviour**. **Reinforcement increases** the likelihood of a behaviour being repeated, whereas **punishment decreases** the likelihood of a behaviour being repeated.

There are two types of reinforcement: **positive reinforcement** and **negative reinforcement**. Both **increase behaviour**, but they do this in different ways.

Positive reinforcement	Negative reinforcement
Adds something pleasant after a behaviour	**Removes or avoids** something unpleasant after a behaviour
Increases the likelihood of the behaviour being repeated	**Increases** the likelihood of the behaviour being repeated
Example: completing homework → receives praise	**Example:** completing homework → avoids detention
Skinner's Box (1938): Investigated **positive reinforcement** using a **Skinner box**. • Placed rats in a **Skinner box** containing a lever and food dispenser. • When a rat accidentally pressed the lever, **food was released**. • Over time, the rats learned to press the lever more frequently because the behaviour was **positively reinforced** by food. This demonstrated **positive reinforcement** because the **addition of food** increased	**Skinner's Box (1938):** Investigated **negative reinforcement** using a **Skinner box**. • Rats were placed in a box where they could receive an **electric shock**. • When the rat pressed a lever, the **electric shock stopped**. • Over time, the rats learned to press the lever more frequently because pressing the lever **removed the unpleasant stimulus**. This demonstrated **negative reinforcement** because the removal of the electric shock

the likelihood of the rat **pressing the lever again**.	**increased the likelihood** of the rat pressing the lever again.

Skinner (1948) - Pigeon study

- **Skinner** placed **pigeons in a Skinner box** and used **food as positive reinforcement**.
- He gradually reinforced behaviours that became closer to the desired behaviour such as **turning in circles and pecking a disc**, using **successive approximation** to shape the pigeons' behaviour.
- The pigeons could therefore be trained to perform **complex behaviours**, demonstrating that behaviour can be **shaped through reinforcement**.

AO3 - EVALUATION

A strength of the behaviourist approach is that it uses **highly controlled and objective research methods**. Behaviourists often use **laboratory experiments**, where extraneous variables can be carefully controlled, making it easier to establish **cause-and-effect relationships**. The use of standardised procedures also means that studies can be **replicated** to check whether the same findings are obtained again, increasing the **reliability** of the evidence. In addition, behaviour is directly **observable and measurable**, reducing the risk of subjective interpretation by researchers. Therefore, the behaviourist approach has strong **scientific credibility**, increasing the **validity** of its explanations of behaviour.

Another strength of the behaviourist approach is that it has **led to effective treatments**. For example, **systematic desensitisation** uses **classical conditioning** to gradually replace the learned association between a **phobic stimulus and fear** with a more positive response. By repeatedly exposing the person to the phobic stimulus while they remain relaxed, the original fear response is gradually **extinguished**, helping people to manage their phobias. This can help people manage their phobias and return to everyday activities, such as **work or education**, that they may have previously avoided. Therefore, the behaviourist approach has **practical usefulness**, as its principles can be used to successfully change behaviour and improve people's lives.

A weakness of the behaviourist approach is that it is **environmentally deterministic**. This may be an oversimplification because the same behaviour can have other causes. For example, **phobias** can be explained through **classical conditioning**, but the **biological approach** suggests that some people may have a **genetic predisposition** to developing fears, meaning their genes may make them more vulnerable to developing a phobia. This means that focusing only on environmental learning may overlook other important influences on behaviour. Therefore, the behaviourist approach may provide an **incomplete explanation** of human behaviour.

Another weakness of the behaviourist approach is that much of its evidence comes from **non-human animals**. For example, **Pavlov** studied dogs in his research into **classical conditioning**, while **Skinner** used rats and pigeons to investigate **operant conditioning**. Although these studies provide evidence that conditioning can influence behaviour, it may be difficult to **generalise the findings to humans** because humans have more complex **cognitive processes and social influences**. Therefore, research based mainly on animals may have **limited generalisability**, reducing the validity of behaviourism as an explanation of human behaviour.

Part 2 — The Learning Approach: Social Learning Theory

Introduction and Assumptions:

Social learning theory (SLT) suggests that behaviour can be learned **directly through classical and operant conditioning** and **indirectly through observing and imitating others**. Unlike behaviourism, SLT recognises that **cognitive processes** influence whether an observed behaviour is actually imitated.

Three key concepts explain learning through observation: **imitation, identification and vicarious reinforcement**.

Imitation	The process of **copying the behaviour of a role model**. An individual is more likely to imitate a role model they **identify with**, particularly when they observe the role model being **vicariously reinforced** for the behaviour.
Identification	Occurs when an observer **relates to a role model and wants to be more like them**, making them more likely to imitate their behaviour.
Vicarious reinforcement	An **indirect form** of learning where an individual observes the consequences of a role model's behaviour. If the model is **rewarded**, this **increases the likelihood** that the observer will imitate the behaviour in anticipation of a similar reward.

Learning through observation does not automatically mean that a behaviour will be imitated. SLT suggests that **cognitive processes**, known as **mediational processes**, influence whether the observed behaviour is actually reproduced.

Mediational Processes

SLT suggests that **mediational processes** are cognitive processes that occur between **observing a behaviour and imitating it**. There are four:

1. **Attention** – the observer must **notice the behaviour**.
2. **Retention** – the observer must **remember the behaviour**.
3. **Motor reproduction** – the observer must have the **ability to perform the behaviour**.
4. **Motivation** – the observer must have a **reason to reproduce the behaviour**, such as expecting a reward.

The first two processes, **attention and retention**, occur during **observation**, while **motor reproduction and motivation** influence whether the behaviour is actually **performed**. Therefore, **learning can occur without immediate imitation**.

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Bandura's Bobo Doll Study (1961)

Aim	To investigate whether children would **imitate aggressive behaviour** after observing an **aggressive adult role model**.
Participants	**72 children** aged 3–6 years from the Stanford University nursery school
Procedure	• The children were divided into **three groups**: an **aggressive model**, a **non-aggressive model** and a **control group**. • In the **aggressive condition**, children watched an adult behave aggressively towards a **Bobo doll**, including hitting it with a mallet and using aggressive language. • In the **non-aggressive condition**, children watched an adult behave **calmly** towards the toys. • The children were then placed in a room containing the **Bobo doll and other toys** and observed for their behaviour.
Findings	Children who observed the **aggressive model showed more aggressive behaviour** and were more likely to **imitate the specific aggressive behaviours** they had observed. **Boys were generally more physically aggressive than girls**.
Conclusion	Children can **learn behaviour through observation and imitation**, without directly experiencing reinforcement. This supports **social learning theory** and the importance of **role models** in learning behaviour.



Bobo Doll Deneyi — Okhanm — CC BY-SA 4.0 — Wikimedia Commons

Bandura also investigated the role of vicarious reinforcement, looking at whether seeing a role model being **rewarded or punished** for a behaviour would affect whether an observer later imitated that behaviour.

Bandura (1965) – Vicarious Reinforcement Study

Aim	To investigate whether the **consequences experienced** by a role model **affect children's imitation** of aggressive behaviour.
Participants	**66 children** aged **3–5 years**, including **33 boys and 33 girls**, from the Stanford University nursery school.
Procedure	The children watched a film of an adult behaving **aggressively towards a Bobo doll**. They were divided into three conditions i. The model was **rewarded** ii. **Punished** iii. Received **no consequence** for the aggressive behaviour. The children were then placed in a room with a **Bobo doll and other toys** and observed for aggressive behaviour.
Findings	Children who saw the model being **punished showed less aggressive imitation** than those who saw the model being rewarded or receiving no consequence. However, when all children were **offered a reward for reproducing the behaviour**, children in all three groups were able to imitate the aggressive behaviour.
Conclusion	Children can **learn behaviour without immediately performing it**. Seeing a model being **rewarded or punished** affects the observer's **motivation** to reproduce the behaviour, supporting **vicarious reinforcement** and the role of **mediational processes** in SLT.

Revision Tip: You can use both of Bandura's studies as AO3 for research support!

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AO3 - EVALUATION

A strength of social learning theory is that it **recognises the role of cognitive processes** in learning. Unlike the behaviourist approach, SLT argues that people do not simply respond automatically to their environment but use **mediational processes** such as attention, retention and motivation to decide whether to imitate a behaviour. This makes SLT a more **complete explanation of human behaviour**, as people can think about what they observe and consider the possible consequences before deciding whether to copy it. Therefore, SLT has greater **explanatory power** than behaviourism because it recognises that humans are active participants in their own learning.

Another strength of **social learning theory** is that it is supported by **research evidence**. **Bandura (1965)** found that children were more likely to imitate aggressive behaviour when they had observed an adult model being **rewarded** for the behaviour. However, when the children were later offered a reward themselves, those who had previously seen the model being punished also reproduced the aggressive behaviour. This supports the idea that **vicarious reinforcement influences performance** and that people can **learn behaviour without directly experiencing reinforcement themselves**. Therefore, the research provides support for a key explanation within SLT.

A strength of social learning theory is that it has **real-world applications** in understanding aggressive behaviour. If a child displays **aggressive behaviour**, SLT suggests that this may have been learned through **observing and imitating aggressive role models**, such as parents, siblings or people in the media. This could raise concerns about the child's **environment and the behaviour they have been exposed to**. Identifying these role models could help adults intervene by providing the child with **more positive role models** and reducing their exposure to aggressive behaviour. Therefore, SLT can be useful in **understanding and managing aggressive behaviour** in real-world settings.

A weakness of SLT is that it may **underestimate the role of biological factors** in behaviour. **Bandura** found that **boys showed more physical and imitative aggression than girls**, but SLT would largely explain this through differences in **modelling, identification and social experiences**. However, biological factors such as **testosterone** may also contribute to differences in aggression. This suggests that behaviour cannot always be explained by what we observe and learn from others, as our **biology may interact with environmental influences**. Therefore, SLT may not provide a **complete explanation of behaviour**, reducing its overall validity.

Another weakness of SLT is that much of its supporting evidence comes from **artificial laboratory research**, particularly Bandura's Bobo doll study. The children were asked to interact with a **doll specifically designed to be hit**, meaning their behaviour may not represent how they would behave towards a real person in everyday life. Children may also have guessed that the researchers wanted them to copy the adult model, creating **demand characteristics**. Therefore, although Bandura's research provides evidence that children can imitate observed behaviour, it may not demonstrate that observing aggressive models causes **real-life aggression**, reducing the **ecological validity and generalisability**.

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Part 3 — The Cognitive Approach

Introduction and Assumptions

The **cognitive approach** explains behaviour by focusing on **internal mental processes**, such as memory, perception and thinking.

- Cognitive psychologists assume that mental processes can be **studied scientifically**, even though they cannot be directly observed. Instead, psychologists make **inferences** about mental processes based on **observable behaviour**.
- Much of cognitive psychology therefore involves the **indirect measurement of mental processes**.

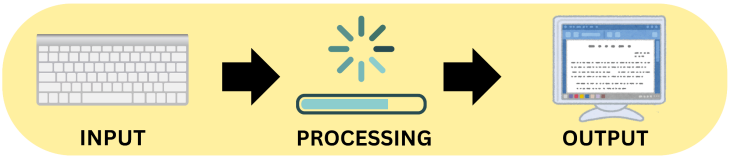
1. Use of Models

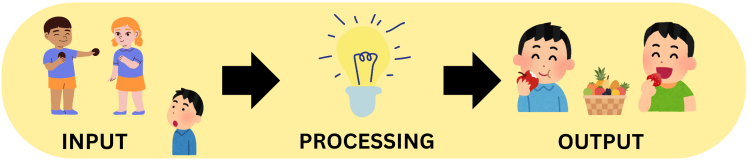
Cognitive psychologists use **models** to simplify and explain complex **mental processes** and make inferences about how they work.

Theoretical models are simplified representations of how a mental process works. For example, the **Working Memory Model** is a suggestion of how Short-Term Memory (STM) may work, using the **central executive, phonological loop, visuo-spatial sketchpad and episodic buffer**.

The cognitive approach also uses the **computer analogy**, which compares the way the mind processes information with the way a computer processes information:

Computer	Human cognition
Encoding information	The mind **encodes/interprets information** from the environment
Hard drive stores information	**Long-term memory** stores information
RAM temporarily holds information being used	**Working/short-term memory** temporarily holds information being processed
Output produces information such as text or images	The mind produces **speech, behaviour or thoughts**





The development of computers during the **1960s** was important to cognitive psychology because computers provided a useful **analogy for understanding how the mind processes information**.

2. Schemas

Schemas are organised **packages of knowledge and information** about people, objects, places or situations. They develop through **experience** and become more **sophisticated** over time.

Schemas help us process information:

- They act as **mental frameworks**, helping us organise and interpret information.
- They also act as **mental shortcuts**, allowing us to process information **quickly and efficiently** without considering every piece of information individually.

However, schemas can cause errors:

- Schemas contain our **existing expectations**, which can **distort our perception**.
- We may interpret new information according to what we **already expect** rather than what is actually happening.

For example:

A child has developed a schema that **dogs are dangerous**. When they see a **friendly dog wagging its tail**, they may interpret the dog as a threat. Their existing schema influences how they **perceive and interpret** the situation, even though the dog is not actually dangerous.

AO3 - EVALUATION

A strength of the cognitive approach is that it provides a detailed explanation of **complex human behaviour**. Unlike approaches that focus mainly on observable behaviour, the cognitive approach considers how **internal mental processes**, such as memory, perception and thinking, influence behaviour. This allows psychologists to explain why people can respond differently to the **same situation**, depending on how they interpret and process information. Therefore, the cognitive approach has strong **explanatory value**, as it provides a more detailed understanding of how mental processes influence behaviour.

Another strength of the cognitive approach is that it has **led to useful real-world applications**. For example, research into **memory and eyewitness testimony** has contributed to the development of the **cognitive interview**, which helps police obtain more accurate information from witnesses reducing incorrect incarceration rates. Cognitive research has also contributed to **CBT**, which uses an understanding of dysfunctional thinking to help treat psychological disorders. Therefore, the cognitive approach has **practical usefulness**, as its understanding of mental processes can be applied to improve people's lives and solve real-world problems.

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A weakness of the cognitive approach is that its **computer analogy may be too simplistic**. Cognitive psychologists often compare the mind to a computer, with information being **input, processed and output**, but humans are influenced by factors such as **emotion, motivation and social context** that a computer does not experience. For example, **anxiety can affect memory**, showing that human information processing is not always as consistent and predictable as a computer. Therefore, comparing the mind to a computer may be an example of **machine reductionism**, meaning the approach may oversimplify the complexity of human cognition and reduce its **validity**.

A further weakness of the cognitive approach is that **internal mental processes cannot be directly observed**. Instead, psychologists have to make **inferences** about what is happening in the mind based on observable behaviour, such as a person's responses or performance on a memory task. This means the same behaviour could potentially be explained by different mental processes, so psychologists cannot be completely certain that their explanation accurately represents what is happening inside the mind. Therefore, the cognitive approach may lack **validity**, as some of its explanations are based on **inference rather than direct observation**.

Another weakness of the cognitive approach is that much of its research is conducted using **artificial laboratory tasks**. Participants may be asked to complete simple tasks, such as remembering lists of words, which may not reflect how people use cognitive processes in **everyday life**. This means that findings from these studies may not always **generalise to real-world behaviour**, as people are likely to think and behave differently in more natural situations. Therefore, the cognitive approach may have **limited ecological validity**, reducing the extent to which its findings can be applied to everyday behaviour.

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Part 4 — The Biological Approach

Introduction and Assumptions

The **biological approach** explains behaviour in terms of **biological processes** within the body. It assumes that humans are **biological organisms**, meaning that our thoughts, emotions and behaviour have a **physical basis**.

Therefore, biological psychologists investigate how **genes, biological structures and neurochemistry** influence behaviour.

1. Genetic Basis of Behaviour

A) Genotype and Phenotype

Genotype	An individual's **genetic make-up,** including the genes they inherit from their parents.
Phenotype	An individual's **observable characteristics,** which develop through an interaction between their genes and **environment**.

A person's **phenotype** develops through an interaction between their **genotype and environment**. This means that genes can **influence behaviour** without completely determining it.

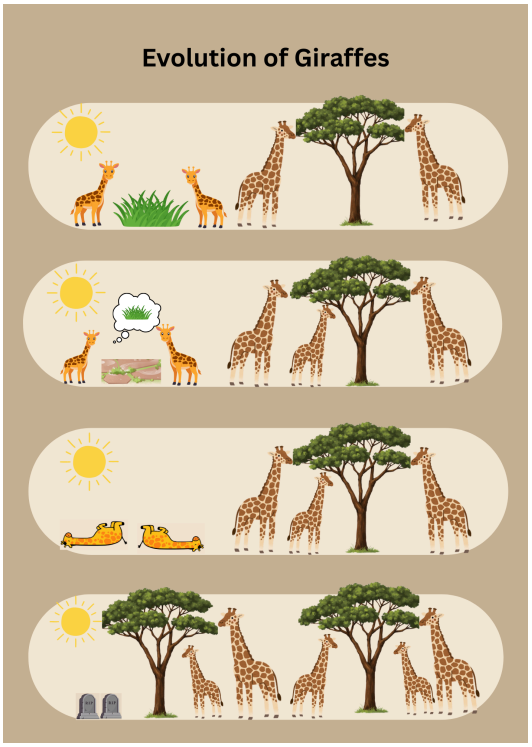
Example: Someone may have genes for **brown hair**, but choose to **dye their hair blonde**. Their genes have not changed, but their observable **phenotype** has been changed by their environment.

B) Evolution

Evolution is the process by which species **change over generations** as a result of changes in inherited characteristics. **Natural selection** is the mechanism through which evolution occurs.

How natural selection works:

1. An individual has an **inherited characteristic**.
2. The characteristic provides a **survival or reproductive advantage**.
3. The individual is more likely to **survive and reproduce**.
4. The characteristic is **passed on to offspring**.
5. Over generations, the characteristic becomes **more common** in the population.



Example: Giraffes naturally varied in **neck length**, with some having longer necks and others having shorter

necks. When food was scarce, the **short-necked giraffes** struggled to reach enough food and were more likely to die. Giraffes with **longer necks** were more likely to survive and reproduce, passing their genes for longer necks to their offspring. Over many generations, **longer necks became more common** in the population.

2. Biological Structures and Neurochemistry

A) Biological Structures

Biological structures are the physical parts of the body that play a role in behaviour and mental processes. The biological approach considers how these structures and systems influence the way we think, feel and behave.

Biological structure	What is it?	Role in behaviour
Nervous system	The body's main **communication and control system**. It is made up of the **CNS and PNS** and uses electrical signals to communicate information around the body.	Receives information from the **environment and body**, processes it and coordinates responses. This allows us to **sense, think and respond** to situations.
CNS	The **central nervous system** consists of the **brain and spinal cord**. It is the main processing and control centre of the nervous system.	Processes information received from the body and environment and coordinates **responses and behaviour**. The brain is also involved in **mental processes** such as memory, emotion and decision-making.
PNS	The **peripheral nervous system** consists of nerves outside the brain and spinal cord. It connects the **CNS to the rest of the body**.	Carries information **to the CNS** from sensory receptors and carries instructions **from the CNS** to muscles and organs. This allows us to **respond to our environment**.
Neurons	**Neurons** are specialised cells that make up the nervous system. They are responsible for **receiving and transmitting information**.	Neurons communicate using **electrical impulses** and **neurotransmitters**. This communication allows information to be processed and passed around the body, influencing **behaviour and mental processes**.
Endocrine system	The **endocrine system** is made up of **glands** that release **hormones** into the bloodstream. Hormones act as chemical messengers that travel to target organs and tissues.	Hormones regulate processes such as **growth, metabolism and reproduction**, and can influence **mood, behaviour and responses to stress**. For example, adrenaline prepares the body to respond to a threat.

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B) Neurochemistry

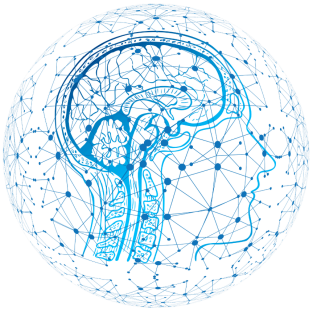
Neurotransmitters are chemical messengers that allow neurons to **communicate with one another**.

- Different neurotransmitters can have different effects on **brain activity**.
- Changes in neurotransmitter activity can therefore influence **thoughts, emotions and behaviour**.

Serotonin, for example, is a neurotransmitter involved in regulating **mood and emotions**. Research has linked **serotonin activity** to psychological disorders such as Depression and OCD. This understanding has contributed to treatments such as **SSRIs** which increase the availability of **serotonin** in the brain and can help to **reduce symptoms**.

Understanding **neurochemistry** has therefore contributed to the development of **drug treatments** for psychological disorders.

3. Cognitive Neuroscience



Cognitive neuroscience is the study of the **biological processes underlying cognitive processes**, including the brain areas involved in thinking, memory and language.

The development of cognitive neuroscience can be understood through three stages:

1. **Brain mapping – 1870s: Wernicke (1874)** studied patients with language difficulties and found that damage to a particular area of the brain was associated with problems understanding language. This provided early evidence for **localisation of brain function**.
2. **Using brain-scanning technology:** Advances in technology allowed researchers to **objectively measure brain activity**. For example, **Petersen et al. (1988)** used PET scans to investigate which areas of the brain were active during different language tasks.
3. **Modern cognitive neuroscience:** Cognitive neuroscience has expanded to investigate the **biological basis of a wide range of cognitive processes and conditions**. For example, researchers investigate how differences in **brain structure and functioning** may be linked to conditions such as **Alzheimer's disease, ADHD and dyslexia**.

This ability to **measure brain activity** can be useful in everyday life, such as helping us understand how the brain **learns and stores information**, which can be applied to **education, revision and learning techniques**.

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AO3 - EVALUATION

A strength of the biological approach is that it has **led to effective drug treatments**. An increased understanding of **neurotransmitters and brain chemistry** has allowed drugs to be developed that alter biological processes linked to psychological disorders. For example, **SSRIs (selective serotonin reuptake inhibitors)** increase the availability of **serotonin** in the brain and can be used to reduce symptoms of **OCD.** Drug treatments can also require less **time and effort from patients** than therapies such as CBT, as they do not require regular therapy sessions or the same level of motivation. Therefore, the biological approach has **practical usefulness**, as understanding the biological causes of disorders has led to treatments that can improve people's lives.

A further strength of the biological approach is that it uses **highly scientific and objective research methods**. Techniques such as **EEG, PET and fMRI scans** allow researchers to objectively measure **brain activity and biological processes**, while twin and adoption studies provide quantitative evidence about the **genetic basis of behaviour**. These methods produce measurable data and can use standardised procedures, making findings more **reliable and replicable**. Therefore, the biological approach has strong **scientific credibility**, increasing confidence in its explanations of behaviour.

A weakness of the biological approach is that it is **biologically deterministic.** The approach suggests that behaviour is influenced by internal biological factors such as **genes, hormones and neurotransmitters**, which can imply that people have limited **free will or control** over their behaviour. This can create problems when considering **personal responsibility**. For example, if someone seriously harmed another person and evidence suggested that their behaviour was strongly influenced by their **genes**, they could argue that they had little control over their actions and therefore should not be held fully responsible in court. This raises important questions about whether people should be held accountable for behaviour that may be partly **biologically determined**. Therefore, biological determinism may be too **inflexible**, as it can underestimate the role of **free will** in human behaviour.

Another weakness of the biological approach is that **twin studies cannot completely separate genetic and environmental influences**. Identical (**MZ**) twins share 100% of their genes, so higher concordance rates than non-identical (**DZ**) twins are often taken as evidence for a genetic influence. However, MZ twins are also more likely to experience **similar environments**, such as being raised in the same home and receiving similar treatment from parents. Therefore, differences in concordance may partly be due to **shared environmental experiences**, rather than genes alone. This means twin studies do not provide conclusive evidence that behaviour is caused by genetics, suggesting that an **interactionist approach** which considers both nature and nurture may provide a more complete explanation.

A further weakness of the biological approach is that it can be **biologically reductionist**. The approach explains complex human behaviour by reducing it to **genes, brain structures and neurochemical processes**. However, behaviour is influenced by many interacting factors, including **cognitive, psychological and environmental factors**. For example, depression may involve biological changes, but stressful life experiences can also contribute to its development. Therefore, reducing behaviour to biological processes may **oversimplify human behaviour**, meaning the approach may lack **explanatory completeness**.

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