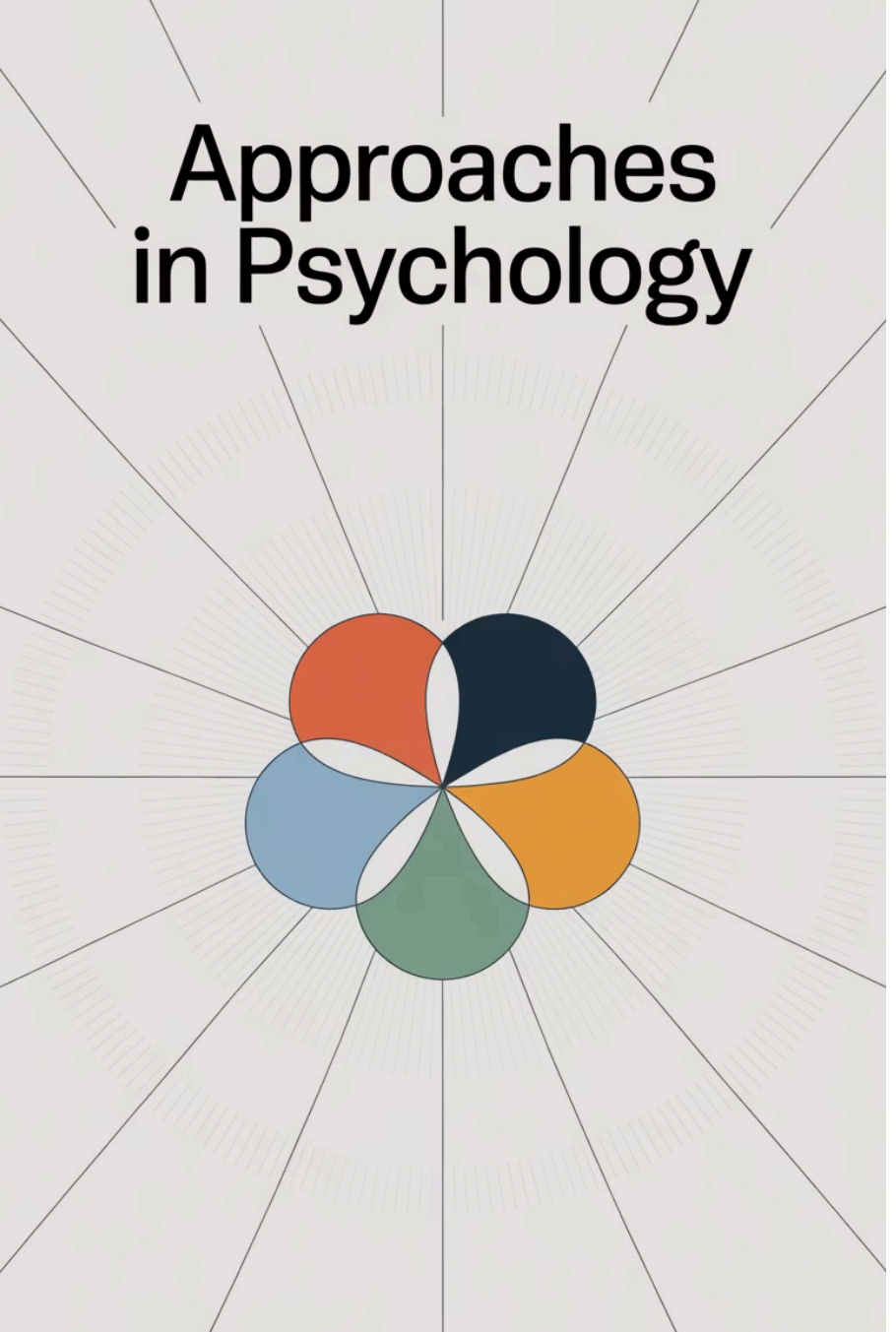


Approaches in Psychology

Welcome to this comprehensive exploration of the major theoretical approaches in psychology. Throughout this presentation, we will examine the origins of psychology as a scientific discipline and delve into the various perspectives that have shaped our understanding of human behaviour and mental processes. From the early introspective methods of Wilhelm Wundt to modern cognitive neuroscience, we'll investigate how different approaches have contributed to the rich tapestry of psychological theory and practice. This presentation follows the AQA A-level specification in psychology, providing you with essential knowledge and critical insights into these foundational concepts.

by Stephen Renwick

Origins of Psychology

Psychology's journey as a distinct scientific discipline began in 1879 when Wilhelm Wundt established the first formal laboratory dedicated to psychological research in Leipzig, Germany. This pivotal moment marked psychology's transition from philosophical speculation to empirical investigation.

Wundt pioneered the method of **introspection**, a systematic approach where trained participants would report their conscious experiences in response to stimuli under controlled conditions. Through this method, Wundt sought to identify the basic elements of consciousness and understand how these elements combined to form more complex experiences.

Wundt's approach, often termed **structuralism**, aimed to break down mental processes into their fundamental components. This represented the first attempt to apply scientific methodology to the study of mental phenomena, establishing psychology as a discipline distinct from philosophy and physiology.

The emergence of psychology as a science faced significant challenges. Critics questioned whether subjective experiences could be studied objectively, highlighting the limitations of introspection. Despite these criticisms, Wundt's work laid crucial groundwork for future psychological inquiry and established important methodological principles that would influence the field's development.

This scientific foundation would eventually give rise to multiple competing perspectives, each offering unique insights into human behaviour and mental processes, and establishing the rich theoretical diversity that characterises modern psychology.

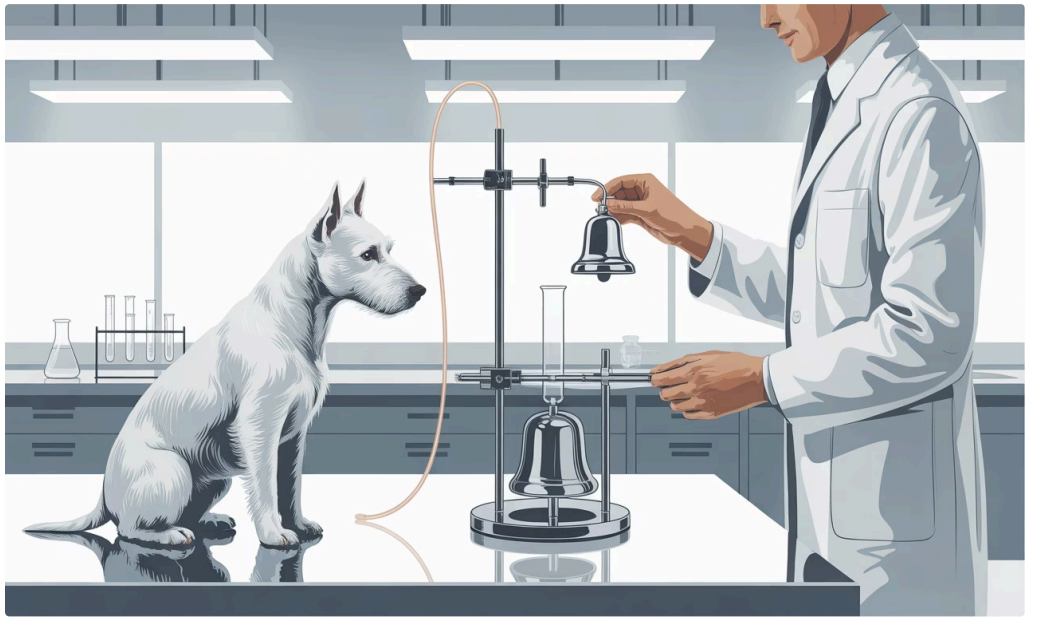
The Behaviourist Approach: Classical Conditioning

The behaviourist approach emerged as a reaction against introspection, proposing that psychology should focus exclusively on observable behaviour rather than unobservable mental processes. John B. Watson, a key proponent, argued that psychology should concern itself with predicting and controlling behaviour, not with consciousness or mental states.

Classical conditioning, first systematically studied by Ivan Pavlov, represents one of the fundamental learning processes identified by behaviourists. Pavlov's famous experiments with dogs demonstrated how a neutral stimulus (bell) could become associated with an unconditioned stimulus (food) that naturally elicits an unconditioned response (salivation). After repeated pairings, the previously neutral stimulus becomes a conditioned stimulus capable of eliciting a conditioned response (salivation) similar to the unconditioned response.

Key components of classical conditioning include:

- Unconditioned stimulus (UCS): A stimulus that naturally and automatically triggers a response
- Unconditioned response (UCR): The natural, unlearned response to the UCS
- Conditioned stimulus (CS): A previously neutral stimulus that, after association with the UCS, comes to trigger a conditioned response
- Conditioned response (CR): The learned response to the previously neutral, now conditioned stimulus



Pavlov's research identified several important phenomena in classical conditioning:

- **Acquisition**: The initial stage of learning when the CS-UCS association is established
- **Extinction**: The gradual disappearance of the conditioned response when the CS is repeatedly presented without the UCS
- **Spontaneous recovery**: The reappearance of an extinguished CR after a rest period
- **Stimulus generalisation**: The tendency for stimuli similar to the CS to elicit the CR
- **Stimulus discrimination**: The ability to differentiate between the CS and similar stimuli

Classical conditioning has significant real-world applications, including understanding and treating phobias, explaining advertising effects, and developing behavioural interventions for various psychological conditions.

The Behaviourist Approach: Operant Conditioning

B.F. Skinner's Contributions

Building on Thorndike's Law of Effect, B.F. Skinner developed operant conditioning theory, focusing on how consequences shape voluntary behaviour. Using the "Skinner Box," he demonstrated how reinforcement and punishment influence the likelihood of behaviour repetition.

Types of Reinforcement

Positive reinforcement: Adding a desirable stimulus to increase behaviour (e.g., praise, rewards)

Negative reinforcement: Removing an aversive stimulus to increase behaviour (e.g., taking painkillers to remove headache)

Both types strengthen behaviour but through different mechanisms.

Types of Punishment

Positive punishment: Adding an aversive stimulus to decrease behaviour (e.g., penalties)

Negative punishment: Removing a desirable stimulus to decrease behaviour (e.g., time-out, privilege removal)

Both types weaken behaviour but may have different side effects.

Skinner's research identified several important schedules of reinforcement that affect response patterns:

- **Continuous reinforcement**: Reinforcing every correct response (fastest acquisition but most vulnerable to extinction)
- **Fixed ratio**: Reinforcement after a set number of responses (creates high, steady response rates with post-reinforcement pauses)
- **Variable ratio**: Reinforcement after an unpredictable number of responses (creates high, steady response rates resistant to extinction)
- **Fixed interval**: Reinforcement after a set time period (creates scalloped pattern of responding)
- **Variable interval**: Reinforcement after varying time periods (creates moderate, steady response rates)

Operant conditioning principles have been widely applied in educational settings, behaviour modification programmes, token economies, and clinical interventions for various psychological disorders. However, critics argue that this approach oversimplifies complex human behaviour and neglects cognitive and biological factors.

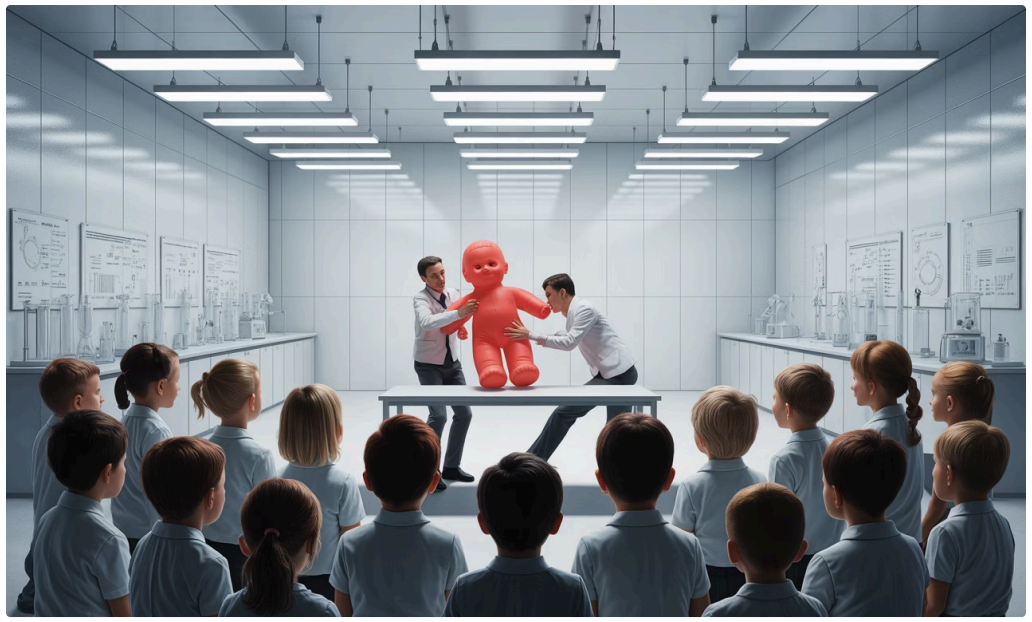
Social Learning Theory

Social Learning Theory (SLT), developed primarily by Albert Bandura, bridges behaviourist and cognitive approaches by recognising that learning occurs within a social context through observation. Unlike strict behaviourism, SLT acknowledges the importance of mental processes in learning.

The theory proposes that individuals learn not only through direct experience but also by observing others' behaviours and their consequences—a process called **observational learning** or **modelling**. This explains how complex behaviours can be acquired without direct reinforcement.

Key concepts in Social Learning Theory include:

- **Imitation**: The direct copying of observed behaviour
- **Identification**: Adopting observed behaviours because one relates to or wants to be like the model
- **Modelling**: The process by which observed behaviour serves as a guide for similar behaviour
- **Vicarious reinforcement**: Learning through observing the consequences experienced by others



Bandura's famous Bobo doll experiments demonstrated these principles. Children who observed adults behaving aggressively toward an inflatable doll were more likely to display similar aggressive behaviours themselves, especially when they saw the model rewarded.

SLT emphasises the role of **mediational processes** that intervene between stimulus and response:

- **Attention**: Observers must attend to the model's behaviour
- **Retention**: The behaviour must be remembered
- **Reproduction**: The observer must be physically capable of reproducing the behaviour
- **Motivation**: There must be incentive or reason to imitate the behaviour

Bandura later expanded his theory to emphasise **self-efficacy**—one's belief in their ability to succeed in specific situations—highlighting the interaction between behaviour, environment, and personal factors (triadic reciprocal determinism).

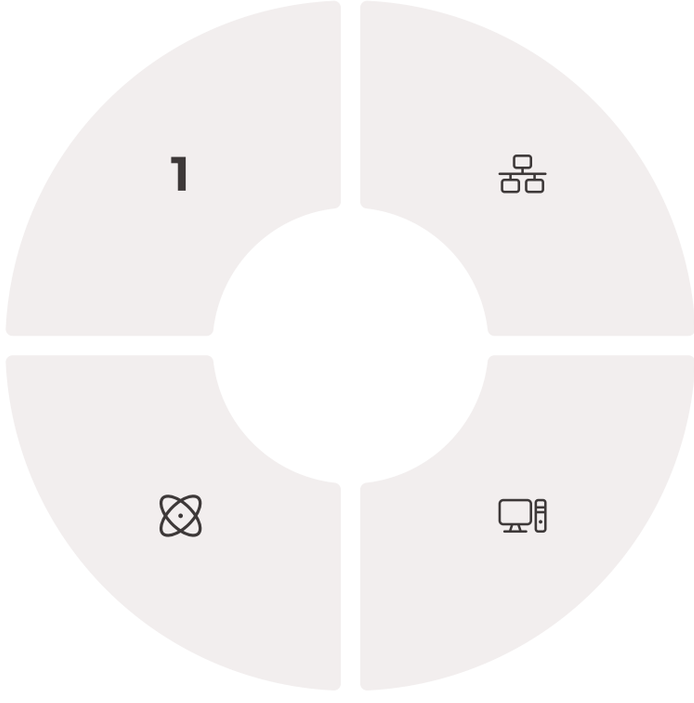
The Cognitive Approach

Internal Mental Processes

The cognitive approach focuses on how people perceive, process, store, and retrieve information. It emerged in the 1950s and 1960s as a reaction against behaviourism's neglect of mental processes. This approach treats the mind as an information processor, similar to a computer, with inputs, processing, and outputs.

Cognitive Neuroscience

This emerging field combines cognitive psychology with neuroscience to understand the neural basis of cognitive processes. Using techniques like fMRI and EEG, researchers can observe brain activity during cognitive tasks, linking mental processes to specific brain regions and networks.



Schema Theory

Schemas are mental frameworks that help organise and interpret information. They represent knowledge about concepts, objects, events, and social situations. Schemas influence attention, encoding, and retrieval of information, often leading to biased processing that confirms existing beliefs.

Theoretical Models

Cognitive psychologists develop theoretical models to explain mental processes like memory (e.g., multi-store model), attention, and decision-making. These models make predictions about behaviour that can be tested experimentally, allowing inferences about unobservable mental processes.

The cognitive approach has revolutionised psychology by reintroducing mental processes as legitimate subjects for scientific study. It has led to significant advances in understanding memory, language, problem-solving, and decision-making. Cognitive theories have practical applications in education, clinical psychology (e.g., cognitive-behavioural therapy), artificial intelligence, and human-computer interaction.

However, critics argue that the computer analogy oversimplifies human cognition, which is more flexible and context-dependent than computer processing. Additionally, the approach has been criticised for sometimes neglecting emotional and motivational factors that influence cognition, though modern cognitive psychology increasingly integrates these aspects.

The Biological Approach: Genetic Influences

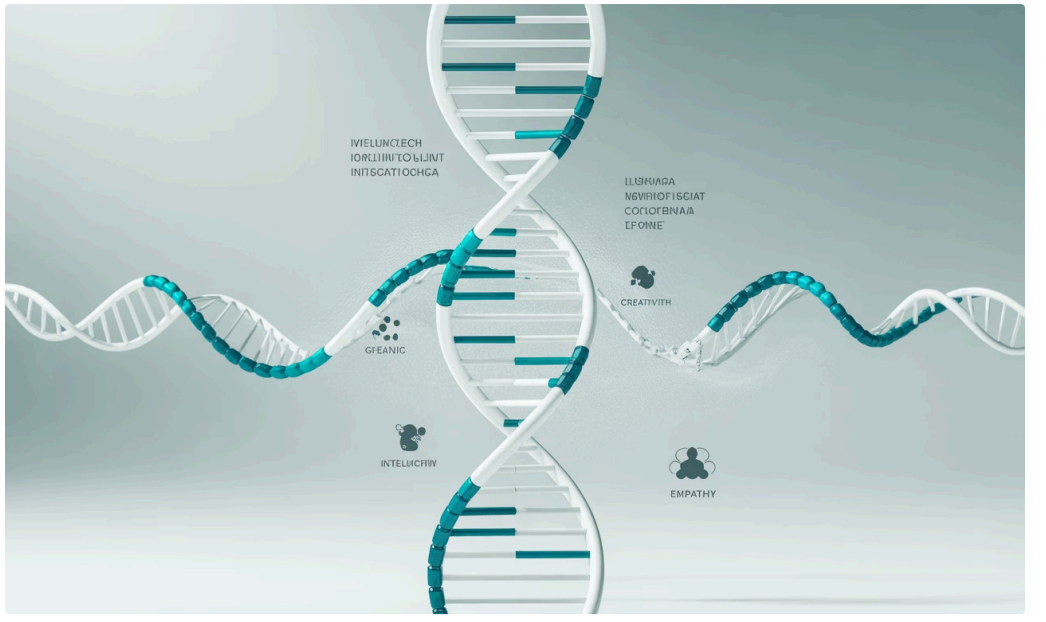
The biological approach emphasises the physical basis of behaviour, focusing on how genes, the nervous system, hormones, and brain chemistry influence our thoughts, feelings, and actions. This perspective views psychological phenomena as products of biological processes, particularly brain function.

Genetic influences on behaviour are a central focus of the biological approach. Key concepts include:

- **Genotype**: An organism's genetic makeup, the complete set of genes inherited from parents
- **Phenotype**: Observable characteristics resulting from the interaction between genotype and environment
- **Heritability**: The proportion of phenotypic variation in a population attributable to genetic variation

Research methods used to study genetic influences include:

- **Twin studies**: Comparing concordance rates between monozygotic (identical) and dizygotic (fraternal) twins
- **Adoption studies**: Examining similarities between adopted children and their biological versus adoptive parents
- **Family studies**: Investigating the prevalence of traits across family members



Evidence suggests that many psychological characteristics and disorders have significant genetic components, including:

- Intelligence (heritability estimates of 50-80%)
- Personality traits (40-60% heritable)
- Schizophrenia (approximately 80% heritability)
- Bipolar disorder (70-90% heritability)
- Autism spectrum disorders (highly heritable)

However, most psychological characteristics involve complex polygenic inheritance (multiple genes) rather than simple Mendelian patterns. Additionally, epigenetic mechanisms—changes in gene expression without alterations to the DNA sequence—can be influenced by environmental factors, highlighting the complex interplay between nature and nurture.

The field of behavioural genetics continues to advance our understanding of how genes influence behaviour, though researchers emphasise that genetic predispositions typically interact with environmental factors rather than determining outcomes absolutely.

The Biological Approach: Neural and Evolutionary Factors

Neuroanatomy

The structure of the brain and nervous system plays a crucial role in behaviour. Key structures include the cerebral cortex (higher cognitive functions), limbic system (emotion), hypothalamus (homeostasis and motivation), and brainstem (basic life functions). Damage to specific brain regions produces predictable behavioural changes, supporting the link between brain structure and function.

Neurochemistry

Chemical messengers in the brain, particularly neurotransmitters, significantly influence behaviour and mental processes. For example, dopamine is associated with reward and motivation, serotonin with mood regulation, and noradrenaline with arousal. Imbalances in these chemicals are linked to various psychological disorders, and many psychoactive drugs work by altering neurotransmitter systems.

Evolutionary Psychology

This perspective applies evolutionary principles to understand psychological traits. It proposes that many behaviours and cognitive processes evolved because they helped our ancestors survive and reproduce. Concepts like natural selection, sexual selection, and inclusive fitness help explain behaviours related to mating, parenting, cooperation, and aggression. Evolutionary psychologists seek to identify psychological adaptations that solved recurrent problems in our evolutionary past.

The biological approach has contributed significantly to our understanding of psychological disorders and their treatment. For instance, the discovery that many psychiatric medications work by altering neurotransmitter activity has revolutionised treatment approaches. Similarly, neuroimaging techniques have revealed structural and functional brain differences associated with conditions like depression, schizophrenia, and ADHD.

However, critics argue that the biological approach can be reductionist, oversimplifying complex psychological phenomena by attributing them solely to biological factors. Modern perspectives increasingly recognise that biological factors interact with psychological and social influences in a complex, bidirectional manner—a view known as the biopsychosocial model.

Despite these criticisms, the biological approach continues to yield important insights, particularly as technological advances enable more sophisticated investigation of the biological bases of behaviour and mental processes.

Comparing Psychological Approaches

Approach	Key Assumptions	Research Methods	Strengths	Limitations
Behaviourist	Focus on observable behaviour; environment shapes behaviour; little emphasis on mental processes	Laboratory experiments; animal studies; controlled observations	Scientific rigour; practical applications; clear predictions	Oversimplifies complex behaviour; neglects cognitive processes; limited ecological validity
Social Learning	Learning occurs through observation; mediational processes important; combines behavioural and cognitive elements	Controlled observations; field studies; experiments	Explains complex social behaviours; bridges behavioural and cognitive approaches	Some concepts difficult to measure; overemphasises social factors
Cognitive	Mental processes central to understanding behaviour; mind as information processor	Laboratory experiments; computer modelling; brain imaging	Addresses complex mental processes; practical applications; testable models	Computer analogy limitations; sometimes neglects emotional factors
Biological	Behaviour has physical basis; genes, brain structure, and chemistry influence behaviour	Twin studies; brain imaging; genetic analysis; animal studies	Scientific rigour; integration with other sciences; effective treatments	Can be reductionist; sometimes neglects psychological and social factors

Modern psychology increasingly recognises that no single approach can fully explain the complexity of human behaviour and mental processes. Each perspective offers valuable insights while having distinct limitations. Contemporary psychologists often adopt an integrative approach, drawing on multiple perspectives to develop comprehensive explanations.

For example, understanding a complex condition like depression might involve considering:

- Biological factors (genetic predisposition, neurotransmitter imbalances)
- Cognitive factors (negative thought patterns, attributional styles)
- Behavioural factors (reduced positive reinforcement, learned helplessness)
- Social learning factors (modelling of depressive behaviours)

This integrative approach, often termed the biopsychosocial model, acknowledges that psychological phenomena typically result from complex interactions between biological, psychological, and social-environmental factors, rather than being reducible to any single cause or explanation.

Assessment Questions

Test your understanding of the approaches in psychology by answering the following questions:

1. Outline the key principles of classical conditioning and explain how it differs from operant conditioning. (4 marks)
2. Describe the role of mediational processes in social learning theory. (3 marks)
3. Evaluate the strengths and limitations of the cognitive approach to understanding human behaviour. (6 marks)
4. Explain how twin studies are used to investigate the genetic basis of behaviour, and discuss one limitation of this research method. (4 marks)
5. Compare and contrast the behaviourist and biological approaches to psychology, using examples to illustrate your answer. (8 marks)
6. Discuss how modern psychology has moved toward an integrative approach that combines elements from different psychological perspectives. (5 marks)

When answering these questions, remember to:

- Define key terms clearly
- Use specific examples and research evidence to support your points
- Consider both strengths and limitations when evaluating approaches
- Structure your answers logically with clear paragraphs
- Allocate your time according to the mark allocation