The Biological Perspective

Introduction
The focus of this perspective is the interaction between the physiological and psychological factors that contribute to behaviour. To understand this interaction, a basic understanding of physiology is needed.

Until the middle of the 19th century, most humans regarded themselves as very distinct from animals.

Since Darwin’s discoveries were published, there has been a general acceptance that humans have evolved from animals, that we have a substantial number of physiological and behavioural characteristics in common, and that we also share much of our genetic make-up with them.

This acceptance has led psychologists to increase research into basic physiological processes as a way of explaining human behaviour. Changes in behaviour can be regarded as arising from an interaction between genetic disposition and environmental factors. Research has frequently, but not exclusively, used the experimental method to investigate behaviour. There are issues that are relevant to the biological perspective, including criticisms that this may involve a reductionist approach and that behaviour exhibited by non-human animals is not always relevant to humans.

There is an increasing awareness, due to the use of brain-scanning techniques, that physiological mechanisms play an important role in the behaviour of individuals in areas as diverse as aggression and stress. The greater insight that researchers have provided into biological processes means that behavioural problems are now often treated using a combination of drug treatment and psychological treatment, to alleviate symptoms caused by psychological disorders.

Learning outcomes
Students should expect questions asking them to:
1. describe and evaluate the four content topics as they relate to the biological perspective
2. describe and evaluate theories and empirical studies within this perspective
3. explain, where appropriate, how cultural, ethical, gender and methodological considerations may affect the interpretation of behaviour from a biological perspective
4. compare theories, empirical studies and the four content topics of this perspective with those from other perspectives
5. identify and explain the strengths and limitations of biological explanations of behaviour
6. explain the extent to which the concepts of free will and determinism relate to this perspective
7. explain and evaluate claims that correlates exist between physiological processes and behaviour
8. discuss controversies surrounding a reductionist approach, as adopted by many biological psychologists.
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- influence of Darwin
- scientific discoveries about biological processes
- biological correlates of behaviour, such as genes, neurotransmitters and hormones
- localization of function in the brain
- genetic contributions to explanations of behaviour, for example, twin and adoption studies
- effects of hormonal change on behaviour, such as melatonin and serotonin in the sleep–wake cycle

- endocrine system
- role of genes
- central nervous system (organization and function)
- neurotransmitters (general mode of action)
- bodily rhythms such as the sleep–wake cycle
- biological factors (such as genes and hormones) influencing behaviour (for example, innate tendency to imprint)
- relative importance of inherited disposition
- relevance of animal research
- comparison with other perspectives to explain strengths and limitations
- empirical studies that challenge or support
- use of drugs, surgical procedures
- physiological impairment, such as strokes or Alzheimer's disease
- physiological factors involved in emotion
- brain injuries
- influence of hormones

- correlational studies
- double-blind trials
- experiments
- interviews
| Strengths and limitations of methods | • case studies  
• questionnaires  
• reliability and validity  
• use of human participants for research  
• use of non-human animals for research  
• comparison with other perspectives on questions such as aggression, gender differences or stress  
• application of genetic research and its ethical implications  
• contribution of the biological perspective to areas such as work (for example, shift patterns and stress) or treatment (for example, drug therapy for dysfunctional behaviours) |
| Ethics and controversies of research | |
| Application | |
| Effectiveness (relative strengths and limitations) of the perspective in explaining psychological or social questions | |
| Application of theories and findings of empirical studies from the biological perspective | |