

Biological Approach

Background

This approach assumes that all behaviour is the result of innate biological processes such as genetics, biochemistry and brain structures. It focuses on the similarities and differences between individuals in terms of internal/ biological factors and how they interact. Studies of twins and others who share DNA are used to support the genetic debate. Brain-damaged patients are also studied to investigate the differences in brain functions.





Evidence

Research from the late 1800's and documented by **Damasio et al (1994)** studied the case of Phineas Gage, a railroad worker who suffered damage to his pre-frontal cortex after an accident. Prior to this he was a calm, placid man who socialised with many people, however, afterwards showed a change in his personality that made him irresponsible and aggressive. This suggested that brain structure can play a part in the influence aggression.

Twin studies such as **Gottesman & Shield (1991)** found a 48% concordance rate in monozygotic (identical) twins and a 17% rate in dizygotic (fraternal) twins with diagnoses of schizophrenia. This indicates a strong genetic component to schizophrenia.

Wong et al. (1997) used MRI scans with 19 violent male criminals and found the volume of the amygdala was smaller in the violent criminals compared to controls, supporting brain structure as a factor involved in violent offending.

Evaluation

-  The biological approach studies behaviour objectively using scientific methods which have high reliability, often carried out under controlled conditions in the lab, to investigate causation.
-  Research in this area often collects quantitative data to allow for statistical analysis and comparison. This increases the scientific credibility of the findings and makes practical applications more reliable.
-  The biological approach fails to account for external influences on behaviour such as upbringing (nurture debate) making it very reductionist.
-  As most of the experimental research is carried out under controlled conditions in the lab it lacks ecological validity and individual case studies are limited in terms of generalisation.

