

Importance of understanding biological basis of behaviour



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This essay will first of all attempt to briefly distinguish between some of the bases of understanding behaviour. Next, the biological approach will be elaborated and this will be followed by a succinct evaluation of the strengths and criticisms of this approach.

Behaviour can be understood from different bases (approaches). Among these include Behaviourist, Cognitive, Psychodynamic, Humanistic and Biological approaches (Glassman and Hadad, 2013). The behavioural approach assumes that behaviour is created or modified by environmental factors, irrespective of the mind (Chance, 2013). Vice versa, understanding behaviour from a cognitive basis involves the consideration of internal events (mediators) between a stimulus and behaviour. Contrary to the biological approach, these internal events are conceptual rather than physiological (Gardner, 2008). Similarly, the psychodynamic approach assumes that behaviour is shaped by internal mental processes. On the contrary, it focuses on the motivation of behaviour (intentionality). Such motivation influences personality and thereby influences behaviour (Glassman, Glassman and Hadad, 2008). From a humanistic perspective, behaviour is understood from an individual's subjective experiences (phenomenological viewpoint), a free will of individuals to behave which is not influenced by immediate or past stimuli (the capacity of choice) and the value individuals place on their experiences and actions (the role of meaning) (Fernald, 2008).

In the biological approach, behaviour is as result of neurological, genetic and physiological processes. The brain and the central nervous system play a key role in determining behaviour. Changes in the growth of the brain are

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genetically determined and result in psychological and behavioural development. A well-functioning nervous system depicts normal behaviour. Abnormal behaviour is usually characterised by bodily (organic) or genetic disorders, chemical imbalances, brain injury or mental illness. Consequently, the modes of treatment include the use of drugs, psychosurgery and electroconvulsive therapy. These are used to treat the underlying causes of the illness or to relieve symptoms (Sanders, 2014).

There are various strengths in understanding behaviour from a biological basis (approach). The biological basis of understanding behaviour has improved our understanding of behaviour. It has successfully proved the impact of genetic factors in explaining behaviour (including individual differences) such as intelligence and some mental disorders. For example, twin studies have shown that behaviour such as susceptibility to mental disorders (Posthuma and Polderman, 2013) and intelligence (FraniÄ† *et al*, 2014) is shaped by genetic factors. The biological approach to understanding behaviour often takes a reductionist approach. Hence, various experimental studies have provided useful results in understanding behaviour. For example, physiological and genetic studies have contributed immensely to our understanding of sleep (Wyatt *et al*, 1999, Allebrandt *et al*, 2011, Dauvilliers, Maret and Tafti, 2005).

Understanding behaviour from a biological basis has been usefully applied in psychopathology. It has been beneficial in the use of chemotherapy to treat mental disorders such as depression, anxiety and schizophrenia (Rockstroh, 2001). Genetic counselling for couples is as a result of our understanding of the relation that exists between genes and behaviour. This could be of great
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relief for some couples who carry a gene that makes their children susceptible to a fatal disease (Harper, 2010). It is also believed that understanding behaviour in its biological context could help in generalisations between animals and humans (Larsson, 2003).

Despite these strengths, the biological basis of understanding behaviour faces some criticisms. It is argued that a thorough understanding of behaviour cannot be established from studying only biological factors. Social, cultural and psychological factors have also been shown to have an influence on behaviour. It has therefore been criticised for not including these factors in explaining behaviour (Glassman and Hadad, 2013). Furthermore, some have stressed that behaviour is a process and not a substance as portrayed in the biological approach (Greenberg, 2011, Overton, 2006). From a biological perspective, there is great emphasis of the role of genetic factors in shaping behaviour. However, this relation has been shown to be indirect and understood poorly. For example, a twin study by Plomin *et al.* (1990) found that television watching is influenced by genetic factors, but it is unclear how genes cause such effect.

In conclusion, understanding behaviour from only a biological basis seems inadequate. This calls for consideration of other approaches to address its limitations.

Total word count: 699

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