

To what extent is human behaviour genetically determined?

Human behaviour isn't only determined by genetics. The greatest factors that influence human's personalities are genetic inheritance and environmental factors. In some conditions, genes play a major role in human behaviour, in other conditions, the environment plays a crucial role in human behaviour.

The nature versus nurture debate is one of the oldest issues in psychology. Nature refers to all of the genes and hereditary factors that influence who we are, from our physical appearance to our personality characteristics.(2) Nurture refers to all the environmental variables that impact who we are, including our early childhood experiences, how we were raised, our social relationships, and our surrounding culture.(2)

The debate centers on the relative contributions of genetic inheritance and environmental factors to human development.(2)

One way to do this is to study relatives who share the same genes (nature) but a different environment (nurture).(1) Adoption acts as a natural experiment which allows researchers to do this. Environmental parents and their adopted children do not share heredity and thus their resemblance can be attributed to family environment. Empirical studies have consistently shown that adoptive children show greater resemblance to their biological parents, rather than their adoptive, or environmental parents (Plomin & DeFries, 1983; 1985).(1) Like adoption studies, twin studies support the first rule of behavior genetics; that psychological traits are extremely heritable, about 50% on average.(1)

Behavioral genetics has demonstrated that multiple genes – often thousands, collectively contribute to specific behaviors. For example, depression is thought to be influenced by around 1000 genes (Plomin, 2018).(1) Genetic influence has been found for most behavioural disorders (Plomin et al., 2001).(3)

Genetic influences are not limited to disorders, they also contribute to normal variation in personality

(Loehlin, 1992) and in cognitive abilities (Plomin & DeFries, 1998), as well as to psychopathology.(3)

Genetic factors even appear to be involved in social and political attitudes and occupational interests

(Plomin et al., 2001).(3)

Some characteristics are tied to environmental influences. How a person behaves can be linked to influences such as parenting styles and learned experiences. For example, a child might learn through observation and reinforcement to say 'please' and 'thank you.' Another child might learn to behave aggressively by observing older children engage in violent behavior on the playground.(2)

One example of an empiricist theory within psychology is Albert Bandura's social learning theory.

According to the theory, people learn by observing the behavior of others. In his famous Bobo doll experiment, Bandura demonstrated that children could learn aggressive behaviors simply by observing another person acting aggressively.(2)

Researchers do know is that the interaction between heredity and environment is often the most important factor of all. Height is an example of a trait that is influenced by nature and nurture interaction. A child might come from a family where everyone is tall, and he may have inherited these genes for height.

However, if he grows up in a deprived environment where he does not receive proper nourishment, he might never attain the height he might have had he grown up in a healthier environment.(2)

Overall, both genetic inheritance and environmental influence play a crucial role in human behaviour and human development. The interaction between genetic inheritance and environmental influence is the most important factor of all.

Reference

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