

To what extent is human behaviour genetically determined?

There is no doubt that our genetics play a large role in determining our behaviour. For example, there was an experiment¹ in which two identical twins were separated from a young age and reunited six years later. It was found that they had very similar hobbies as one another, as well as having the same haircut and similar clothing items. Furthermore, both twins grew up in different environments which implies that inherited genes do play a part in how someone develops. In addition, an article written by Ewen Callaway² explains that 106000 people took part in a study to see if there is a gene which codes for IQ. The researchers picked out 69 gene variants most strongly linked to education level. To establish a more direct link with IQ, they cross-checked this list with genetic variants in a second sample of 24,000 people who also had taken tests of cognitive ability. Three gene variants were found to be associated with both educational attainment and higher IQ scores.

Although we have established the fact that our genetics do in fact play a part in our behaviour, there are other factors by which dictate our behaviour. The environment in which people live in can greatly impact their behaviour. For example, a child who is raised in a family which constantly fight is going to mimic that behaviour later in life, as they have grown up thinking that it is acceptable. A document written by Dr Brady Dorn³ states that 90% of brain development happens within the first 5 years of someone's life, and during the first 3 years the brain is at its most malleable; it is during these early years of neuronal growth and proliferation that the brain is most neuroplastic. If someone receives a lot of affection when they are young, they are more likely to be amicable when they are older.

¹ Nigel Barber, "What behaviours do we inherit via genes?", Psychology today, September 24th 2015

² Ewen Callaway, "'Smart genes' prove elusive", Nature.com, September 8th 2014

³ Dr Dorn Brady, "Brain Development in Children: Making the Most of Brain Neuroplasticity", dornchiropractic.com, July 2017

This question comes back to the ‘nature vs nurture’ debate, and in this case our nature has a part in how we develop in our lives, the evidence being the twin experiments. However, research suggests that our genetics does not necessarily influence how we conduct ourselves from a behavioural standpoint. It is more likely that our behaviour is mostly determined by the environment we grow up in and other external stimuli. Many of our genes work concert to influence most behaviours, meaning the genetic aspects of a particular trait are the result of small effects over hundreds of individual genes. Instead of our behaviour being either our genetics or our environment, our genes create a framework within which the environment acts to shape our behaviour.

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