

# Personality: a product of nature or nurture

Business



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Jack is a quiet boy. He often isolates himself from other students, and he has few friends. In comparison, his neighbor Jimmy is out-going and popular. Jimmy participates in many after-school events, and he is captain of the football team.

Is the differences in the boys' behavior due to their genetics (nature) or the environment (nurture)? Studies show that genetics have a huge influence on personality especially the traits neuroticism and extraversion. Neuroticism and extraversion are part of the Big Five Factor Model that is often used to describe personality. Neuroticism measures the individual's emotional stability. For instance, someone who score high on the trait neuroticism is temperamental, anxious, and tend to worry a lot, while someone who score low on it is more calm and stable. Extraversion measures how outgoing the individual is. An extrovert is an example of a high scorer; an introvert is an example of a low scorer.

Heritability refers to " the extent to which variation among individuals can be attributed to their differing genes" (Myers). According to a study involving 24, 000 pairs of twins, heredity accounts approximately 60% for extraversion and 50% for neuroticism (Plomin). This does not means that the reason why you are an extrovert or introvert is 60% due to your genetics and 40% due to the environment. Rather, it means that genetics influence 60% of the observed variation among people. This shows that it is not just genetics alone that influence personality; it is the interaction of genetics and the environment.

Study shows that the correlations for identical twins raised together for the traits neuroticism and extraversion are .46 and .51 respectively. In comparison, the correlation for fraternal twins raised together for the traits neuroticism and extraversion are .20 and .18 respectively (Plomin).

These numbers are the correlation coefficient. Correlation coefficient ranges from -1 to 1 where a positive number indicates a positive correlation. In a positive correlation, two variables increase or decrease together. The closer the coefficient is to 1, the stronger the positive correlation. Since the correlation coefficients for the traits neuroticism and extraversion are higher in identical twins compared to fraternal twins, this means that if one identical twin is an introvert, the chances of the other identical twin being an introvert is very likely.

If one fraternal twin is an introvert, the chances of the other one being an introvert is not as likely. This emphasizes the influence of genetics on the traits neuroticism and extraversion since identical twins have more genetics similarity than fraternal twins. In a study of Swedish identical twins reared apart, the correlation for neuroticism is .25, and the correlation for extraversion is .30 (Plomin).

These numbers are significantly lower than the correlations for identical twins reared together which indicated that the environment also play an important role in personality development. The family environment that the individual grew up in also play an important role in shaping that individual's personality. Growing up in an abusive environment negatively affect personality development. An example of this would be Alice who suffered

from sexual abuses by her father (Jamieson). This abusive environment causes her to be anxious and emotionally unstable.

As a result, Alice developed dissociative identity disorder which is formerly known as multiple personality disorder. Her consciousness splits into nine distinctive personalities to help her cope with the stress. This shows that growing up in an abusive environment causes the individual to score high on the trait neuroticism. Another environmental factor that affects personality is the culture. In a collectivist society, it emphasizes social harmony, and it prioritizes the group over the individual.

The individual's rights and independence is emphasized in an individualistic society. Since individualistic societies are more tolerant of individual differences, people living in an individualistic society tend to score higher on openness and lower on agreeableness compared to people living in a collectivist society (McCrae). Openness and agreeableness are both part of the Big Five Factor Model used to describe personality. Openness measures how open someone is to new experiences, and it also reflects that person's intellectual curiosity. An example of a high scorer is someone who is creative and imaginative.

Agreeableness reflects the degree of trust and tolerance an individual has for another individual. Someone who scores high on this trait is trusting and empathetic. Genetics have a larger influence in the traits neuroticism and extraversion while the environment plays a larger role in the traits agreeableness and openness. When you clap, you need both of your hands. This is similar to how nature and nurture work to influence your personality;

it is neither nature nor nurture alone that influences your personality, rather it is the interaction of both nature and nurture. For example, if you are baking a cake, the ingredients you use would be the genetics component.

The shape of the cake and the decorations would be the environmental factors. Your personality starts with the genetics component and the environment help shape it. Therefore, the Nature vs. Nurture conflict is actually a myth since both of them have an equally important role in shaping human behavior and personality.