

Heredity and environmental influences and its effects



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Personality is a set of characteristics or traits that reflect in one's cognitive, affective and behavioural states. Personality may be based on many factors. It may be based on innate or learned experience, or latent or manifest. But, the focus of this essay will be whether a person's personality is based on the magnitude of genetic or an environmental influence. Personality can be divided into two categories, innate or acquired characteristics. Heritability is a statistical measure that expresses the proportion of the observed variability in a trait that is a direct result of genetic variability. Environmental influences can be divided into two classes, shared and non-shared environment. Both heredity and environment contribute to personality traits and that the degree of their individual contributions cannot be specified for any traits. Although a person's environment plays an important part in their personality development, heredity factors play a larger role in deciding disposition of this environment.

Heritability is defined as the proportion of phenotypic variance attributable to the additive effects of genes (Carey & DiLalla, 1994). A person's genetic background has a strong influence on their personality. Some personality traits are strongly capable of being inherited by a person. This can be seen by the comparison of fraternal twins and identical twins, and twins brought up together with twins brought up apart. The aim of such a study is to see which has a greater influence on personality, the genetic background or the environmental influence. Twin studies showed that identical twins are much more similar than non-identical twins, which suggests genetic influence (Plomin & Colledge, 2001). Studies have found that identical twins are more similar than fraternal twins on a range of personality measures,

indicating that characteristics are heritable. If a family environment has an influence on personality characteristics, twins brought up together should have more similarities than those brought up apart. Yet, this is not the case (Plomin & Colledge, 2001). Thus, through twin studies, it can be seen that a person's personality is based more on heredity rather than environmental influences.

Heritability is virtually a sine qua non of biologically based theories of personality. This can be seen in the Humoral Theory, also known as the Fluid Theory. According to Galen's theory, one's body fluid represented one's personality. There are four fluids, namely yellow fluid, black fluid, phlegmatic temperament and sanguine temperament. These fluids are hereditary and not possibly influenced by environment. An example is the hereditary of schizophrenia. Initially, the idea that schizophrenia could run in families for genetic reasons was not taken into consideration. Instead, schizophrenia was thought to be environmental in origin, with theories putting the blame on poor parenting (McCrae et al., 2000). However, schizophrenia is a hereditary deficiency which no environmental factors can completely counteract. Thus, the individual will be defective, regardless of the type of environmental conditions under which one is being brought up in.

Besides Galen, Hans Eysenck also emphasized the biological nature of personality. He long championed the view that personality traits are heritable. Eysenck founded the biological and trait approach and he believed that genetic makeup plays a significant role in the formation of personality.

All five factors of Eysenck's theory are heritable. People inherit more than the global dispositions summarized by the five major personality factors;
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specific traits such as self-consciousness, gregariousness and openness to ideas are also specifically heritable, and in this regard can better be considered basic tendencies than characteristic adaptations (McCrae et al., 2000).

Through the study of parental influences, one can see that parenting has a subtle effect on personality. Results of adoption studies showed that children bear little resemblance to either their adoptive parents or their adoptive siblings (McCrae et al., 2000). Instead, adopted children appear to become more like their birth parents. For personality, adoptive “siblings” (genetically uncorrelated children adopted into the same adoptive family) correlate near zero, a value implying that shared environment is unimportant and that environmental influence, which are substantial for personality, are of the non-shared variety (Plomin & Colledge, 2001). The heritability estimates, as well as estimates of shared and unique environmental influences on personality agree well with those from twin studies in suggesting that the dominant reason for familial resemblance in personality can be traced to genetic factors, with common environment having only a small effect (Carey & DiLalla, 1994). Thus, this shows that neither parental role modelling nor parenting practices that would influence all children in a family seem to have much influence on personality trait (McCrae et al., 2000).

However, environmental influences also have a part to play in the development of a person’s personality. They define the conditions under which human personality changed; they shape a variety of skills, values, attitudes and identities; they provide the solid forms in which personality traits are expressed; and they supply the trait indicators from which

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personality traits are inferred and trait levels are asserted (McCrae et al., 2000). According to Walter Mischel, he believed that much of one's personality is influenced through interaction with the environment. People's behaviour was driven by the situations that they were in rather than by any innate personality traits. Bandura also argued that personality is the effect of reciprocal determinism- the interaction of behaviour, environment and person variables such as perception. Thus, through Bandura and Mischel theories, environmental influences play a part in shaping a person's personality.

Environmental influence has a pervasive effect on personality traits as well. According to the Five Factor Theory (FFT), personality is biologically based, but it is well established that perceptual and learning experiences can reshape the developing brain (McCrae et al., 2000). Personality change is linked with life experiences. Life experience may influence personality through its effects on the brain. Recent studies have suggested that traumatic stress may contribute to atrophy in the hippocampus (McCrae et al., 2000). Thus, this shows that life experiences influences a person's personality.

Environmental influences in terms of parenting influences a child's personality. According to the FFT, the influence of parents on their children is surely incalculable; they nourish, protect, teach them; instils habits, aversions and values and provide some of the earliest models for social interaction and emotional regulation (McCrae et al., 2000). Therefore, in the long run, parenting has crucial effects for the growth of characteristic adaptation. For example, birth order has been resurrected as a possible <https://assignbuster.com/heredity-and-environmental-influences-and-its-effects/>

environmental influence for personality (McCrae et al., 2000). The younger sibling tend to be more of an extravert than the oldest sibling, as the younger sibling has to try harder for parental attention because of competition from other siblings. Thus, through birth order, it shows how family environment influences one's personality.

In conclusion, both hereditary and environmental factors can influence a person's personality. Heredity sets the limitation which environmental differences decide the concluding result. However, genetic factors have a larger effect on personality traits. Through twins and adoption studies, and the hereditary of schizophrenia, it can be seen that hereditary has a bigger effect on personality as compared to family environment. Thus, studies of heritability and limited parental influence all point to the notion that personality traits are more of expressions of human biology rather than products of life experiences.