

## **Nature Vs Nurture in Personality Formation**

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**Abstract**

Personality is defined as the characteristic sets of cognition, feelings, and behaviors derived by a person's subjective experiences and desires. In this paper, I argue that personality is mainly influenced by the environment. First, I argue that the family environment, culture, and learned values form the personality. Second, I argue that environmental influences such as war and trauma can alter the personality formation process. Alternative positions include case studies on separated twins and parent-child similarities that suggest a stronger genetic influence on personality. However, I show that many of these studies seem to be biased towards greater twin similarity. This paper is important as understanding the environmental influences on personality is a crucial step in predicting human behavior. I conclude my paper by recommending that more adequately controlled case studies must be conducted to capture an accurate interplay linking genetics and personality.

*Keywords:* Personality formation, behavioral genetics, developmental psychology, inheritance, environmental influences

### **Nature Vs Nurture in Personality Formation**

In this paper, I argue that personality is mainly influenced by the environment.

*Personality* can be defined as the conscious and unconscious behaviors that are derived by a person's subjective experiences, thinking, and desires (Kernberg, 2016). There has been widespread debate on whether personality is predisposed by genetics or shaped by the environment (Bleidorn et al., 2010). Both fields of developmental psychology and behavioral genetics have conducted extensive research and numerous experiments to find out what forms and influences personality. In this paper, I discuss different case studies to support my argument that environmental factors are the main influence on personality.

I support my position that the environment is the main influence on personality with the following three arguments. First, I argue that the family environment and rank order play a significant role in personality formation. As suggested by Kandler (2012), personality formation is a lifelong process that is developed and altered mainly by environmental influences. The author further argues that interindividual differences in siblings' personalities tend to stabilize with increasing age, which further suggests that environmental influences play a significant role in personality continuity and change. Second, I argue that culture, religion, and learned values shape personalities from a young age. The authors McCullough and Worthington (1999) conducted a study that shows a positive correlation between religiousness and people's tendency to forgive. Finally, I argue that other environmental factors such as traumas and mental illnesses alter the personality formation process. To elucidate, a study by Bunce et al. (1995) reports that traumatized college students tend to have more trait anxiety and lower self-esteem compared to non-traumatized individuals of similar demographics, suggesting that traumatic life experiences can completely alter personalities.

I also consider alternative positions that suggest personality is not influenced by the environment. Such positions include, separated twins' studies suggesting genetic influence,

and similarities in siblings and parent-child personalities suggesting that personality is genetic (i.e., inherited). While these positions have merit, I show that many studies suggest otherwise. In an article by Joseph (2001), the author concludes that several studies on separated twins seem to be biased towards greater twin similarity, hence invalid. In another article, Hoffman (1991) indicates that findings from behavioral genetics indicate numerous dissimilarities between siblings and family members. These dissimilarities and differences between family members suggest that genetics does not play a significant role in shaping personality.

This paper is important as it discusses one of the most studied topics concerning the 'nature vs nurture' debate. As such, knowing the extent to which environmental factors can influence personality is a crucial step in understanding and predicting human responses and behaviors towards certain situations ("UKEssays," 2018). In fact, most fields of research and areas of profession require a thorough understanding of human behaviors.

### **Environmental Influences on Personality**

The personality formation process is mainly influenced by environmental factors. Such environmental factors may include the family environment, rank order, religion, culture, and traumas. Researchers argue that these factors can influence and alter the personality formation process more significantly than inheritance and genetic predispositions. For this reason, many researchers conduct case studies to showcase the extent to which the environment affects personality.

### **Effects of the Family Environment on Personality Formation**

Personality formation is a lifelong process influenced by the environment. According to Kandler (2012), the family environment is the main influence on children's personality formation up to their preteen years. As reported by Hoffman (1991), peer reviewed research from behavioral genetics and environmental psychology concludes personality variance

among siblings and family members. The author explains this variance with respect to the objective environmental differences that account between siblings. He gives an example of the attention a mother gives to her first-born child in comparison to her second-born child. Every new child receives a different treatment as their mothers' behaviors and expectations change after each experience. Therefore, treating each child differently is an environmental influence that results in a within-family variance in personality.

In another example explaining the effects of rank order on personality formation, Hoffman (1991) explains its effects within siblings. For example, family events such as divorce can be seen differently by children of different ages. Such family events may alter a preschool girls' personality more than a teenage girl. This example by Hoffman suggests how rank order can create personality differences among siblings. These differences in siblings' personalities suggest that the objective environment can alter behaviors and expectations that influence and form personality. In another study, Price (2008) supports Hoffman's findings. The author collected data from the American Time Use Survey to analyze the average quality time a first-born child receives each day with his/her parents. Price found that more quality time is given on average to first-born children than to second-born children. He further explains the effects that these results can cause on child outcomes. Results from the study suggest that children of higher birth orders tend to have worse outcomes. In addition, empirical evidence shows that school performance declines with increasing birth order (Hotz & Pantano, 2015). The authors agree that strategic parenting tends to create a consistent pattern in birth-order differences resulting in different behavioral outcomes in children.

In another study by Nakao (2000), the author explains how the family environment influences three main personality traits. Nakao conducted a study of 150 children to assess these three personality traits: extraversion, maturity, and intellect. The analysis from this study shows a strong positive correlation between maturity and high socio-economic status. In addition, intellect was positively correlated with maternal influence and high socio-

economic status. Additionally, extraversion was negatively correlated with over-protection and over-interference. Results of this study suggest that the family environment along with external environmental influences can elicit certain personality traits, suggesting that environmental factors are a significant part of the personality formation process. To further support the results of the study, Lloyd et al. (2014) shows that maternal and paternal practices correlate with behavioral outcomes of children. These studies suggest the significance of the family environment and its influence on personality.

Results from adoption studies further support the significance of environmental factors on personality formation. By comparing personalities of children and their non-biological parents, clear similarities of personality traits can be found (Lloyd et al., 2014). To support this argument, Hoffman (1991) provides a case study that compares both monozygotic and dizygotic adopted twins reared together and apart. In both cases, the shared family environment creates a strong influence on two main personality traits: positive emotionality and social closeness. In agreement with this study, Tellegen et al. (1988) conduct another study of non-separated twins reared together with non-biological parents. The study concludes that the family environment, and not heredity, is the main influence on interindividual differences between the set of twins. A study by Coon and Carrey (1989) further supports these results by studying sets of nonseparated twins. Results found that the shared family environment, and not genetics, influenced the personality trait of aggression within the twins. Overall, results from these studies along with previous studies conducted by behavioral geneticists showcase similar and overlapping results supporting a strong environmental influence on personality.

### **Effects of Religion and Culture on Personality Formation**

Some environmental aspects that people hold can shape and alter their personalities throughout their lives. Accordingly, McCullough and Worthington (1999) discuss several links between religion and the spiritual personality trait of forgiveness. The authors

conducted a study by measuring the religiousness of individuals in comparison to their personality trait of forgiveness. The research study concluded a significantly positive correlation between religious individuals and the forgiving personality trait. Abdel-Khalek (2013) conducted a similar study to examine the association between religiosity and Eysenck's three dimensions of personality. The study was conducted with a sample of 227 Kuwaiti Muslim undergraduates to assess their traits of psychoticism, extraversion, and neuroticism. The findings of this study suggest a link between religiosity and certain personality traits. Primarily, a strong negative correlation was found between religiosity and the personality trait of psychoticism. In addition, religiosity was positively correlated with extraversion, and negatively correlated with neuroticism. Results of this study replicate the findings of previous similar case studies, suggesting that personality can be shaped and influenced by religion and religiosity.

In addition to religion, culture plays a significant role in influencing and developing personality traits. A study by Nazir et al. (2009) discusses the importance of culture in shaping personality and influencing behaviors. The authors report that interactions between people and their means of perceiving, relating, and interpreting information are influenced by culture. The study goes on to compare the behaviors and personalities of social groups of different cultures. Findings of the study suggest that socio-cultural differences in groups influence the ways in which they recognize, express, perceive, and display certain emotions. Evidently, the behaviors associated with certain socio-economic cultural groups can shape and alter their personality formation process.

To support the significant role that culture plays on personality, Church (2000) gives another example on cross-cultural countries. The author mentions that people in collectivistic cultures have fewer evident differences in their personalities within their social group in comparison to people in individualistic cultures. As such, different cultures influence peoples' personalities in different ways. To illustrate, Akande (2009) addresses the

differences in cross-cultural social groups and their influences on the self-esteem personality trait. Akande conducts a study in five cross-cultural countries to measure any notable differences in that certain trait. Findings of the study suggest significant differences in the self-esteem rate between students of collectivistic versus individualistic cultures. As reported, students in collectivistic cultures tend to have a higher academic self-esteem compared to students in individualistic cultures. Alternatively, individualistic cultures tend to positively influence students' non-academic self-esteem more than those in collectivistic cultures. Results from this study showcase a significant difference in the overall personalities of cross-cultural social groups. These results conclude that cultures can create behavioral effects that cause personality differences within individuals of different cultures.

### **Effects of Trauma and War on Personality Formation**

Traumatic life experiences such as mental traumas, abuse, disasters, and bereavements tend to create cognitive and emotional consequences for people. For example, a study by Bunce et al. (1995) was conducted to explore personality changes in traumatized college students in comparison to non-traumatized ones. Bunce assessed the students' emotional and physical health on a span of 28 days. Results of this study show that traumatized college students tend to have higher rates of neuroticism, introversion, and more unstable emotions and cognitive disturbances than non-traumatized college students. This study suggests that environmental factors such as traumatic events and experiences can affect and alter personality to a large extent.

Experiencing bereavement can also alter the personality formation process on both the short-term and the long-term. Bereavements can create temporary and long-term consequences on people's happiness and attitudes (Moor & de Graph, 2016). In a recent study by Chopik (2018), personality change following spousal bereavement was examined in a sample of 9944 individuals. Chopik hypothesizes that following life changing events, such as bereavements, peoples coping mechanisms can facilitate and considerably change their

personalities. In his study, there was evidence for decreased emotional stability in bereaved individuals in comparison to the control group of non-bereaved individuals. The author's hypothesis is supported by several studies. A study by Mroczek and Spiro (2003) found a significant change in the levels of neuroticism in bereaved individuals. In another study, Hoerger et al. (2014) examines the personality traits of 31 bereaved spouses. The study reports a large increase in their social, prosocial, and dependability traits over the span of 18 months. Results of these studies align well with previous research demonstrating personality changes in bereaved individuals, all concluding that bereavements can influence and alter personality.

In addition to the effects that bereavements and traumas play on personality, many argue that war-related traumas have more catastrophic effects on mental health and behaviors. According to Fink (2003), post-traumatic war effects tend to affect people throughout the world both psychologically and mentally. The author argues that war related traumas have significant and definite effects on mental health and behaviors. In his study, Fink hypothesizes that war can result in serious personality changes in potentially anyone, regardless of any previous childhood experiences. He conducts a case study of 64 Nazi concentration camp survivors in which he examines the survivors' current personality structures and compares them to their pre-traumatic personality structures. As Fink reports, 81.2% of the 64 survivors showed depressive personality structures along with anxiety symptoms. Other studies support Fink's argument, as Leach (2002) postulates, wars can cause almost identical post-traumatic personality structures, including stress, anxiety, schizophrenic symptoms, and antisocial personalities. Leach conducts a study that supports the results of Fink, both studies show that war-related traumas can produce significant depressive personality structures. These personality structures are referred to as post-traumatic personality structures as they hold notable influence on the long-term personality of people. Thus, making them significant environmental influences on personality.

### **Arguments Supporting Genetic Influences Over Environmental**

Behavioral genetics scientists support the idea that personality is predisposed by genetics and only slightly influenced by the environment. Many suggest a strong link between genes and personality formation through studying separated twin cases, parent-child similarities, and sibling similarities. Although the studies showcase interfamily similarities, many argue that these similarities do not necessarily denote genetic influence.

#### **Separated Twin Studies**

Many argue that personality is mostly affected by genetics and inheritance, with little or no influence from the environment. Most separated twin studies conducted to study personality tend to support this idea by showcasing a strong link between personality and genetics. As an example, a study of twins by Olson et al. (2001) examined the attitudes of 336 pairs of twins to analyze the heritability of their personality traits. The results of this study suggest that heritability accounts for a high proportion of the twins' personality traits and attitudes. Findings of this study along with many others were based on the "Minnesota Study of Twins Reared Apart" (MISTRA). MISTRA is a well-known study that suggests and showcases strong genetic influence on personality. Most research and studies conducted today supporting a strong genetic influence tend to be based off of MISTRA.

Despite the widespread reliance on MISTRA, many researchers argue that most studies suggesting a greater link between genes and personality tended to be biased towards greater twin similarity (e.g., Joseph, 2001; Krueger et al., 2008). In a critique by Joseph (2001), the author argues that several twin studies, and in particular, MISTRA may not be completely valid. Joseph critiques and focuses on two aspects in the MISTRA study: cognitive ability and personality. The author critiques the procedure and conclusions of the MISTRA study with several points. First, Joseph mentions that a bias of sample was used in the study. He explains that the sample of twins in the MISTRA study are not representative of

the other separated twins in the population. Second, the MISTRA study lacked sharing case histories and data to the public. This point is an important issue that will not allow independent observers to draw their own conclusions.

To add to criticisms of MISTRA, other authors argue that separated twin studies do not accurately resemble the role of genetics in personality differences. By studying the results of these studies, Joseph (2001) introduces the “unconscious investigator bias” (p. 8), a potential bias affecting the validity and the results of studies. According to Joseph, this bias favors the researchers’ preconceptions and can invalidate their final evaluations. To further support his argument, the author gives an example of a study conducted in 1965 by Juel Nielson. According to Joseph, the results of Juel Nielson’s study were affected by the unconscious investigator bias. In his study, Juel noticed numerous differences between a set of twins’ attitudes, ambitions, and behaviors. However, Juel ignored these differences and concluded that the separate rearing environment affected their genetically identical personality. Juel was susceptible to the unconscious investigator bias and concluded from his study that genetics are the main influence on personality. The article by Joseph brings to attention that many volunteer-based twin studies are susceptible to several biases, making them invalid and inaccurate.

### **Similarities in Parent-child Personalities**

Many argue that genetic predispositions and heredity are the main influence on the personality formation process. This idea is supported by several researchers who looked at parent-child similarities (e.g., Dalege & Degner, 2013; Dhont & Meeusen, 2015). However, Lloyd et al. (2014) argues that these parent-child similarities are caused by parenting influences rather than genetics. A study by Loehlin et al. (2010) supports this argument by conducting an adoption study. The authors found a positive correlation between certain personality traits and the closeness of adopted children with their parents. The closer the children are with their non-biological parents, the more likely they are to share similar

personality traits with them. Many other researchers support the idea of parenting influence over genetic influence by looking at parent child similarities in adopted children (e.g. Hoffman, 1991; Van der Voort et al., 2014).

Other authors critique studies supporting genetic influence by studying their methods and statistical models. Kreuger (2008) critiques previous studies supporting genetic influences by analyzing the statistical models used in those studies. Krueger argues that the models used in previous studies are inaccurate and conclude an invalid connection between the genetic contribution of personality between parents and children. The author suggests that newer statistical models with conceptualized dynamic systems must be used in research to capture the accurate interplay linking heritability and personality. Joseph (2001) supports Kreuger's argument and further argues that using outdated statistical systems can lead to inaccurate final results and evaluations.

### **Conclusion**

The process of personality formation and development is mainly influenced by the environment, and specifically, the family environment, culture, and traumas. This widely debated topic of nature vs nurture in personality formation is the basis of research in countless fields, including behavioral genetics and developmental psychology. Many case studies brought evidence and suggested that these environmental factors influence personality more significantly than genes and inheritance.

Personality formation is a lifelong process developed and constantly altered by environmental factors. Indeed, research studying the effects of the family environment concluded a within-family variance in personality resulting from parenting and rank order. Additionally, adoption studies supported these findings by focusing on trait similarities between children and their non-biological parents. Along with these family-related environmental factors, other studies showcased a strong link between culture, values, and personal traumas. These studies suggest that the behavioral effects resulting from

environmental factors play a role in altering and influencing the personality development process.

Opponents argue that genetics and inheritance have a stronger influence on personality. As such, research from separated twins and parent-children similarities suggested a strong link between genetics and personality. However, most of the previous studies appeared to possibly be invalid and biased towards greater twin similarity. Additionally, most results from opponent studies are considered inaccurate as the statistical models used to assess the results were unreliable.

Knowing the extent to which the environment can form and alter personality is a critical component in predicting human behavior. Studying and predicting human behavior is an essential element in different fields of research, professions, and interactions within society. However, it is still unclear to what extent genetics play a role in the personality formation process. Having said this, it is vital that more research and adequately controlled case studies are conducted in bias-free methods. These methods must contain updated conceptualized statistical models in order to capture an accurate interplay linking heritability and personality.

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