

## Are Geniuses Born or Made?

The word “genius” is an abstract term that can be interpreted in a variety of ways by people of different ethnicity, class, and race. The dictionary defines genius as “Exceptional intellectual or creative power or other natural ability” (Definition of genius, n.d.). Likewise, it is commonly spoken that a genius is a person with exceptional talent and ability in one or more of the six components of intelligence – linguistic, logical-mathematical, spatial, musical, bodily kinesthetic and personal (Deonanan, n.d.). Albert Einstein is a renowned physicist; he is considered to be a genius for his work and contribution, but that type of genius he is portrayed as, is a different sort of genius than say Tiger Woods, a professional golf player known for his fantastic plays.

Throughout society, there have been appearances of geniuses in our everyday lives; whether they be babies, toddlers, students, adults, or even the elderly. A genius is a person that stands out from a crowd, far more unique than your average person. Some might say that scoring a 2400 on the SAT is considered a genius, or having an IQ of over 140 defines a genius. However, the major question is that, are these geniuses made or born?

A genius is made, or “nurtured” in a combination of ways to grow into a genius. I agree that genes can contribute significantly towards an individual’s success to become a genius, and surely, genes also leave some people neglected. For example, genes can give athletes an edge in their career like fast reflexes or a tall height; similarly, genes may give a person a good working memory, but these are not the only things required to become a genius. It is known that all humans are born with particular strengths and weaknesses, talents and abilities, or none at all. It depends on the individual whether these can be improved or wasted. However, researchers have

not pinpointed where those genes exist in the human body. A person's genes may be the base of his or her intelligence, and then the growth in becoming a genius is determined by other factors such as environmental and interactions, biological influences, and cultural significance.

One of the factors that affect how a genius can be made is through an individual's environmental conditions and how he or she interacts with it. An estimated collection of statistics shows that genes play a small factor of significance, only 20 to 40% of a person's intelligence. That leaves the rest of the approximately 50% up to environmental factors to shape a person's intelligence into a genius (Gayle, 2013). Environmental factors doesn't separately affect the function of the genome or inherited traits in any way. However, based on the interaction of the genes and the environment, as a result, traits arise and develops from it (Shenk, 2010, p. 14 ).

What this means is that a person's personality, abilities, and of course, intelligence is affected by the environment around him or her, and how they interact with it. If a logical-mathematical type of genius was declined the qualification to explore his or her research, then that person becomes mediocre. The opposite happens when the genius is able to work freely, without restrictions to become successful. An example of this is shown in Albert Einstein's past: His family was familiar with science, so his family would have helped contribute to his interest in pursuing science and mathematics (Deonanan, n.d.). Albert Einstein followed his family's footsteps as he had a scientific background, and developed his own research based on that. A person's learning ability to adapt to changes is not limited to infants alone, but to older people as well, as Albert Einstein continued his research even when he became older.

From a biological perspective, neurologists researched the concept of neurology and how it affects a person's permanent development in the brain, which can greatly impact whether the

person may become a genius. This is especially true for infants and babies (Goldberg, n.d.).

When babies are born, they know nothing, neither that they have any experiences in real-life.

Yet, they carry their brain structure to adapt to their environment as they grow. In other words:

what they learn now and are disclosed to, will determine the process of growth, not how they

were born. The factor that contributes to this are neurons. Neurons are specialized cell

transmitting nerve impulses, otherwise known as a nerve cell. These make connections with

other neighboring neurons as the brain develops. These neurons connect with each other to form

neurological bridges, and these connections become the pathways of brain networks

(Environment and intelligence, n.d.). Brain cells make these connections exponentially between

the time of birth and approximately three years of age. After the first six months after birth, the

brain capacity has reached 50 percent of its potential of an adult-like brain. By the age of three, it

has reached 80 percent (Goldberg, n.d.). After maturity, which is approximately age sixteen, a

person's IQ is predictably going to remain stable because of the slowing and then stopping of the

growth of neurons in the human brain.

It is largely due to an interaction with the environment that this process comes to a

complete stop, since there is not enough genetic material from birth to connect the major

pathways. Even if there was enough genetic material to connect them, they are not able to

produce good connections because the environmental factors wouldn't play a key role in this

process. The environment affects the process because the neurons adapt to the stimuli present.

Over time, the capacity of the brain to adapt its connections to environmental stimuli shortens

(Environment and intelligence, n.d.). For a person to become a genius, he or she needs to be

provided with the appropriate environmental stimuli in the first few years before the time of

adapting neuronal connections comes to a close. At a young age, Albert Einstein started exploring the ideas of physics and the universe (World Biography, n.d.). I believe that helped him improve his brain functions to become the well-known genius everyone knows today. For almost a century, there has been the factual use of the IQ test to determine one's intelligence. And over time, these IQ scores have been rising to which James Flynn of the University of Otago in New Zealand argues that there is an increased cultural sophistication in society (Is there a genius, 2011). What Flynn means is that as there is an increased amount of culture people share, are getting smarter compared to those back then. There has been a rise of athletics and knowledge seekers. Society's culture is improving at a pace, which includes diffusion of cultures, and less discrimination towards others. This is clear evidence to show how culture affects the morale and growth of geniuses. Scientists and Sociologists are comparing how different types of attitudes and practice shape people and society.

*"Beauty is a form of Genius--is higher, indeed, than Genius, as it needs no explanation. It is one of the great facts of the world, like sunlight, or springtime, or the reflection in the dark waters of that silver shell we call the moon. It cannot be questioned. It has divine right of sovereignty. It makes princes of those who have it."*

**-Oscar Wilde**

The changing and revolutionizing world also affects the amount of geniuses that are successful. The age and culture around people will affect the number of intelligences that arose and adapted to the ever-changing world. The cultural world led people to display their genius. Culture provide ways for different types of geniuses to grow. There had been many events in history, in which, geniuses blossomed out of, such as the Italian Renaissance, and the Roaring 20s. For

example, when the Harlem Renaissance arose, Langston Hughes was influenced by the acceptance of black culture, took advantage and became a genius in literature. His works helped shape American literature and politics (Langston Hughes, n.d.).

There has been many cases of twins studies and what researchers found is that every single psychological trait is heritable (Genetics and intelligence, n.d.). However, no single gene could be found to explain that a piece of the genes can be included in those traits. Even when potential genes were found, they rarely replicated, so it was futile. Studies show that the genes are actually there, but today's research can't solve how a very large number of interacting genes influence the development of complex psychological traits. Eric Turkheimer, Professor of Psychology at the University of Virginia, showed that the heritability of IQ is high in enriched environments that encourages learning; on the other hand, it is low in poorer households because they can't afford a nourishing environment. This proves that environment matters and that you can't take the heritability estimate of a trait at face value (Kaufman, n.d.). None of our traits arrive in the time of birth; while traits are develops over time based on environmental factors such as traits. However, this doesn't necessarily mean that people don't differ in the rate at which certain abilities are developed, which is one step from being a genius or not.

The problem is that geniuses can be made even after the brain growth is stopped due to age. to improve the brain by training. A solution to this problem can be solved by the biological fact explained by Dr. Ericsson's charge of powerful memories for storing information possessed by geniuses. Dr. Ericsson teaches psychology at Florida State University, and was able to train ordinary laboratory volunteers to increase their "digit-span" from seven to eighty and a hundred in two cases. When these subjects were exposed to rigorous training, they adapted mentally to

the increased memory demands (Cloud, 2009). Such evidence directly shows that even mediocre people can achieve higher intelligence through extensive training and by under the right circumstances. This experiment is very similar to what I read in Document Two of the six handouts, "Can You Make Yourself Smarter?" by Dan Hurley. He argued that the n-back game may be a game, but this game was made to train the brain's working memory. The children who played this game for an extended period of time had signs of improvement of the children's cognitive ability known as fluid intelligence; therefore, they became smarter. With training activities, a person may not necessarily become a genius, but they can be more intelligent. Another solution to the problem that a genius may not be made due to an age passed the growth of the brain anymore. The second solution to this problem is to make new neurons starting in in the brain, and continuing well into old age (How to Boost, n.d.). There are plenty of ways to preserve, protect and enhance the gray matter of the brain. Working out the body, also works out the mind. It is important to stay fit, mentally and physically. By doing so, your brain recognizes the still needed work to be done,

It would be too early to determine that anyone can achieve the status of genius or higher. But with new scientific discoveries and research show that it is also too early to think that one can only be average. There is no limitation when one puts in hard work, perseverance, and especially time. Our intelligence and talents is not permanently your IQ score, as these results can change over time. It can grow or waste depending how far you are willing to go. Greatness is something of any age can accomplish.

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