NATURE vs. NURTURE =

HEREDITY vs. ENVIRONMENT

You got your green eyes from your mother, and your freckles from your father. But where did you get your thrill-seeking personality and talent for singing? Did you learn these from your parents or was it predetermined by your genes? While it’s clear that physical characteristics are hereditary, the genetic waters get a bit more murky when it comes to an individual’s behavior, intelligence, and personality. Ultimately, the old argument of nature vs. nurture has never really been solved. We do not yet know how much of what we are is determined by our DNA and how much by our life experience. But we do know that both play a part.

# What is Nature vs. Nurture?

It has been reported that the use of the terms “nature” and “nurture” as a convenient catch-phrase for the roles of heredity and environment in human development can be traced back to 13th century France. Some scientists think that people behave as they do according to genetic predispositions or even “animal instincts.” This is known as the “nature” theory of human behavior. Other scientists believe that people think and behave in certain ways because they are taught to do so. This is known as the “nurture” theory of human behavior.

Fast-growing understanding of the human genome has recently made it clear that both sides are partly right. Nature endows us with inborn abilities and traits; nurture takes these genetic tendencies and molds them as we learn and mature. End of story, right? Nope. The “nature vs. nurture” debate still rages on, as scientist fight over how much of who we are is shaped by genes and how much by the environment.

**The Nature Theory – Heredity**

Scientists have known for years that traits such as eye color and hair color are determined by specific genes encoded in each human cell. The Nature Theory takes things a step further to say that more abstract traits such as intelligence, personality, aggression, and sexual orientation are also encoded in an individual’s DNA.

* The search for “behavioral” genes is the source of constant debate. Many fear that genetic arguments might be used to excuse criminal acts of justify divorce.
* The most debated issue pertaining to the nature theory is the existence of a “gay gene,” pointing to a genetic component to sexual orientation.
* An April, 1998 article in LIFE Magazine, “Were You Born That Way” be George How Colt, claimed that “new studies show it’s mostly in your genes.”
* If genetics didn’t play a part, then fraternal twins, reared under the same conditions, would be alike, regardless of differences in their genes. But, while studies show they do more closely resemble each other than do non-twin brothers and sisters, they also show these same striking similarities when reared apart – as in similar studies down with identical twins.

**The Nurture Theory – Environment**

While not discounting that genetic tendencies may exist, supporters of the nurture theory believe they ultimately don’t matter – that our behavioral aspects originate only from the environmental factors of our upbringing. Studies on infant and child temperament have revealed the most crucial evidence for nurture theories.

* American psychologist John Watson, best known for his controversial experiments with a young orphan named Albert, demonstrated that the acquisition of a phobia could be explained by classical conditioning. A strong proponent of environmental learning, he said: *Give me a dozen healthy infants, well-formed, and my own specified world to bring them up in and I’ll guarantee to take any one at random and train him to become any type of specialist I might select… regardless of his talents, penchants, tendencies, abilities, vocations, and race of his ancestors.*
* Harvard psychologist B.F. Skinner’s early experiments produced pigeons that could dance, do figure eights, and play tennis. Today known as the father of behavioral science, he eventually went on to prove that human behavior could be conditioned in much the same way as animals.
* A study in New Scientist suggests that sense of humor is a learned trait, influenced by family and cultural environment, and not genetically determined.
* If environment didn’t play a part in determining an individual’s traits and behaviors, then identical twins should, theoretically, be exactly the same in all respects, even if reared apart. But a number of studies show that they are never exactly alike, even though they are remarkably similar in most respects.

***So, was the way we behave engrained in us before we were born? Or has it developed over time in response to our experiences? Researchers on all sides of the nature vs. nurture debate agree that the link between a gene and a behavior is not the same as cause and effect. While a gene may increase the likelihood that you’ll behave in a particular way, it does not make people do things. Which means that we still get to choose who we’ll be when we grow up.***

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

HEREDITY OR ENVIRONMENT

There are many factors that influence the development of a child. In the blanks below, place an “H” if the factor is influenced by heredity, an “E” if the factor is influenced by environment, and “B” if the factor is influenced by both heredity and environment.

1. Color of hair

2. Color of eyes

3. Color of skin

4. General health of the baby

5. Personality traits of the child

6. Strength of eyesight

7. Physical strength

8. Relationships with family

9. Relationships with friends

10. Level of education

11. Sex / gender

12. Body type

13. Weight

14. Religious involvement

15. IQ

16. Height

17. Blood type

18. Defects passed on from parents

OPTION 7 – GENETICS, HEREDITY, AND BIRTH DEFECTS

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Hour: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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\_\_H\_\_ 3. Color of skin

\_\_B\_\_ 4. General health of the baby

\_\_B\_\_ 5. Personality traits of the child

\_\_H\_\_ 6. Strength of eyesight

\_\_B\_\_ 7. Physical strength

\_\_E\_\_ 8. Relationships with family

\_\_E\_\_ 9. Relationships with friends

\_\_E\_\_ 10. Level of education

\_\_H\_\_ 11. Sex / gender

\_\_H\_\_ 12. Body type

\_\_B\_\_ 13. Weight

\_\_E\_\_ 14. Religious involvement

\_\_B\_\_ 15. IQ

\_\_H\_\_ 16. Height

\_\_H\_\_ 17. Blood type

\_\_H\_\_ 18. Defects passed on from parents