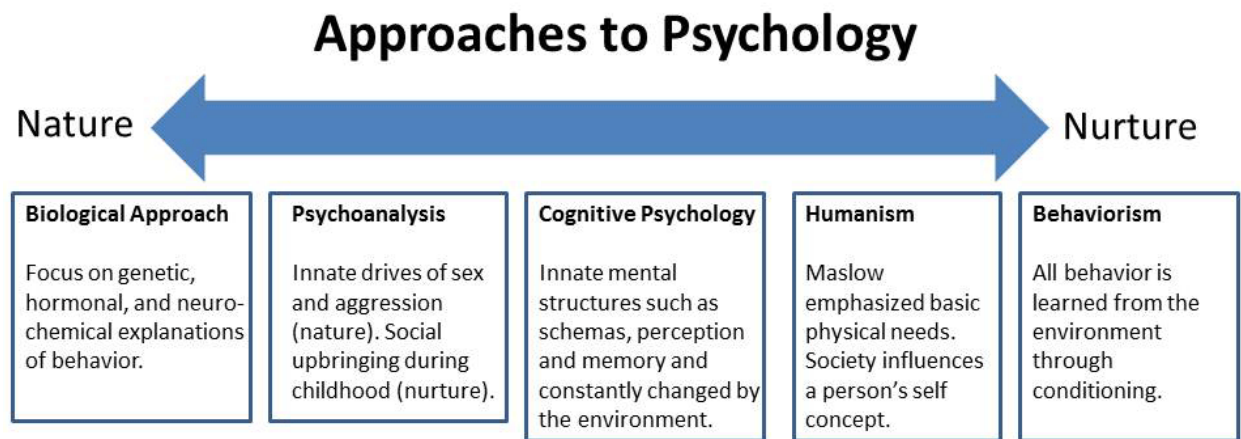


INTRODUCTION: NATURE VS. NURTURE

The nature versus nurture debate is one of the oldest issues in psychology. The debate centers on the relative contributions of genetic inheritance versus environmental factors to human development. Some philosophers such as Plato and Descartes suggested that certain things are inborn, or that they simply occur naturally regardless of environmental influences. Other well-known thinkers such as John Locke believed people were essentially a *tabula rasa* (“blank slate”) which suggests that everything that we are and all of our knowledge is determined by our experience.

For example, when a person achieves tremendous academic success, did they do so because they are genetically predisposed to be successful or is it a result of an enriched environment? Today, the majority of experts believe that behavior and development are influenced by both nature and nurture. However, the issue still rages on in many areas such as in the debate on the origins of homosexuality and influences on intelligence.



THE NATURE VERSUS DEBATE

The nature vs. nurture debate is centered on the question as to whether or not our psychology/behavior is determined by genes or shaped exclusively by our experience. In short, when a psychologist uses the word *nature* in reference to this question they mean “genetically inherited traits”. Moreover, when they speak of *nurture* they are considering all environmental influences *after conception*. For example, is a person quiet because of their genetic make-up or

because they learned at an early age that if they drew attention to themselves people might ridicule them?

It has long been known that certain physical characteristics are biologically determined by genetic inheritance. Color of eyes, straight or curly hair, pigmentation of the skin and certain diseases are all a function of the genes we inherit. Other physical characteristics, if not determined, appear to be at least strongly influenced by the genetic make-up of our biological parents. Height, weight, hair loss (in men), life expectancy and vulnerability to specific illnesses (e.g. breast cancer in women) are positively correlated between genetically related individuals. These facts have led many scientists to speculate as to whether psychological characteristics such as behavioral tendencies, personality attributes and mental abilities are also “wired in” before we are even born.

Those who adopt an extreme heredity position are known as **nativists**. Their basic assumption is that the characteristics of the human species as a whole are a product of evolution and that those individual differences which exist are due to each person’s unique genetic code.

Characteristics and differences that are not observable at birth, but which emerge later in life, are regarded as the product of physical maturation over time. That is to say we all have an inner “biological clock” which switches on (or off) certain types of behavior in a pre-programmed way. The classic example of the way this affects our physical development are the bodily changes that occur in early adolescence at puberty. However nativists also argue that maturation governs the emergence of attachment in infancy, language acquisition and even cognitive development as a whole.

At the other end of the spectrum are the environmentalists—also known as **empiricists**. Their basic assumption is that at birth the human mind is a **tabula rasa** (a blank slate) and that this is gradually “filled” as a result of experience.

From this point of view psychological characteristics and behavioral differences that emerge through infancy and childhood are the result of learning. It is how you are brought up (nurtured) that governs psychologically significant aspects of child development and the concept of

maturation applies only to the biological change of an individual over time. So, when an infant forms an attachment it is responding to the love and attention it has received, language comes from imitating the speech of others and cognitive development depends on the degree of stimulation in the environment and, more broadly, on the civilization within which the child is reared.

Examples of an extreme nature positions in psychology include Bowlby's (1969) Theory of Attachment, which views the bond between mother and child as being an innate process that ensures survival. Likewise, Noam Chomsky (1965) proposed language is gained through the use of an innate language acquisition device. Another example of nature is Freud's theory of aggression as being an innate drive (which he called *thanatos*).

In contrast Bandura's (1977) Social Learning Theory states that aggression is learnt by the individual from the environment through observation and imitation. This is seen in his famous bobo doll experiment (Bandura, 1961). Also the famous behaviorist B. F. Skinner (1957) believed that language was learnt from other people via behavior shaping techniques.

In practice hardly anyone today accepts either of the extreme positions. There are simply too many "facts" on both sides of the argument which are inconsistent with an "all or nothing" view. So instead of asking whether child development is down to nature or nurture the question has been reformulated as "How much?" That is to say, given that heredity and environment both influence the person we become, which is the more important?

This question was first framed by Francis Galton (1822-1911) in the late 19th century. Galton was convinced that intellectual ability was largely inherited and that the tendency for "genius" to run in families was the outcome of a natural superiority. This view has cropped up time and again in the history of psychology and has stimulated much of the research into intelligence testing (particularly on separated twins and adopted children). A modern proponent is the American psychologist Arthur Jensen. Finding that the average I.Q. scores of black Americans were significantly lower than whites he went on to argue that genetic factors were mainly responsible—even going so far as to suggest that intelligence is 80% inherited.

The storm of controversy that developed around Jenson's claims was not mainly due to logical and empirical weaknesses in his argument. It was more to do with the social and political implications that are often drawn from research that claims to demonstrate natural inequalities between social groups. Galton himself in 1883 suggested that human society could be improved by "better breeding". In the 1920's the American Eugenics Society campaigned for the sterilization of men and women in psychiatric hospitals. Today in Britain many believe that the immigration policies are designed to discriminate against Black and Asian ethnic groups. However the most chilling of all implications drawn from this view of the natural superiority of one race over another took place in the concentration camps of Nazi Germany.

For many empiricists there is a barely disguised right wing agenda behind the work of the behavioral geneticists. In their view part of the difference in the I.Q. scores of different ethnic groups is due to inbuilt biases in the methods of testing. More fundamentally they believe that differences in intellectual ability are a product of social inequalities in access to material resources and opportunities. To put it simply children brought up in the ghetto tend to score lower on tests because they are denied the same life chances as more privileged members of society.

Now we can see why the nature-nurture debate has become such a hotly contested issue. What begins as an attempt to understand the causes of behavioral differences often develops into a politically motivated dispute about distributive justice and power in society. What's more this doesn't only apply to the debate over I.Q. It is equally relevant to the psychology of sex and gender where the question of how much of the (alleged) differences in male and female behavior is due to biology and how much to culture is just as controversial.

However in recent years there has been a growing realization that the question of "how much" behavior is due to heredity and "how much" to environment may itself be the wrong question. Take intelligence as an example. Like almost all types of human behavior it is a complex, many-sided phenomenon which reveals itself (or not!) in a great variety of ways. The "how much" question assumes that the variables can all be expressed numerically and that the issue can be resolved in a quantitative manner. The reality is that nature and culture interact in a host of qualitatively different ways.

This realization is especially important given the recent advances in genetics. The Human Genome Project for example has stimulated enormous interest in tracing types of behavior to particular strands of DNA located on specific chromosomes. Newspaper reports announce that scientists are on the verge of discovering (or have already discovered) the gene for criminality, for alcoholism or the “gay gene”. If these advances are not to be abused then there will need to be a more general understanding of the fact that biology interacts with both the cultural context and the personal choices that people make about how they want to live their lives. There is no neat and simple way of unraveling these qualitatively different and reciprocal influences on human behavior.