

# NATURE VS NURTURE

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## ISSUES, PERSPECTIVES AND DEBATES IN PSYCHOLOGY

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NATURE refers to our innate potential that is influenced entirely by physiological and genetic factors. NURTURE refers to the influence of the environment into & all the learning experiences we have after we are born.

The nature-nurture debate has been hotly debated in psychology. At the outset of psychological research the nature-nurture debate was a point of argument between researchers from the behaviourist tradition and other approaches. More recently it has divided researchers with regard to social and racial differences in intelligence. Nowadays it's hard to believe that something as complex as human behaviour can be completely explained by either side of the argument, it's more likely to be a product of both, as suggested by the Psychologist Robert Plomin. He would like to see the nature-nurture debate end as he says most human behaviours are not influenced by nature *or* nurture but by nature *and* nurture. He makes the point that twin and adoption studies have provided evidence for the fact that there is a genetic component to personality, intelligence and general behavioural disorders such as Schizophrenia and Autism. However the genetic influence on these traits and behaviour is only partial, genetics account for on average half of the variance of most traits therefore the environment must account for the rest according to Plomin. This means that they are interdependent.

An approach that belongs on the interdependent side of the argument is the cognitive-developmental approach. A key assumption of this approach is that development occurs through the twin processes of nature and nurture. Piaget believed that children were innately curious and programmed to learn (nature) but they needed the right sort of stimulation and environment to be able to do this adequately (nurture). However a criticism to this approach is that Piaget underestimated children's abilities, this produces a difficulty in his theories and suggests that children are not the way he envisioned them. This could indicate that they are not innately curious and even if provided with the right environment, don't learn. This can be compared to the Learning Approach; a criticism with this approach is that it doesn't consider the effect of nature, similar to a criticism of the physiological approach, which doesn't consider the effect of nurture. If the theories are proved false it's tempting to say that that indicates nature and nurture have no effect individually, but must work together.

An approach that believes that nurture is entirely responsible for our behaviour is the learning approach. The learning approach presents the assumption that all behaviour is learnt, through interactions with the environment, and at birth we are a blank slate ready to develop. Evidence for this comes from Watson's study of little Albert. Albert was an 11-month-old baby when the study began; Albert was presented with a white rat, to which he responded with curiosity. After several sessions the presentation of the white rat was accompanied with a loud noise to which Albert responded with fear. After several sessions Albert displayed fear as soon as the rat was presented even without hearing the loud noise. This showed Albert had learnt to associate the rat with a loud noise, which he was frightened of. Albert generalised this fear with other things similar to the rat

such as a white rabbit and a white beard. Albert had learnt this behaviour. So according to the learning approach it therefore follows that nurture is solely responsible for human development. Watson's study was

On the other hand is the physiological approach. This approach presents the assumption that genetics are responsible for human behaviour. For example research into genetics has shown there to be genes responsible for certain type of behaviour and characteristics for example tongue rolling and eye colour, and more controversially research has been carried out to find a gene responsible for homosexuality and criminality. Evidence to support this theory comes from research into Schizophrenia. This research has shown there to be an excess of dopamine in the brains of schizophrenics. Schizophrenia has been shown to run in families, 10 out of every 100 children who have one biological parent with schizophrenia go on to develop schizophrenia whereas only 1 or 2 in every 100 in the general population develop schizophrenia. Twin studies on monozygotic (identical twins) have also indicated that genetics are responsible for schizophrenia, as if one twin is schizophrenic there is between a 35 and 58% chance of the other twin also developing schizophrenia. Of course this is only a correlation and this relationship could be caused by another variable. Twin studies are hard to conduct because the necessary situation doesn't occur particularly frequently in the population, therefore the sample is limited and difficult to generalise. This affects the reliability and validity of the results.

The idea of the causes of schizophrenia is explored further in clinical psychology. Schizophrenia is the most commonly diagnosed form of mental illness; 1% of the whole population will be diagnosed at some point in their lives as having schizophrenia. Schizophrenia doesn't seem to have one single cause but is rather the product of a relationship between biology, psychology and culture. Which suggests both nature and nurture play a role in the development of schizophrenia.

As I said earlier twin, adoption and family studies give the clearest indication that genetics play a role in the development of schizophrenia. 10% of children with a schizophrenia parent will go on to develop the disease. This however, because it's only a correlation, could be caused by another factor, for example the environment. Studies have been carried out using twins to find out the concordance rate of schizophrenia in twins. The increased risk of developing schizophrenia could be the result of difficulties that have arisen during the rearing of a child by a parent with such a disorganised personality. However adoption studies have been carried out which also suggest that genetics are responsible for schizophrenia. Heston (1966) compared the adopted children of 77 schizophrenic mothers with the adopted children of 50 normal mothers and found the former to be 5 times more likely to be admitted to hospital with schizophrenia. This study also shows that those children of schizophrenic parents were more likely to go on and be diagnosed as psychopaths, behaviourally disordered or neurotic. The study by Heston rules out the possibility that the experience of being adopted leads to the development of schizophrenia as the control group didn't go on to develop higher levels of schizophrenia. However the sample isn't large so is difficult to generalise and this type of situation doesn't occur frequently so it is hard to do this type of investigation.

It could also be due to learning theory. The child could have observed its parent; a role model, being rewarded for obscure actions, by increased attention for example, and modelled their behaviour on them. This theory suggests therefore that schizophrenia can be learned, or put another way is the product of ones environment.

There has been found to increased levels of the hormone dopamine in the brains of schizophrenics as well as enlarged ventricles. Again this is a correlation and could in fact be a symptom of schizophrenia not necessarily the cause.

Gregory Bateson suggested that schizophrenia was caused by communication. Bateson et al (1956) showed that schizophrenia arises within families which use "pathological" forms of communication in particular contradictory messages "double binds" in which for example a mother encourages her son to give her a hug but when he does so tells him "not to be such a baby". This therefore suggests that nurture is responsible for the development of schizophrenia. Although investigators are still uncertain whether this disorganised communication is the cause or result of schizophrenia. It's difficult to place all of the blame onto contradictory messages, people will

respond differently to contradictory messages; this suggests this idea is unreliable as the results aren't consistent. The disorganised family life often associated with poverty has also been implicated in schizophrenia.

In conclusion there doesn't seem to be a definite answer as to whether schizophrenia is caused by nature or nurture. They appear to be interdependent, as with the above causes no one seems to solely cause schizophrenia. There is evidence to support as well as to contradict each of the suggestions, which makes discovering the cause of schizophrenia difficult.

Child psychology has been in the middle of the debate on nature vs. nurture. Psychologists such as Piaget said children were innately curious but needed the right sort of environment to learn. Theories of attachment are however central.

Bowlby was involved within the psychodynamic approach and influenced by the work of ethologists. He believed children have an innate instinct to attach to their primary caregiver for survival. He stated that children are born with the tendency to display certain behaviours, which help ensure proximity and contact with the mother or mother-figure, for example crying, smiling etc. Attachment behaviour makes very good sense from an evolutionary point of view because it would have been those babies that stayed close to their mothers who would have survived to have children of their own. Therefore humans have evolved a biological need to behave in this way whereby ensuring they stay in close contact with one another.

However looking in from the nurture side of the argument: attachments are formed with respect to the child's temperament. If the child has a difficult nature the parents will respond to it differently therefore affecting the quality of the attachment. A mother of a difficult baby who cries all the time will have less patience with the baby and possibly wouldn't stay in as close proximity as would a mother of an "easy" baby. This therefore disrupts the patterns of attachment formation. Also mothers of special care babies don't have the opportunity to spend as much time with their infants as do mothers of healthy babies. These factors are all determined by environment. Again this shows that nature and nurture work together. Babies may have an innate instinct to attach to their parents but the environment may prevent this from occurring in the way intended.

Bowlby's theory of attachments forming because they aid survival can be linked to Freud's view that attachments are formed because the child knows its mother satisfies all its needs. Which in turn can be linked to the ideas of the learning approach. It's suggested that children learn attachment behaviour through classical conditioning. The child learns to pair receiving what it desires with showing attachment behaviours such as crying, reaching out and smiling. This idea was influenced by the work of Pavlov. Pavlov showed that dogs learnt to associate the ringing of a bell with receiving food until the point where they salivated just upon hearing the bell.

Here again it seems nature and nurture need to work together in order for the child to form strong attachments. Children do seem to possess an innate instinct to show attachment behaviours to draw their parents towards them and to get what they desire but this is aided or prevented because of the environment. Children will learn to associate attachment behaviours with receiving what they desire but genetics has to allow them to be able to perform these attachment behaviours in the first place. Children who have the inability to show attachment behaviours such as severely handicapped children still form bond with their parents so in a way this contradicts both sides of the argument.

Bowlby also presented a theory that can be applied to criminal psychology. Bowlby put forward the idea that if children didn't form attachments until after the age of 2<sup>1/2</sup> to 3 then it would have detrimental effects on the child as he grows up. This idea is concerned with the influence of the environment. This has links to the assumptions of the psychodynamic approach, which states "childhood experiences have an effect on later life". Bowlby suggested that if children didn't form bonds then they would develop severe personality disorders such as affectionless psychopathy. This is where an individual finds it difficult to form and maintain relationships, shows no remorse for wrongdoings and can't distinguish between right and wrong. This theory is backed up by Bowlby's 44 thieves study. In 1946 Bowlby compared 44 juvenile delinquents who had been convicted of theft

with a control group of delinquents in a similar position but who hadn't been convicted of theft. 14 of the 44 thieves but non of the control group showed signs of the affectionless psychopath and 7 of them had suffered complete and prolonged separation from their mothers for 6 months or more during the first 5 years of life. However this study is flawed. It was a retrospective study which means the delinquents and mothers had to remember past events. The majority of thieves hadn't suffered complete and pro-longed separations. Also the control group was odd because they didn't represent the whole population, as they were in fact also juvenile delinquents. In conclusion this theory doesn't really show that early separation results in criminal behaviour however it does look at the importance of childhood experiences, which means police are able to look at them first when investigating a crime.

There's also the suggestion that criminal behaviour is learnt in a similar way to aggression through media violence. This is called social learning theory. Children may observe criminals and view them as role models. They could see the exposure and attention they receive from the media as a reward, which is called vicarious reinforcement. The child may then model their behaviour on that of the criminal's. An example of a case where this has been suggested is the Jamie Bulger case. The boy killers are supposed to have been fascinated by horror movies such as Child's play. This of course is just an idea. The boys may have also been separated from their mothers at a young age or they could possess some of the features suggested by Lombroso, an advocate for the genetic basis of origins of criminal behaviour.

Lombroso believed that criminals were "biologically predisposed". Lombroso lived and worked in Victorian England. During the Victorian Era it was believed criminals could be spotted by their facial features. This is part of a tradition known as physiognomy. He believed that some people were born with a strong, innate predisposition to behave anti-socially. He suggested criminals were from a more primitive form of human beings who were genetically somewhere between modern humans and their primitive ancestors. The physical characteristics they were suggested to display included a narrow sloping brow, which suggested a low intellect, a prominent jaw, which suggested they were strong in passion, high cheekbones, large ears and extra nipples, toes and fingers. He suggested these individuals couldn't adjust socially and morally to a modern civilised society. They were incapable of distinguishing right from wrong, showed no guilt or remorse and showed no feelings for others so were unable to form deep, meaningful, loving relationships. These are interestingly the characteristics of an affectionless psychopath. Of course there is no serious evidence to support this theory and it encourages prejudices and stereotyping. Lombroso's research was flawed as he didn't use proper control groups and the criminal samples he used were often mentally disturbed or suffering chromosomal abnormalities. Goring (1913) reported that a study comparing 3000 convicts with 3000 non-criminals found no differences in features.

Another theory for the genetic basis of crime comes from Sheldon. He categorised people into 3 body shapes and noticed criminals fell into a particular group. His three groups were: Endomorphs – these people were fat and soft; they were relaxed as a whole and enjoyed the company of others. Ectomorphs – these people were thin and fragile and as a whole solitary and self-conscious. Mezomorphs – these were muscular and broad, this is the group associated with criminality because they are aggressive, have a high pain tolerance and are careless of other people's feelings. Of course this is only a correlation and could be due to third variables.

In conclusion it's unlikely that biological theories alone can offer a convincing explanation for criminal behaviour. Any link between physiology and criminal behaviour is likely to have been affected by the environment.

In conclusion of the nature nurture debate there doesn't seem to be any conclusive evidence for either and I believe the interactionist view is more reliable. Because of the advances in technology it's impossible to reach a clear result as proved in the case of schizophrenia, it's better to be more open-minded and accept that both nature and nurture have a role to play side by side.

