The Great Criminology Debate

Nature vs Nurture

Nativism (aka Positivism): A formal term used to describe the perspective that natural predisposition (nature) is the primary factor that determines human behavior and potential.

Example: genetics, physiology, chemical activity, hormone levels

Famous Supporters: Cesare Lombroso (physical traits), Noam Chomsky

Empiricism (aka Socialization): A formal term used to describe the perspective that socialization (nurture) is the primary factor that determines human behavior and potential.

Example: upbringing, exposure to violence, education, socioeconomic status, exposure to physical / emotional abuse.

Famous Supporters: Emile Durkheim (anomie), John Locke (tabula rasa).

More About Brain Waves

Most people have five major types of brain wave patterns. Multiple patterns are present in the brain at any given time.

Each area of the brain has a predominate pattern that reflects one’s current mental state. The five types of brain wave patterns are:

Beta waves (13-30Hz): The fastest waves. Associated with attention, excitement, action.

SMR waves: A subcategory of beta waves. Active in the sensorimotor cortex when a person is quietly focused to prepare for a physical challenge.

Alpha waves (8-12Hz): Slower waves. Associated with relaxation, passive awareness, mind, concentration.

Theta waves (4-7Hz): Even slower waves. Associated with drowsiness, daydreaming, falling asleep.

Delta waves (0.5-3Hz): The slowest waves. Associated with deep sleep.

These patterns can be measured and recorded by an electroencephalogram (EEG). The EEG can therefore map a person’s mental function.

Criminal Minds: The scientific study of crime, criminals, criminal behaviour, and corrections. Often concerned with the root causes, and the treatment, of criminal behaviour.

Criminal Conduct: conduct that may harm personal safety and health, property, and social order.

Nature vs Nurture: A colloquial term used to describe the debate regarding the root cause of human behaviour / human potential. This debate sees two possible explanations for behaviour – one being natural predisposition (nature) and the other being socialization (nurture).

The Neurological Model – A Nativist Perspective

Criminal minds have been found to be different from non-criminal minds in a number of ways:

1. The left hemisphere (responsible for language and communication) is less active.

2. Lower levels of activity in the frontal cortex (responsible for rational control). The central limbic system (responsible for emotion, impulse, aggression, and action) is therefore left unchecked. Imagine a car that had a throttle but no brakes!

3. Levels of theta waves (consistent with drowsiness or near falling asleep) are far more present, while beta waves (consistent with focus and concentration) are less present.

Biofeedback / Neurofeedback Treatment

When a normal child tries to read or concentrate, he increases the amount of beta waves in certain parts of his brain. ADHD children don’t do this. Instead of increasing beta waves, they increase theta waves. This slows down the daydreaming brain wave. Exgo, when other children are concentrating harder, ADHD children are shutting off.

Neurofeedback - How it Works:

Over a series of 40 or more neurofeedback sessions, children are gradually taught to inhibit the brain’s production of theta waves and increase the brain’s use of beta waves. Many children can learn to make these changes.

As one learns to adjust their brain wave patterns, they show an improvement in cognition, and a reduction in ADHD symptoms and behaviour.

Some experts criticize these studies as lacking control groups. However, studies over a decade indicate this improvement is permanent.
The Sociological Perspective

Empiricists believe that sociological factors play a major role in determining human behaviour. Thus, they support various forms of education, training, counselling, therapy, and a variety of behavioural modification programs, including:

**Individual-based programs:** For example, the EQUIP program combines social skills training, moral reasoning, and problem solving that emphasize positive peer culture.

In Problem-Solving Skills Training, a youth works individually with a therapist to learn appropriate self-statements for interpersonal situations that lead to effective resolutions. By altering the way the youth perceives events and interprets the intent of others, aggression is reduced.

**Family-based programs:** Such as Parental Management Training in which parents are trained to manage their children, and Multi-Systemic Therapy (MST) in which all aspects of a child's life are analyzed and modified.

**Community-based programs:** Such as group homes, foster care, and wilderness programs.