



What Makes a Criminal?

Sophie Dixon

PhD in Criminology

What Is Criminology

Criminology the study of **crimes** and their **causes, effects, and social impact**. A criminologist's job responsibilities involve analyzing data to determine **why the crime was committed** and to find ways to **predict and prevent further criminal behavior**.

Multidisciplinary Subject

- Psychology – why someone commits a crime
- Sociology – social impact of criminal activity
- Philosophy – Is a criminal “responsible” for there actions

- Police – Detection and Prevention
- Government – Policies around crime and the justice system
- Prison Services – Rehabilitation or Punishment

Today

- Nature V Nurture Debate
- Inherited Influences on criminality
- Environmental Influences on criminality
- Impact on Policy

Nature Vs Nurture

Nature: those things acquired by genetic or hereditary influences.

Nurture: those things that are influenced by the environment we live in

Inherited or Environmental

- Hair Colour
- Taste in Fashion
- Height
- Eye Colour
- University Attendance
- Drug Addiction
- Personality
- Mental Illness

Examples

IQ

Can you think of any reasons why this is a major point of debate.

Traits That Make a Criminal



Inherited Traits

Jeffrey Landrigan had been adopted at birth into a loving middle-class professional family. He was nevertheless a particularly troublesome child from the beginning. This behaviour progressed from temper tantrums at 2 years of age, abusing alcohol at 10 years of age, being arrested for burglary at 11 years of age, abusing drugs as a teenager, to killing his first victim at the age of 20 years. After escaping from prison, he perpetrated his second killing and was sentenced to death. While he was on death row in Arizona for this second homicide, another death-row inmate noticed an eerie resemblance between Landrigan and Darrel Hill, an inmate he had met on death row in Arkansas. It transpired that Hill was the biological father of Landrigan — a father Landrigan had never met.

Hill, like his son Landrigan, was a career criminal who also abused drugs and also killed twice. Hill's father — Landrigan's grandfather — was also an institutionalized criminal who had been shot to death by police. Landrigan's great-grandfather was a notorious bootlegger. Hill had seen Landrigan only briefly as he hid two .38 pistols and the narcotic medicine Demerol under his baby son's mattress — an action that was unintentionally prophetic of Landrigan's future drug abuse and violence¹.

Inherited Traits

XYY Chromosome

Mono-Amine Oxidase A gene

Prefrontal Cortex

XYY

Male = XY

Female = XX

Chromosomal Mutation = XYY

- Incidence rate 1/1000
- Studies show that 4% of mentally disordered male forensic patients have this mutation
- That is 40x the rate in the general population

XYY



American mass murderer who systematically tortured, raped, and murdered eight student nurses from South Chicago - 1966

- Defense lawyer attempted to XYY condition as legal defense
- Didn't have the disorder
- A lot of methodological issues with initial studies

Mono Amine Oxidase A: MAOA

MAOA gene

MAOA gene produces an enzyme that brakes down chemicals that send messages in the brain

Serotonin & Dopamine

Mono Amine Oxidase A: MAOA

Low Activity MAOA gene → A deficit in this MAOA enzyme → High levels of serotonin and dopamine → impulsive violence and aggression

Low activity MAOA Gene → Impulsive Violence & Aggression

Mono Amine Oxidase A: MAOA

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News

Lighter sentence for murderer with 'bad genes'

Italian court reduces jail term after tests identify genes linked to violent behaviour.

Emiliano Feresin

Related stories

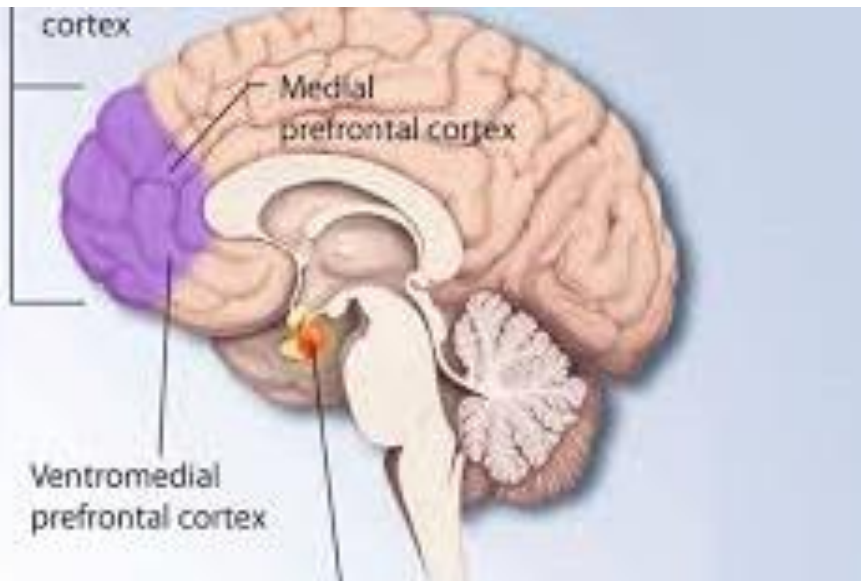
- [Human genetics: One gene, 10 years](#)
08 July 2009
- [Biomarkers in psychiatry](#)
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- [Psychiatric genetics: The brain family](#)
09 July 2008

Abdelmalek Bayout

Admitted to stabbing and killing a man he had argued with

Appeal: found abnormalities in brain-imaging scans and in five genes that have been linked to violent behaviour — including the gene (MAOA).

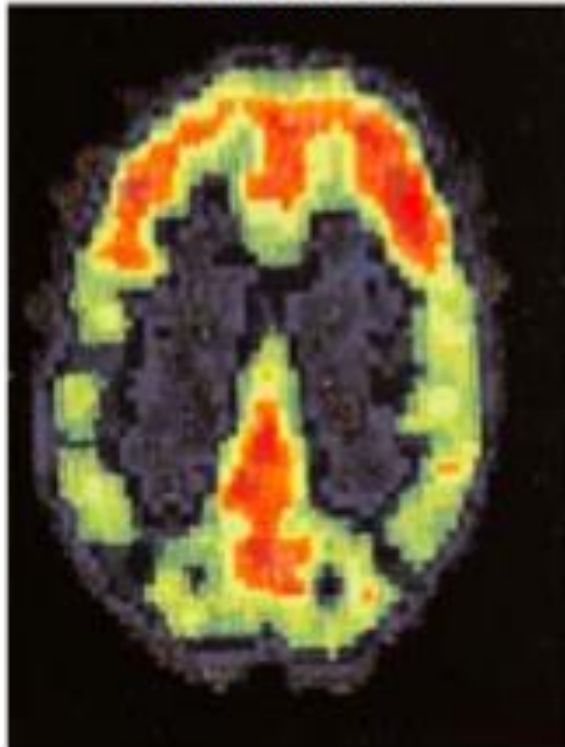
Prefrontal Cortex



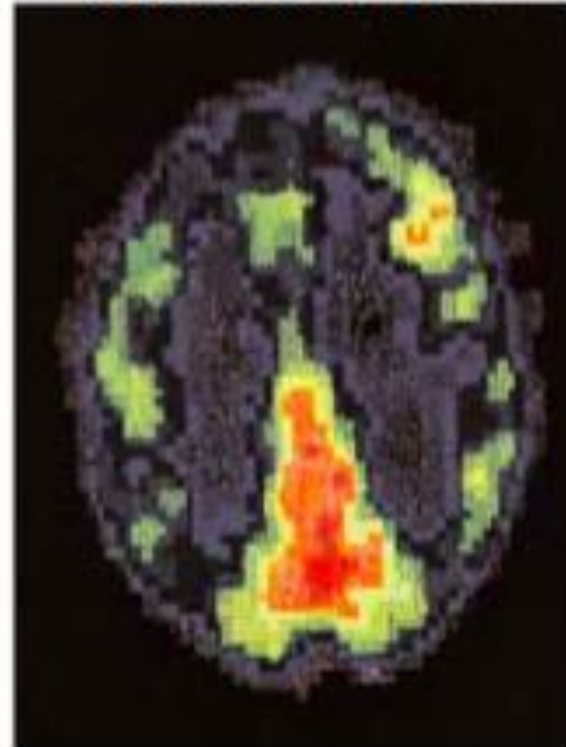
- Decision Making
- Cognitive flexibility
- Impulse control
- Emotional regulation
- Empathy

Prefrontal Cortex

Controls



Murderers



Environmental Factors

- Foetal Alcohol syndrome
- Childhood Maltreatment
- Birthing Complications
- Head Trauma
- Poor maternal attachment
- Poverty
- Deviant Peers

Childhood Maltreatment

- Physical abuse
- Emotional Abuse
- Sexual Abuse
- Neglect

Majority of maltreated children suffer from more than one kind of abuse

Childhood Maltreatment

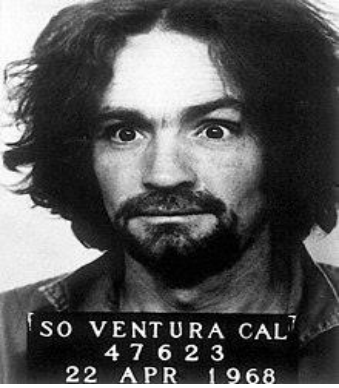
Childhood maltreatment is associated with poorer mental health and elevated delinquent behaviour.

Maltreatment increases the risk of

- Depression
- Anxiety
- PTSD
- Conduct disorder
- Personality disorders
- Substance abuse

Childhood Maltreatment

These disorders are more likely to occur because the exposure to sustained levels of stress can influence the expression of some genes (epigenetics) and change brain function.



Childhood Maltreatment



Charles Manson

- Leader of a cult that committed a total of 9 murders
- Neglected by mother
- Sold to strangers for alcohol

Aileen Wuornos

- Killed 6 men along Florida highways
- Father committed suicide in prison after being convicted for child molestation
- Abandoned by mother
- Raised by alcoholic grandmother and physically and sexually abusive grandfather

Foetal Alcohol Syndrome

Developed due to significant exposure to alcohol during pregnancy

- Craniofacial abnormalities
- Learning disabilities and low IQ
- Neurological Functional and Structural abnormalities

Foetal Alcohol Syndrome

415 patients diagnosed with FAS or FAE

- 60% exhibited juvenile delinquency
- 49% showed inappropriate sexual behaviours on repeated occasions
- 50% Spent time in prisons, detention centers, or psychiatric inpatient setting.

Deviant Peers

- Individuals that affiliate with deviant peers are more likely to participate in crime themselves
- Studies have shown that the majority of crimes committed by teenagers occur in groups
- Association with deviant peers is one of the best predictor of participation antisocial activity.

Interaction of Two Factors

Low activity MAOA + Childhood Maltreatment

These two risk factors interact with one another to increase risk of criminality above that of the sum of both risk factors in isolation.

- Low MAOA has a risk factor of 1
- Childhood Maltreatment has a risk factor of 3
- Both together have a risk factor of 10

Application

There are no right or wrong answers

Questions

- Should we be putting people in prison?
- What should be the focus of prisons – punishment or rehabilitation?

Questions

- What should we do if we know somebody has many risk factors for criminality but has not yet committed a crime?
- Should somebody with many risk factors for criminality be considered responsible for their criminal activity?

Questions

- Should somebody under the age of 25 be tried as an adult?