

# Criticisms of positive theory in the light of international developments

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## Abstract:

Positivist criminology assumes that criminal behaviors have its own distinct set of characteristics. As a result, most criminological research conducted within a positivist paradigm has sought to identify key differences between ‘criminals’ and ‘non-criminals’. This paper examines the criticism as these theories were propounded more than 200 years ago.

Date of Submission: 12-06-2024

Date of acceptance: 25-06-2024

## I. INTRODUCTION -POSITIVIST SCHOOL OF CRIMINOLOGY

In the late nineteenth century, some of the principles on which the classical school was based began to be challenged by the emergent positivist school in criminology<sup>1</sup>, led primarily by three Italian thinkers: Cesare Lombroso, Enrico Ferri, and Raffaele Garofalo.

It is at this point that the term ‘criminology’ first emerged, both in the work of Italian Raffaele Garofalo (criminological) in 1885 and in the work of French anthropologist Paul Topinard (criminology) around the same time.

Positivist criminology assumes that criminal behaviors have its own distinct set of characteristics. As a result, most criminological research conducted within a positivist paradigm has sought to identify key differences between ‘criminals’ and ‘non-criminals’. Some theorists have focused on biological and psychological factors, locating the source of crime primarily within the individual and bringing to the fore questions of individual pathology.

This approach is termed individual positivism.

Other theorists – who regard crime as a consequence of social rather than individual pathology – have, by contrast, argued that more insights can be gained by studying the social context external to individuals. This approach is termed sociological positivism.

### Positivism and causality

The positivist school introduced the problem of causality into criminological thinking. Examining the potential causes of crime has been tackled from a range of differing perspectives, including: -

- Biological: Are criminals born or made?
- Psychological: What are the individual factors that lead to criminal behavior?
- Sociological: Why do some neighborhoods have higher crime rates than others?
- The project of seeking the ‘scientific facts’ that can explain criminality has been – and continues to be – a dominant strand within academic criminology.

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<https://www.open.edu/openlearn/society-politics-law/introduction-critical-criminology> [Last visited on 07.01.2024]

▪ Positivism does not concern itself with the abstract and unprovable, but rather with the tangible and quantifiable. Through the acquisition of ‘objective knowledge’ it is assumed that most social problems can be better understood and treated. The key characteristic of the positive school is its emphasis on applying the methods of the natural sciences to the study of human behavior. Within criminology, positivist approaches have focused on searching for the causes of criminal behavior and have assumed that behavior is predictable and determined.<sup>2</sup>

▪ Differences between individual and sociological positivism: -

Individual positivism.	Sociological positivism.
Crime is caused by individual abnormality or pathology.	Crime is caused by social pathology.
Crime is viewed as a biological, psychiatric, personality or learning deficiency.	Crime is viewed as a product of dysfunctions in social, economic and political conditions.
Behavior is determined by constitutional, genetic or personality factors.	Behaviors are determined by social conditions and structures.
Crime is a violation of the moral consensus surrounding legal codes.	Crime is a violation of a collective conscience.
Crime varies with temperament, personality and degree of ‘adequate’ socialization.	Crime varies from region to region depending on economic and political milieux.
Criminals can be treated via medicine, therapy and resocialization and the condition of the majority thus cured.	Crime can be treated via programs of social reform, but never completely eradicated.
Crime is an abnormal individual condition.	Crime is a normal social fact, but certain rates of crime are dysfunctional.

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<sup>2</sup> The development of critical criminology [*Last visited on 07.01.2024*]

Key features of positivism<sup>3</sup>-

- ✓ The use of scientific methodologies, from which quantifiable data are produced and are then open to further empirical investigation and scrutiny
- ✓ The emphasis on the study of criminal behavior, rather than on the creation of laws or the operation of criminal justice systems
- ✓ The assumption that ‘criminality’<sup>4</sup> is different from ‘normality’ and indicative of various pathological states
- ✓ The attempt to establish cause-and-effect’ relations scientifically and to therefore increase the ability to predict criminality (when particular criminogenic factors can be identified)
- ✓ The assumption that, because criminals are ‘abnormal’, criminal behaviour is in violation of some widely held consensus in the rest of society
- ✓ An interest in the treatment of causes, when these become known, with the ultimate goal of eliminating criminal behaviour. Since behaviour is involuntary and not a matter of choice for the offender, punitive responses are misplaced.

Evaluation of the historical approach

Lombroso brought science to the study of crime! He based his ideas on empirical observation and detailed measurements. He revealed that crime may not simply be as a result of free will. (Promotes Fairness) Lack of control in the method: Lombroso did not give the same attention to non-prisoners as he did for prisoners when studying their ‘atavistic form’

Charles Goring (1913) after comparing 3000 criminals with 3000 non-criminals, He found no differences except for the fact that criminals were smaller and had below average intelligence.

Subcultural Theory

Linked to anomie and strain are concepts of status frustration and differential opportunity, which

North American subcultural theorists used to explain the delinquent activities of disadvantaged groups in the 1950s and 60s.

Richard Cloward and Lloyd Ohlin (1960) built on these ideas, pointing to the differential opportunity structures available to lower-class young people in different neighborhoods: criminal (making a living from crime), conflict (territorial violence and gang fighting) and retreatism (drugs and alcohol).

Status frustration<sup>5</sup> is associated with the work of Albert Cohen (1955), who conducted research into group offending by young, lower-class men. Cohen argued that lower-class youths could not aspire to middle-class cultural goals and so, frustrated, they rejected them to create their own subcultural system of values. In school, for example, they gain status and respect by meeting the expectations of peers not teachers, engaging in delinquent activities such as smoking, truancy, and acting up in class.

Researchers at the Scottish Centre for Crime and Justice Research draw on some of these ideas in their research on young people and ‘gangs’. For example, Susan Batchelor’s research on girls and violence, which emphasizes the gendered meaning of respect in street-orientated youth groups, or Alistair Fraser’s work on territorial gang identity amongst young men in Glasgow.

As Walklate observes, this theory lends itself to the range of policy initiatives known as situational crime prevention, sometimes referred to as designing out crime. This is the umbrella term for a range of strategies that are used to reduce the opportunities to commit crime.

Q. ‘What works to reduce crime?’<sup>6</sup>

Considers situational crime prevention and includes measures and it also includes ‘approaches that extend beyond the “situation”’ which involve restricting access to weapons and alcohol and investing in diversionary activities

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<sup>3</sup> Various researchers in SCCJR draw on feminist perspectives in their work, especially in relation to research relating to domestic and sexual violence (see SCCJR Violence Against Women and Girls) [**Last visited on 08.01.2024**]

<sup>4</sup> <https://www.sccjr.ac.uk/wp-content/uploads/2016/02/SCCJR-Causes-of-Crime.pdf> [**Last visited on 08.01.2024**]

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<sup>5</sup> experienced by the less successful. (See section on ‘Relative deprivation’, below). More information on strain theories and the work of Jock Young [**Last visit on 08.01.2024**]

<sup>6</sup> In the 2014 Scottish Government report [**Last visited on 08.01.2024**]

(such as engagement in sport) to encourage people to engage in pro social, rather than anti-social, activities (such as crime).

Ecological theories focus on the influence of neighborhood organization on criminal activity. Researchers have found that poorer neighborhoods, where families frequently move from one location to another and where there is a relatively high proportion of single-parent households, tend to have higher crime rates. Ecological theorists argue that this is a result of the inability of neighborhood residents, because of the chaotic conditions of their lives, to organize effectively to achieve their goals.

#### RIGHT REALISM / RATIONAL CHOICE THEORY

This branch of criminology sees individuals as rational actors: -  
individuals are capable of making their own choices, which includes choosing to commit crime. In any course of action, individuals weigh up the likely benefits and disadvantages of each action.

Right realism<sup>7</sup> emerged in the USA and the UK around the 1980s, in response to rising crime rates and a perceived failure of sociological approaches to adequately address the real causes of crime. Prominent right realists such as James

Wilson (1975) and Charles Murray (1990) come from political backgrounds and claim that criminological theory should inform criminal justice policy.

One of the key theories to emerge from this branch of criminology<sup>8</sup> is rational choice theory, associated with the work of Cornish and Clarke (1986).

According to this theory, individuals not only decide to commit crime, but decide when and

where to commit crime.

**Realism:** - Realist criminology tends to be written from a particular ideological position, i.e. it is politically right or left. Both approaches attempt to get 'real' about the problem of crime: treating it as a serious social issue.

Examples of this strategy include: -

Increasing formal surveillance measures such as CCTV and alarms, and the neighborhoods watch scheme increasing natural surveillance such as improving street lighting concealing or removing 'targets' e.g. 'high value' goods such as mobile phones, cash and jewelry.

Criminology describes the study of crime and punishment. The biological theory of criminology says that individuals who commit crimes and individuals who obey the law are biologically different.

Theories<sup>9</sup> that focus on the individual include psychological and biological explanations. Biological theories have focused on body type, genetic factors, studies of twins to differentiate between genetic and social factors, and studies of chromosome variations. This literature suggests that criminality is genetically transmitted through the family.

Psychological theories also focus on the individual. They consider internal characteristics influencing criminal behavior and have proposed that criminal propensity is a function of psychological trauma and maladjustment early in the family experience. A second category of theories focus on social structure and social process and their promotion of criminal behavior.

Learning theory and subcultural theory have generated the propositions that criminality is transmitted through the family socialization process and is encouraged by families entrenched in criminal subcultures.

Theories focusing on conflicts in cultural values propose that families as well as individuals are affected by cultural pressures to commit crime. The conflict theory suggests a parallel

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<https://www.simplypsychology.org/lombroso-theory-of-crime-criminal-man-and-atavism.html> [Last visited of 20.01.2024]

<sup>8</sup> Biological Theories of Crime By Charlotte Nickerson Updated on September 29, 2023 [Last visited on 20.01.2024]

<sup>9</sup> Criminological Theory and Family Crime (From Crime and the Family, P 46-63, 1985, by Alan J Lincoln and Murray A Straus - See NCJ-98873) [Last visited on 08.01.2024]

proposition: that families as well as individuals are affected by social inequality and resulting structural pressures to commit crime.

Literature focusing on social stress has suggested another proposition: families under stress generate crime. The third broad theme among criminological theories is the societal reaction focus. This approach considers how societal mechanisms created to control crime may be partially responsible for causing it.

This analysis results in the proposition that crime is a product of criminal type scripting within, by, and against families. These propositions are not established facts. Instead, they represent guides to thinking about the issues and serve as hypotheses. Fifty-three references are listed.

The oldest theories of this type focused solely on the biological aspect, believing that criminals are born and not made, while some modern offshoots include external factors, as well.

In contrast to biological theories, classical<sup>10</sup> theories presumed that committing a crime is strictly a choice that doesn't correlate with any external factors or distinct biological characteristics. Both approaches have been proven overly extreme, but it's rare for an older theory - i.e., classical thought - to be more in line with scientific evidence than a younger one.

Criminological theories have a long history, but biological theories of crime are rather new. They can be traced back to the work of Cesare Lombroso.

When Lombroso entered the field of criminology, most of his colleagues focused almost exclusively on the legal aspects of crime. They wanted to discover the combination of laws that would reduce crime.

Lombroso changed that forever. Instead of focusing on the law, he focused on the criminal. Lombroso thought that some people are more primitive than others - they are living relics of an earlier stage of human evolution. These primitives can be identified by their strange skulls, and they are more prone to violence.

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<sup>10</sup> <https://biological-theory-of-crime> [Last visited on 08.01.2024]

Some people took up Lombroso's theories to argue in favor of eugenics, or the elimination of certain bloodlines from the human species. During the Progressive era in America, eugenicists gave highly publicized speeches and wrote books that influenced state-level legislation. Many had a definite racist tinge. So did the claims of Nazi eugenicists of a later period.

Biological theories of criminology were disproved within several decades. However, Lombroso had a lasting impact on the field. In addition to shifting the focus from the law onto the criminal, Lombroso promoted the humane treatment of prisoners, arguing that work programs could teach them valuable skills and help them return to normal society.

#### Biosocial Theories

Some researchers have come to the realization that biological<sup>11</sup> characteristics cannot feasibly be used as the only explanation for human behavior. For that reason, a new set of theories emerged that combine sociological and biological aspects. They are referred to as biosocial theories.

These theories take a look at the abovementioned core elements of the biological theory of crime, but also take into account the social factors, such as living in a disruptive home, being bullied by peers, and so on. That's why there are laws regarding the responsibility of parents to combat the issue of child abuse and neglect.

#### Evolutionary views of crime:

Cheater<sup>12</sup> theory: a subpopulation of men has evolved with genes that incline them toward extremely low parental involvement. Sexually irresponsible men are free to prey on young girls. Overtime their offspring will supply an ever-expanding supply of cheaters who are both antisocial and sexually aggressive.

All biological theories are racist and dysfunctional.

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<sup>11</sup> <https://blog.ipleaders.in/all-about-crime-and-its-theories/> [Last visited on 21.01.2024]

<sup>12</sup> <https://www.julianhermida.com/crimtrait.htm> [Last visited on 09.01.2024]

## Biopsychosocial Theories

Biopsychosocial theories of crime involve three disciplines when studying crime causation:

1. Biology
2. Psychology
3. Sociology

One of the modern biological theories of crime examples observed through the prism of sociological and psychological theories of crime includes a case study<sup>13</sup> of the infamous serial killer Theodore Robert Bundy.

Biological influences are hard to establish here. Social and psychological factors seem to have taken the lead: Given that Bundy's grandfather displayed aggressive tendencies, it's likely that Bundy's behavior was modeled after that. The environment Ted grew up in is believed to have significantly impacted him, and the confusion and trauma he experienced undoubtedly affected his perception of the world and his place in it, particularly in relation to women.

In psychiatric terms, several disorders have been thrown around when discussing this serial killer. The most prominent three are narcissistic, borderline, and antisocial personality disorder. While it's likely he suffered from them, their causes in Bundy remain unknown.

One of the tasks of criminal<sup>14</sup> psychology is to glean the psychological factors participating in criminal behavior, and determine their roots. That's why more research and studies need to be conducted, so as to reach a better understanding of human behavior, and avoid convictions based on bias.

Q. Why one would commit a crime?

Criminal behavior is not a fixed phenomenon: what is illegal and what isn't changes with the

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<sup>13</sup> Rational Choice Theory: What It Is in Economics, With Examples By AKHILESH GANTI Updated May 27, 2023 Reviewed by SOMER ANDERSON Somer G. Anderson Reviewed by Somer Anderson [**Last visited on 22.01.2024**]

<sup>14</sup>

<https://www.bartleby.com/essay/Biologica-I-Theory-Of-Criminology-FCBJAVUBRGV>  
[**Last visited on 22.01.2024**]

law, not through biological factors. Biological theorists assess the causation from the biological angle, looking for causes in neurology, genetics, and physiology. However, since the impact of social and economic factors remains the strongest predictor of antisocial behavior. Lombroso

Positivism is the use of the scientific method to solve problems. It relies on the use of empirical methods to test hypotheses.

Cesare Lombroso studied cadavers of executed criminals to scientifically determine whether law violators were physically different from people of conventional values.

Lombroso believed that serious offenders have inherited criminal traits. These born criminals have inherited physical problems that take them to a life of crime.

Criminogenic traits can also be acquired through indirect heredity, such as the case of a degenerate family with a history of insanity, deafness, syphilis, epilepsy and alcoholism.

## Sociology<sup>15</sup>

It stresses that biological and genetic conditions affect the perception and learning of social behaviors, which in turn are linked to existing environmental structures. The gene is the ultimate unit of life that controls all human destiny.

Biochemical<sup>16</sup> conditions and crime: -

**a)** Sugar: Twinkie defense in Moscone's and Milk's murder by White. White was a city councilman and former police officer who opposed Milk's measures in favor of gay people. The jury found him guilty of the lesser offense of manslaughter.

**b)** Nutritional deficiencies: low levels of vitamins and minerals.

**c)** Hypoglycemia: low level of sugar in the blood.

**d)** Hormonal deficiencies

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<sup>15</sup> Deterrence no more. Now reformation or rehabilitation. Sociobiology (Edmund Wilson, 1970) [**Last visited on 09.01.2024**]

<sup>16</sup>

<https://www.investopedia.com/terms/r/rational-choice-theory.asp> [**Last visited on 22.01.2024**]

- e) Premenstrual syndrome
- f) Allergies
- g) Environmental contaminants
- h) Neurophysiological conditions
- i) The study of the brain activity-Neurological and physical abnormalities are acquired as early as the fetal or perinatal stage and then control behavior throughout the life span.
- j) Attention deficit disorder
- k) Brain injuries
- l) Genetics and crime

Some personality traits are genetically determined. Richard Speck, the murderer of 8 nurses in Chicago was said to have inherited an abnormal chromosomal structure.

These led to several studies, including twin studies and adoption studies.

#### TRENDS

Criminology<sup>17</sup> represents a diverse body of knowledge that incorporates a wide variety of approaches. Although few contemporary trends can be applied to the whole field of study, it is nonetheless the case that much research is increasingly quantitative, particularly in studies examining the causes of crime.

Some of this work applies the statistical approach originated by Quetelet to explain the crime rates associated with particular societies and social groups; other work employs the approach originated by Lombroso to explain the likelihood of an individual's committing a crime in terms of his biological, psychological, or social characteristics.

These approaches are increasingly aimed at probabilistic predictions rather than absolute or deterministic ones. Finally, criminologists now tend to concentrate on identifying factors in societies that are associated with relatively small increases in crime rates and factors in individuals that are associated with relatively small increases in the probability that they will commit crimes.

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<https://www.britannica.com/science/criminology/Sociological-theories> [Last visited on 09.01.2024]

All of this reflects the inherent complexity of the subject and points to the conclusion that no single factor actually determines whether an individual commits a crime or whether a society has high or low crime rates.

“Radical” criminological theories focus on power but anchor it in the political and economic structure of society.

These theories generally explain both crime and criminal justice as by-products of capitalism and explore alternative systems that might generate more harmonious social relations.

Radical theories<sup>18</sup> tend to view criminal law as an instrument by which the powerful and affluent coerce the poor into patterns of behaviour that preserve the status quo. One such view, the so-called “peacemaking” theory, is based on the premise that violence creates violence. Advocates of this theory argue that criminal justice policies constitute state-sanctioned violence that generates rather than suppresses criminal violence.

#### PSYCHOLOGICAL THEORIES

Psychologists approach the task of explaining delinquent and criminal behaviour by focusing on an individual's personality. In particular, they examine the processes by which behaviour and restraints on behaviour are learned. These processes often are conceived as being the result of the interaction of biological predispositions and social experiences.

Psychological theories of crime were those based on the work of Sigmund Freud (1856–1939)

**I.** Freud argued that human nature includes a great reservoir of instinctual drives (the “id”) that demand gratification.

**II.** These drives are restrained by moral and ethical codes (the “superego”) that children internalize as a result of their great love for and attachment to their parents.

**III.** Adults develop a rational part of their personality (the “ego”) that mediates between the drives of the id and the restraints of the superego.

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<sup>18</sup> labeling theory portrays criminality as a product of society's reaction to the individual [Last visited on 09.01.2024]

Because the id is a relatively constant drive, criminality is assumed to result from the failure of the superego, a consequence of its incomplete development.

Mental illness is generally the cause of a relatively small proportion of crimes, but its perceived importance may be exaggerated by the seriousness of some of the crimes committed by persons with mental disorders. The closure of many American mental institutions in the 1960s and '70s thrust many mentally ill people into the surrounding communities, where some of them later became troublesome. Because authorities had no other place to put them, there was a strong tendency for mentally ill people to end up in jails and prisons.

Personality Configuration<sup>19</sup>— antisocial personality disorder:

Thought to be strongly associated with criminality. However, because the criteria for diagnosing the disorder emphasize committing crimes and engaging in crimelike<sup>20</sup>behaviour, it is unclear whether the disorder is a cause of crime or simply a label that psychiatrists use to describe people who happen to be criminals. In the 1990s, psychological research was focused on early childhood experiences that tended to lead to criminality in later life, including poor parental child-rearing techniques, such as harsh or inconsistent discipline. Research also isolated impulsivity—the tendency to engage in high levels of activity, to be easily distracted, to act without thinking, and to seek immediate gratification—as a personality characteristic associated with criminality.

All human behaviour—criminals, manipulable by the use of reinforcement and punishment. The social learning theory of Ronald Akers expanded behaviour theory to encompass ways in which behaviour is learned from contacts within the

family<sup>21</sup> and other intimate groups, from social contacts outside the family (particularly from peer groups), and from exposure to models of behaviour in the media, particularly television.

Biochemical Research –

In the 1980s and '90s attempted to identify specific factors associated with an increased risk of engaging in criminal behaviour. For example, certain neurotransmitter imbalances in the brain (e.g., low levels of serotonin), hormonal imbalances (e.g., higher levels of testosterone), and slower reactions of the autonomic nervous system appear to be associated with increased criminality.

These factors do not absolutely determine whether a person will commit a crime; indeed, most people with these factors do not commit crimes. Instead, the presence of these factors merely increases the chance that the person will engage in criminal behaviour. Because these various biological factors may be influenced by environmental conditions, however, the direction of causation is unclear.

Researchers have identified other biological factors associated with increased violence and aggressiveness, including alcohol intoxication, the use of some drugs (e.g., crack cocaine but not marijuana), diet, and the ingestion of toxic substances.

Drinking alcohol has tended to increase criminality<sup>22</sup> temporarily, and the long-term effects of ingesting lead (such as is found in lead-based paint) have generally been associated with long-term increases in criminality.

Certain types of head injuries and complications during pregnancy or birth are correlated with long-term increases in the tendency of the child to commit crime. The direction of causation in these cases is clearer than with serotonin and testosterone but not entirely certain.

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<sup>19</sup> behaviour genetics; Homo sapiens; personality; philosophical anthropology; sociobiology. **[Last visited on 09.01.2024]**

<sup>20</sup> Recent research in genetics, evolutionary biology, and cultural anthropology **[Last visited on 09.01.2024]**

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<sup>21</sup> History and Society: (see Thomas Hobbes; John Locke) or social and altruistic (see Karl Marx; Émile Durkheim). **[Last visited on 09.01.2024]**

<sup>22</sup> a connection between biology and criminality for both twins and adoptees. **[Last visited on 09.01.2024]**



For example, it could be the case that some other nonbiological intervening factor (e.g., poverty) causes the increased tendency to commit crime and also causes the increased tendency to experience complications during pregnancy and birth, to ingest lead and other toxins, and to abuse alcohol.

#### HISTORY AND OVERVIEW

No one is born a criminal since crimes are socially defined. A link must be established between some other common factor such as hostility, impatience, danger, and so on. According to biological theories of crime, the extent to which people commit crimes is determined by their fundamental character which is genetics.

Biological traits related with criminality, according to biological theories of crime, could include inheritance, psychology, or physical composition. Although many biology-based theories of crime take into account the impact of situational and surrounding elements (what criminologists refer to as biosocial models), biological criminal behaviour theories differ from sociological perspectives in their emphasis on internal aspects. Biological explanations of crime emerged concurrently with their sociocultural versions.

Criminologists frequently contrast biological theories of crime with sociological ideas. These crime statisticians compiled and analyzed statistical data to determine the quantity and distribution of crimes, establishing links between age, race, social origin, and crime.

These findings supported the concept that crime was caused by environmental, social, and biological causes. Other studies that claimed criminality could still be explained only by genetic tendency. Physiological anomalies that lead to crime can occur in the brain or skull, as well as in the body's structure.

Most criminal scientists have rejected the notion that criminality can only be characterized by biological anomalies in the criminal, instead favoring techniques that mix biology and sociology.

According to research into biological explanations of crime, certain (lower) social groups and races are genetically predisposed to physical and

mental diseases, rendering them more inclined to commit crimes. Scholars believed that criminals may be distinguished from the normal community by their appearance. These individuals have atavistic, or primal, characteristics.

Thieves had exaggerated facial expressions, manual dexterity, and small, wandering eyes; murderers had cold, glassy stares, bloodshot eyes, and hawk-like noses; sex offenders had thick lips and protruding ears; and female criminals were shorter, wrinklier, had darker hair, and committed smaller crimes than normal women.<sup>23</sup>

Criminals were at a more primitive evolutionary stage than non-offenders, making them unwilling adapt into modern society and thus more likely to commit crime. This was accompanied by the assumption that misconduct was hereditary.

People who commit crimes fall into two categories: life-course-persistent offenders, whose antisocial, criminal behaviour begins in childhood and worsens through time, and adolescent years offenders, whose antisocial behaviour begins in adolescence but stops in early adulthood.

Advances in genetic theories of crime focus on how distinct parts of the brain are involved for perceptions, sentiments, and behaviors, and how malfunctioning in these regions can lead to criminal behaviour.

In current biological research of crime, criminologists and neuroscientists have focused on numerous areas of the brain. The cerebral cortex is the brain's outer layer and is separated among left and right regions. There are four lobes in each hemisphere.

In their biological theories of crime, criminologists and company that does research in various areas like social science or criminology have emphasized on the frontal lobe because the region is engaged in abstract reasoning,

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<sup>23</sup> PubMed Central (PMC),  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6640871/> date published: 30th January 2019, Date accessed 15th November 2022. **[Last visited on 10.01.2024]**

thinking, goal development, maintaining concentration and focus, self-monitoring, and behavioral inhibition.

Researchers studied 41 violent killers and discovered lower activity in the prefrontal brain and frontal lobe of these offenders when compared to control non-criminals. Individuals suffering from antisocial personality disorder (psychopathy) have a decreased emotional reaction and a lack of empathy for others.

Many criminals have displayed these indications. Neuroscientists also investigate how molecules in the brain called neurotransmitters influence thought, emotion, and behaviour. Excessive dopamine levels, for example, have been linked to aggressive and criminal conduct in some studies, and antipsychotic medicines that diminish dopamine may potentially be used to lessen aggression.

**Conclusion** – In conclusion it can be said that positive theory of the positivists were only related to biological traits. But these days born criminal issues are not the only issues. Social issues, involvement in terrorism are contemporary issues. Scientists have discovered that high levels of norepinephrine can contribute to violent conduct, while low levels can lead to antisocial behaviour. These findings demonstrate that both elevated / low norepinephrine levels can cause behavioral issues. Serotonin, an inhibitory neurotransmitter used across the brain, including the limbic system and frontal cortex, is another neurotransmitter of relevance to biological theories of crime.

Researchers discovered that low serotonin levels are associated with criminal behaviour and that the neurotransmitter regulates impulsivity.<sup>24</sup>

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<sup>24</sup> Biological Theories of Crime – Simply Psychology, <https://www.simplypsychology.org/biological-theoriescrime>. [Last visited on 10.01.2024]