

## **The Causation of Crime: A Study on Biological Factors**

**Md. Gajjur Rahman,**

*Lecturer, Department of law, Northern University Bangladesh.*

---

**Abstract:** *This paper aims to describe crime & analyze the biological reasons behind commission of crime. Preference is given to describe various defective organs of human body & some hereditary defectiveness which are liable for the commission of offences. The paper, furthermore, describe about remarkable theories on the topic. Its principal object is to establish a concept that biological abnormalities in human body also play contributory role along with psychological & environmental factors in the commission of crime.*

**Keywords:** *Crime, Causation, theories, Biological factors, Psychology, Motive etc.*

---

### **I. Introduction**

The history of committing crime is not recent. From the dawn of civilization, it is evident that man commits crime for getting their targeting fruit by any means. In early times, the concept of crime was unknown to the society. Men didn't have the legal sense. They failed to make a distinction between right & wrong. There was a general belief that man was by nature simple & his actions were controlled by some super natural power. They believed their society as innocent. But with the development of social, Psychological, biological & behavior science, the oldest concept of causation of crime is proved false. Now intention, motive, preparation, attempt, execution are considered & everyone is liable for his wrongful act in where facts & circumstances are considered. Some criminologist suggests that man is not criminal but they are, sometimes, bound to commit crime for social disorder like poverty, family breakdown, and unemployment etc. & at the same time, there are some hidden biological & psychological factors by virtue of which they proceed towards crime in spite of their unwillingness. Most of the people having criminal tendency can't imagine at all that they commit crime for their internal physical & mental defectiveness in addition to social reasons. So, firstly, this paper aims at presenting the concept of crime, finding out latent physical factors which are liable to crime & establishes a concept that crime should be held as social maladies rather than crime in the true sense.

### **II. Historical Concept Of Crime**

Historical concept of crime is based on superstition. Primarily crime was meant as activities against religious law or certain social norms, belief, custom & tradition of the society. This meant that little attention was devoted to the motive, environment & psychology of the offender in the causation of crime. Moreover, punishments were often haphazard, arbitrary & irrational as there was no definite principle for the guidance of those who were involved with the criminal justice of administration. Man used to believe that human conduct was controlled by some supernatural power. It was generally believed that a man committed crime due to the influence of some external spirit called demon or devil. Thus, an offender committed a wrongful act not because of his free will but due to the influence of some external power (Dr.N.V.Paranjape, 2005). So, there was absence of attempt to prove into the real cause of crime. Only worship, sacrifices & ordeal by trial were usually prescribed to specify the spirit & relieve the victim from its evil influence.

According to Dharamsastra writer, ordeal was a living institution in India. Epigraphic & legal records showed that ordeals were practiced strictly according to Dharamshastra rules since time immemorial in the Indian history. Ancient writers have referred to the ordeals as divine methods with various names such as Samayakriya, Sapatha, Divya, or Pariksa. Ordeals were treated as divine means of proof about guilt or innocence of the accused. The two important aspects of the ordeals were: (i) they indicated the divine aspects of trial, and (ii) the basic idea underlying this method of trial was the need of divine intervention at the crucial moment in dispensing justice. Thus ordeal was an antique institution, a deep rooted custom, practiced by the people in ancient India. Yajnavalkya mentions five kinds of ordeals- Balance, Fire, Water, and Poison & Kosa. In the balance ordeal, the accused was weighed against a stone & if the latter was lighter, the charge was considered as false, but if it was otherwise, the charge stood proved.

The Fire ordeal consisted of main four forms, namely, (i) going through nine circles with red-hot iron-ball in hand; (ii) walking over burning fire, (iii) lifting up a piece of iron from boiling oil; (iv) licking the red-hot iron bar with tongue. In water ordeal, the accused was brought to a deep & rapidly flowing river or a deep well with such water. Then he was to speak to the water; "since thou belongest to the pure angels & knowest both what are secret & the public, kill me if I lie & angels preserve me if I speak the truth; then five men took the

accused & threw him into the water. If he was not guilty, he would not drown or die". The poison ordeal was also used as a method of investigation. The accused was made to eat the poison & take out a living black serpent from a pot. If he survived harmless, he was supposed to be innocent otherwise he would be deemed guilty.

The Kosa form of ordeal had universal application. The accused was taken to the temple. Then the priest poured water over the deity (idol) & this holy water was given to the accused for drinking. If he was guilty or false, he would at once vomit blood (S.N Dr. Pendse 1985). However, historically the concept of crime seems to have always been changing with the variations of social conditions during the evolutionary stages of human society. This can be illustrated by the fact that early English society during 12<sup>th</sup> & 13<sup>th</sup> centuries included only those acts as crimes which were committed against the state or religion. Thus, treason, rape & blasphemy were treated as crime whereas murder was not a crime. Ancient societies failed to distinguish between the law of crime & torts but recognized only law of wrongs. Almost all wrongs were repressible subject to providing compensation to the victim. Even private vengeance was recognized prior to the tenth century where recourse to the legal remedy was considered as merely an optional alternative to self-redress (Dr.N.V.Paranjape, 2005).

### **III. Modern Concept Of Crime**

Presently, the concept of crime is more practical & completely opposite to the thinking of primitive societies. Recent concept of crime starts to develop from the 'boltless' offences which are increased considerably after 12<sup>th</sup> century. Boltless offences are those for which no amount of compensation can wipe out the guilt & the wrong doer has to undergo punishment though there are other offences in where bolt (payment of compensation to the victim) is recognized & offences which entitles wite (additional fines) payable to the king. In fact, the sense of crime is originated from the boltless offence & civil wrongs atoned with bolt (Dr.N.V.Paranjape, 2005). However, in modern times, intention, motive, malice, facts & circumstances are considered for considering an act as offence. In addition to that the grievance of offence is measured after considering certain factors like commission or omission, attempt, preparation, execution etc. Mens rea or criminal intent is the pre-condition of a crime. That's why, if a person takes a moveable property of another person mistakenly, it is not a theft. Again, for being a crime, there must be commission or omission of an act. Mere conspiracy without taking any subsequent action can't be treated as offence. Moreover, motive is an element of every crime divided into two parts namely-good motive & bad motive. Bad motive is called malice which implies the offensive purpose of criminals. In some circumstances, a person commits crime with good motive. For example, if a man commits theft for the first time with the intention of feeding his hungry children, it is clear that there is good motive. Here commission of theft is crime but facts & circumstances are considered to reduce the punishment of the offender. In addition to, several stages are taken into judicial consideration to determine the grievances of offences. Suppose a person intends to kill his neighbor with a motive to possess neighbor's land illegally. That person buys a pistol & manage visa to go abroad so that he can escape easily after committing murder. In a morning, he fires at his neighbor but failed to kill him. All actions till conducting of trigger of pistol are preparation. Attempt comes after the stage of preparation. If the person becomes successful to kill him, it amounts to execution. So, the degree of grievances of crime varies in different stages & punishment follows accordingly. It is worth mentioning that there must be violation of state penal law in where punishment is awarded for offences.

### **IV. Biological Approach**

Biological drawbacks of a person play a contributory role for committing offence. From ancient time, eminent jurists have been trying to find out the hidden biological factors which lead to the commission of crime. Although criminologists varies in their opinions in their research but they show remarkable success to the development of biological approach of causation of crime. All human bodies are not same in their structure. A man having good physical structure possesses less criminal tendency into mind whereas this tendency can be found in a man having defective physical structure. A particular organ of human body implies a specific tendency of crime. Almost all the study of biological approach suggests that criminals are defective in physique other than non-criminals. Another fundamental truth which can't be overlooked is that two major segments of human society-male & female are different in their biological structures. The sex determining chromosomes, hormonal operation, & some other physiological rules are different for these two classes. In most of the human societies, male have been pictured as aggressive, active, diverging & females as gentle, polite, & motherly. Different biological structure may contribute to the different behaviour pattern of males & females. All over the world, around 85 to 90 percent crimes are being committed by the males indicating a close link of male biological structure & violent behavior (Sheikh Hafizur Rahman Karzon 2008). For more convenient understanding, different parts of human body & their effects on offensive activities can be described consecutively:

**4.1 Physiognomy:** The term “Physiognomy” refers to the study regarding structure & characteristics of human face. T. Baptistella Della Porta (1535-1615) is the founder of physiognomy (Schafer Stephen, 1969). He emphasizes that abnormal elements of human face are the principal causes of crime though he does not accept the other biological factors of crime. The principle of physiognomy gets established while Baccaria was absorbed in research in crime. In 1775, Swiss scholar Johan Caspar Lavater (1741-1801) publishes a book named “Physiognomic fragments” in four parts in which Lavater showed a close relationship between human face & conduct (George B Volt, 1979). He mentions beardlessness in men, the bearded women, a shifty eye, a weak chin, an arrogant nose & many other facial features as signs of an abnormal individual. One of the glaring examples is that Havelock Ellis describes the examination by a Greek physiognomist of Socrates having abnormal facial features which reveals him as brutal, sensuous, & inclined to drunkenness. Socrates concedes the observation of the physiognomist, but says that he overcomes all those tendencies through his endeavor (George B Volt, 1979). In course of time the significance of physiognomy diminishes & it contributes to the emergence of a better organized & logically more impressive branch of criminological study, namely phrenology.

**4.2 Phrenology:** The term “phrenology” implies the study of human skull in which an attempt is made to find out the close relation between human skull features & crimes. The famous European anatomist, Franz Joseph Gall (1758-1828) is the founder of phrenology & plays a significant role in its development. He didn't use the term “phrenology” directly rather applied the term “Craniology” which also included researching human skull & conduct. But, the phrenology got more popularity & The British naturalist Thomas Ignatius Forster did choose this term for the first time in 1815. (B K Goswami 1983).

In 1971, Gall firstly starts to publish materials on the relation between head conformations & the personal characteristics of individual. John Gaspar Spurzheim (1776-1832), student of Gall, continues researching along with Gall on phrenology. In fact, Spurzheim makes this theory popular in Britain & America.

According to Greek philosopher, Aristotle, brain is one of the organs of mind. Arthur E Fink also provides three basic propositions which are:

- a. The external shape of the skull conforms to the interior & reveals the shape of brain.
- b. The mind consists of faculties or functions.
- c. These faculties are related to the shape of the brain & skull; thus the shape of the skull is the indicator of brain & the shape of brain is the indicator of different faculties (Schafer Stephen, 1969).

Gall listed 26 such faculties though Spurzheim increases the number to 35. The remarkable faculties include amativeness, conjugality, philoprogenitiveness, friendliness, combativeness, destructiveness, acquisitiveness, cautiousness, self-esteem, firmness, benevolence, constructiveness, ideality, imitiveness, secretiveness (George B Volt, 1979). These faculties are grouped into three compartments namely-

- a. The intellectual faculties.
- b. The moral sentiments.
- c. The lower or active propensities.

It is actually the lower or active faculties which are liable for the commission of crime. This faculty includes destructiveness, combativeness, amativeness, acquisitiveness, secretiveness. For the faculty of destructiveness, man commits the offence of murder. For the combativeness faculty, the offences of hurt, grievous hurt, assault etc. are committed. For the faculty of acquisitiveness, the offences of theft, robbery, dacoities are committed. Giving false evidence, frauds are committed for the propensities of secretiveness (Schafer Stephen, 1969). It is worth mentioning that human being possesses intellectual, moral, lower & active propensities at the same time. But the lacking of moral & intellectual propensities indulges a man in offensive activities where it is impossible for a man to commit crime having dominant moral & intellectual propensities.

**4.3 Body type theory:** Social scientist, William H. Sheldon, tries to establish a co-relation between physical structure of the criminal & the crime. He develops his ideas from the fact that life begins in the embryo which is made up of three different tissue layers, namely- an inner layer called endoderm, a middle layer known as mesoderm & an outer layer or ectoderm. He correlates a corresponding physical & mental typology consistent with the known facts from embryology & the physiology of genetic development. He points out that physiologically; the endoderm gives rise to the development of digestive viscera, the mesoderm to bone, muscle & tendons of the motor-organ system, the ectoderm to connecting tissues of nervous system, skin & related

appendages. He summarizes the basic characteristics of physique & temperament of these types of physical structures in the following way (Dr.N.V.Paranjape, 2005):

**a. Endomorphic structure-** They are persons with fatty or bulky body having short tapering limbs, small bones, soft & smooth skin & are usually of a mild temperament & comfortable person.

**b. Mesomorphic structure-** Persons with such structures are strongly built with prominent muscle & bones & connective tissues. They have heavy chest & large wrists & hands. These people are temperamentally somotonic, active, dynamic, assertive & behave aggressively.

**c. Ectomorphic structure-** Persons with ectomorphic structure are constitutionally lean & fragile with delicate body, small face, sharp nose & fine hair. They are sensitive by temperament & avoid crowds.

Sheldon further describes that these physical structures are directly related to temperament of the person who commits crime. Thus according to him, endomorphic are moody & accommodative by nature but the mesomorphic is a rigid & somewhat of serious temperament. The ectomorphic, on account on their delicate physical build-up, are often shaky in their decisions & are short tempered. He attributes criminality to endomorphics & mesomorphics rather than the ectomorphics. But Sutherland criticizes the analysis of Sheldon on the ground that it closely resembles the heredity consideration of criminals which has lost its significance in modern criminology.

**4.5 Cesare Lombroso's "Born Criminal" Theory:** Cesare Lombroso (1835-1909) is regarded as the father of modern criminology since he is the first to employ scientific methods in explaining criminal behavior & shifts the emphasis from crime to the criminal (S.M.A. Qadri 2009). Lombroso, principally asserts that man becomes criminal by born. He also finds that man commits crime for having ancestral characteristics which are liable for anti-social activities. This theory is related to the word "atavism" which comes from the Latin term "atavus" which means ancestor & atavism is related with the primitive human characteristics which provide identity of inferior nature of a man. Lombroso becomes influenced by Darwin & opinioned that whether a man possesses criminal tendency or not, depends upon the evolution of human being. A man who has not been evolved soundly bears inferior characteristics of ancestor & can't keep up with the modern civilization. Hence human being shows abnormal anti social activities which may amount to crime (Schafer Stephen, 1969).

However, Lombroso as a doctor in the Army measures physical characteristics of soldiers & get interested to determine a relation between mental condition & physical structures on some findings. He also examines & measures different organs of thousands of convicts & finds abnormal & defective structures which he considers as identifier of a criminal. He further asserts that these abnormal organic features bear criminal tendency but doesn't make a man criminal all the time. Ceasure Lombroso provides some abnormal physical characteristics such as asymmetrical face, large & excessive dimension of jaw, defective eyes, unusual ear, receding forehead, twisted nose, fleshy & swollen lips, scant beard, wooly hair, long arms, abnormal dentition, abnormal chin, defective thorax, abnormal & inconsistent sex organ, supernumerary fingers, imbalance of the hemispheres of the brain, abnormal head etc. which have the linkage to the commission of crime. Lombroso conducts statistical research upon Italian offenders in support of his theory. In a research, he examines 383 Italian criminals in where he finds 21% who have only one such anomaly; 43% have five or more anomalies, hence as many as five in any individual is taken as the minimum indication of criminal physical type. From this research, He comes to a decision that man is born criminal & the persons who have five or more of above mentioned characteristics possesses the criminal tendency (George B Volt, 1979).

Although, Lombroso principally emphasizes over the biological factors, he never denies other non biological reasons. He admits that psychological affairs can be liable to the commission of crime indirectly (H.E Barnes & Teeter, 1966).

**4.6 Hooton's Theory:** E. A. Hooton's (A Harvard anthropologist) point of view with regard to biological study of crime is identical with Lombroso. He publishes a book named " Crime & the Man" after twelve years research on biological factors of crime in where he tries to uphold his view that offences & other anti social activities are related with physical types & has racial effect. He observes upon prisoners & finds differences in physique between non criminals & criminals. He suggests that criminal stock should be removed from the society to make a society criminal free. That's why, rectification of inferior physical type & creation of new generation by cloning can be a better choice. Hooton makes a comparison of about 14000 prisoners with more than 3000 non criminal people. He concludes that criminals are organically inferior. When environment impacts on low grade human organism, the ultimate consequence is criminal activities. His data revealed that; I. Tall thin men are tended to be murderers & robbers; II. Killing, forgery & fraud are committed by tall heavy men; III. Undersized men are thieves & burglars; IV. Assault, rape & other sex crimes are committed by short heavy persons; V. Men having mediocre physique floundered around among the crime with no specialty (Sheikh Hafizur Rahman Karzon 2008).

**4.7 Heredity & Crime:** Some efforts have been made by criminologists to establish a relationship between hereditary features in a person & his criminal or non criminal behavior. The difficulty in tracing any possible correlation between heredity & behavior of any type lies in the fact that it is almost impossible to make any scientific study based on hereditary factors independent of environmental factors of various dimensions. Nevertheless, the researches on twins are thought to be of practical advantage. This is because the genetical factors may be the same, at least in identical or monozygotic twins.

**4.8 Study on twins & adoptee:** Research on twins reveals that criminals possess some abnormal biological characteristics from their ancestors which are liable for crime. Criminologists, for their convenient research divide twins into two following categories (Adrian Raine, 1993):

- i. Twins having same biological characteristics come from single fertilized egg.
- ii. Twins having different biological features come from two simultaneous fertilized eggs by two sperms.

The similarity of behavior between identical twins substantiates the presumption that the similarity is due to identical inheritance. Their different behavior presupposes that the twins are lacking identical biological characteristics from their predecessors. When both the twins indulges in committing one or more offences, they are called “Concordant” & when there arises differences in behavior between the twins, they are called “discordant” for the purpose of research. There are some researches which uphold the relation between criminal tendency & lineage.

In 1929, Johannes Lange, a German Physician, publishes his study on twins. He makes a research upon 30 twins in where 13 twins are the creation of one fertilized egg (monozygotic) & other 17 twins are the creation of two fertilized eggs (dyzygotic). Lange observes that among 13 twins, 10 twins are concordant or both are criminals & rest 3 twins shows that one is criminal (concordant) & others are non criminal (discordant). On the other hand, 17 Twins from different eggs implies that only 2 twins are concordant & 15 twins are discordant. So, Lange’s research proves that twins who have come from the same egg possesses more criminal tendency than the twins who has been created from different eggs (Johannes Lange, 1929). Later on, a number of studies show greater similarity of criminal behavior among identical than among fraternal twins. Karl Christiansen & Sarnoff A. Mednick conducted the largest study, which includes 3586 pairs born in a region of Denmark between 1881 & 1910. For identical twins, if one twin is a criminal, the other twin’s chance of being a criminal is 50 percent; the probability is 20 percent for fraternal twins. After reviewing serious offences, they get these findings (Cf. Gregory Carey, 1992), which helps to form the hypothesis that the risk of criminality increases by some genetic factors.

A number of scholars make some studies on adoptee to determine whether heredity has any impact on criminal behavior. After examining the records of all non family male adoptions in Copenhagen, Hutchings & Mednick, makes group of the boys on the basis of who commits crime, who commits minor offences & who have no criminal records. They also collect information about the criminal records of their biological fathers. They found that a total of 31.1 percent of the boys who have no criminal records have biological father with criminal records. According to their findings, 48.4 percent of the boys who commits crimes & 37.7 percent of the boys who commits minor offences have their biological father with criminal records (Barry Hutchings and Sarnoff A. Mednick, 1977). When biological fathers are criminal, as pointed out by the above figure, adopted boys are more likely to be involved in delinquency.

**4.9 Heredity & Criminal families:** A debate starts at the mid of nineteenth century regarding the influence of environment & lineage over the human activities. Some criminologists demands that criminal tendency is the result of abnormal ancestral family & starts study on the background of various families. There have been two well-known interesting studies in the USA, The Jukes (1877) & The Killikaks (1912). The Juke family, a family of “mental degenerates” is traced back by Arthur Dugdale & the study is later continued & expanded by Arthur H. Estabrook. A person named Max, a descendant of Dutch settlers in New York, marries Ada Juke, one of the six illegitimate sisters of the family & who subsequently come to be known as the “mother of criminals.” Dugdale trace well over 1000 descendants & other blood relative of Ada. Out of them are found 280 paupers, 60 habitual thieves, 7 murderers, 140 other criminals, 50 common prostitutes, 440 with venereal disease & a number of others who can be labeled as deviants. The other study, The Killikaks, made by Henry Herbert Goddard, concludes that crime is the result of low grade mentality, primarily feeble-mindedness, which is an inherited quality of criminals. A feeble-minded girl has an illicit relationship with Martin Killikark resulting in the birth of an illegitimate son. The study traces 480 relatives of the son & these are compared with 496 descendants of Killikark through his legitimate wife, a Quaker girl of good reputation. Among the descendants through the legitimate union, only one mentally abnormal person, two alcoholics & no criminals were discovered but the illegitimate feeble-minded bloodline produced 143 mentally sick persons, 36 illegitimate, 33 sexually perverted

individuals or prostitutes, 24 alcoholics, 8 brothels keepers, 3 epileptics, three convicted offenders & a number of other abnormal persons or deviants (S.M.A. Qadri 2009).

It may be stated that the influence of heredity on a person's behavior can't be satisfactorily established since it is not possible to isolate the hereditary factors from various kinds of environmental factors. It may however be conceded that certain physical & mental traits may be inherited which can indirectly result in criminal behavior.

## **V. Conclusion**

Man is the best creature of this universe possessing all good qualities along with worst propensities liable for the commission of crime. It is very difficult to discover the actual reasons leading a man to the crime due to the complex human mind. Although criminologists have shown success to find out biological, psychological & sociological factors behind crime but their observations in their theories are not beyond criticisms. These theories remains relatively inadequate where many individuals who possess the characteristics said to be associated with crime but who don't exhibit criminal behavior or there are many criminals who don't possess the abnormal physical characteristics. Nevertheless, a theory on biological reasons of crime plays a vital role in reducing offence in the society to large extent. A criminal having abnormal physical organ can aloof from criminal activities taking proper medical treatment.

## **Reference**

- [1]. Adrian Raine (1993). *The Psychology of Crime*, Inc. San Diego: Academic Press
- [2]. Barnes, H.E. & Teeters (1966). *New Horizons in Criminology*, New Delhi: Prentice Hall of India.
- [3]. Barry Hutchings and Sarnoff A. Mednick (1977). *Criminality in Adoptees and Their Adoptive and Biological Parents: A Pilot Study*, New York: Gardner Press.
- [4]. Goswami, B.K (1983). *A Critical Study of Criminology & penology*, Allahabad: Allahabad Law Agency.
- [5]. Gregory Carey Cf. (1992). *Twin Imitation for Antisocial Behavior: Implications for Genetic Environment Rearch*, University of Colorado: *Journal of Abnormal Psychology*.
- [6]. Karzon, Sheikh Hafizur Rahman (2008). *Theoretical & Applied Criminology*, Dhaka: Palal Prokashoni.
- [7]. Lange Johannes (1931). *Crime as Destiny*, London: Allen & Unwin Ltd.
- [8]. Paranjape, Dr.N.V (2005). *Criminology & Penology*, Allahabad: Central law publications.
- [9]. Pendse Dr. S.N (1985). *Oaths & Ordeals in Dharamsastra*, M.S. University: Baroda publication.
- [10]. Qadri S.M.A. (2009). *Criminology & Penology*, Lucknow: Estern Book Company.
- [11]. Schafer, Stephen (1969). *Theories in Criminology*, New York: Straford Press
- [12]. Volt. George.B (1979). *Theoretical Criminology*, New York: Oxford University Press.