**Chapter 4**

**Early Positivism: Biological Theories of Crime**

**Learning Objectives**

* Describe what distinguishes positivistic perspectives from the Classical/rational choice perspectives in terms of assumptions, concepts, and propositions.
* Explain how the early, pre-Darwinian theories, such as craniometry and phrenology, different from (and similar to) later post-Darwinian theories, such as Lombroso’s theory of offending.
* Identify the key assumptions, propositions, and weaknesses of Lombroso’s theory of atavism and the born criminal.
* Explain the shift to more psychological areas, namely IQ testing, and how it affected the field in terms of policy and thinking about individuals’ risk for criminality.
* Evaluate the key propositions, concepts, and weaknesses of Sheldon’s body type theory, and how he measured the various body types of this perspective.

**Chapter Summary**

This chapter discussed the early formation of the Positive School of criminology, which was a giant departure from the Classical School paradigm. The Classical School assumes free will/choice in criminal behavior, whereas the Positive School assumes that free will is not involved at all. Rather, according to the Positive School, our behavior is determined by factors other than free will/choice, such as bad parenting, poverty, and low intelligence. We started this chapter by discussing the earliest positive perspectives, which included craniometry, phrenology, and physiognomy. Thus, the early formation of criminology was largely based on examinations of the skull and brain (e.g., craniometry) in the early 1800s. But these disciplines did not become popular then, because Darwin had not yet presented his theory of evolution. The post-Darwinian explanations of the late 19th century, on the other hand, became very popular, largely because society was ready to accept them.

Once Darwin’s theory spread worldwide, the ground was more fertile for a theory of crime that claimed that certain individuals (or groups) were more likely to become criminals, which led to a eugenics movement among both scientists and society as a whole. By far the most notable of these theories are Lombroso’s (the Father of Criminology), as well as Goddard’s theory of feeble-mindedness and IQ testing. Early policy implications of these perspectives were also examined. These studies ultimately inspired far more focus on the influence of inheritance and genetics in predisposing certain individuals to criminal activity (which we also cover in the next chapter). This was supported by more recent studies on IQ testing and minor physical anomalies (MPAs) that show individuals with low IQ scores and numerous MPAs do indeed engage in more criminal behavior than do their counterparts without MPAs.

Also, this chapter examined the connections between various body types, temperaments, and criminality, with recent research supporting a link between certain body types and criminal behavior. To some extent, these body type theories provide a bridge between the early emphasis on physical features (e.g., skull, stigmata, etc.) and the focus on psychological factors (e.g., temperament, personality). Thus, the body type theories appeared to advance the knowledge in criminological literature by emphasizing more than one dimension. Furthermore, most studies have supported the claim that body type actually does predict criminality, as well as the corresponding temperament or personality associated with certain body types most likely found among delinquents and criminals. However, there are many criticisms of such early Positive School perspectives of crime.

**Chapter Outline**

* Introduction
  + The **Positive School** of criminology
    - The emphasis on science in criminology started in the mid-1800s and provided a basis for what continues today.
* Early Biological Theories of Behavior
  + Academics and scientists were becoming aware that the deterrence framework was not explaining the distribution of crime.
  + This restlessness led to new explanatory models of crime and behavior.
    - Most of these perspectives focused on the fact that certain individuals or groups tend to offend more than others, and that such “inferior” individuals should be controlled or even eliminated.
  + Fit a more general stance towards **eugenics**.
    - The study and policies related to the improvement of the human race via control over selective reproduction.
  + There must be notable variations across individuals (and groups) that can help determine who are most at risk of offending.
  + In the early to mid-1800s, several perspectives were offered regarding how to determine which individuals or groups were most likely to commit crime.
    - Many of these theoretical frameworks were based on establishing a framework for determining the more superior individuals/groups from the more inferior individuals/groups.
  + **Craniometry**
    - The belief that the size of the brain or skull represented the superiority or inferiority of certain individuals or ethnic/racial groups.
      * The size of the skull was believed to perfectly conform to the size of the brain.
    - Although modern science has somewhat dismissed this assumption, there actually is a significant correlation between the size of the skull and the size of the brain.
    - Measurement Methods
      * Living Subjects
        + Measured the various sizes or circumference of the skull.
      * Recently Dead Subjects
        + Measured the actual weight or volume of the brains of the “participants.”
      * Subjects Who Had Died Long Before
        + Poured some type of seeds into the skull area and then measured the volume of the skull by pouring the seeds into a graduated cylinder.

Later, when these scientists realized that seeds were not a valid measure of volume, they moved toward using buckshot, or ball bearings.

* + - Most studies by craniometrists tended to show the subjects of white, Western-European descent tended to show far more superiority over other ethnic groups, in terms of higher circumference or volume in brain or skull size.
    - The front portion of the brain (i.e., genu) was thought to be larger in the superior individuals/groups, and the hind portion of the brain/skull (i.e., splenium) was predicted to be larger in the lesser individuals/groups.
    - These researchers typically knew which brains/skulls were of which ethnic/racial group before they were measured, making for an unethical and improper methodology of craniometry.
    - These examinations were largely done with the intentions of furthering the assumptions of eugenics, which aimed to prove under the banner of ‘science’ that certain individuals and ethnic/racial groups are inferior to others.
    - Studies done without knowing which skulls/brains were from certain ethnic/racial groups showed only a small correlation between size of the skull/brain with certain behaviors or personality.
    - Craniometrists switched their postulates to individuals with more convoluted or complex structures of brains (with more fissures and gyrus than others) that were superior.
  + **Phrenology**
    - The science of determining human dispositions based on distinctions (e.g., bumps) in the skull, which are believed to conform to the shape of the brain.
    - Was still targeted toward supporting the assumptions of eugenics, and showing that certain individuals and groups of people were inferior or superior to others.
    - Assumed the shape of the skull conformed to the shape of the brain.
      * Thus, a bump or other abnormality on the skull is directly related to an abnormality in the brain at that spot.
    - Phrenology did get some things right.
      * Certain parts of the brain are indeed responsible for specific tasks.
  + **Physiognomy**
    - The study of facial and other bodily aspects in order to indicate developmental problems, such as criminality.
    - Early studies focused on contrasting various racial/ethnic groups to each other in order to prove that certain groups or individuals were superior or inferior to others.
    - Darwin’s Influence
      * *The Origin of Species*
        + Outline a vague framework that proposed that humans had evolved from more primitive beings, and that the human species (as all others) evolved from a number of adaptations preferred by natural selection.

This lead to an inclination to believe that certain ethnic/racial groups are inferior or superior to others.

* + - * Laid the groundwork for what would become the first major scientific theory of crime, namely that of Lombroso’s theory of born criminals.
* Lombroso’s Theory of Atavism and Born Criminals
  + Theory of Crime
    - *The Criminal Man* (1876)
      * Outlined a theory of crime that largely brought together the pre-Darwinian theories of craniometry, phrenology, and physiognomy.
    - Largely based on certain groups (and individuals) being “atavistic,” and likely to be born to commit crime.
    - **Atavistic**
      * A person or feature of an individual is a throwback to an earlier stage of evolutionary development.
    - In other words, people who are serious criminals are manifestations of lower forms of humanity in terms of evolutionary progression.
      * Lombroso would likely suggest that chronic offenders are more similar to the earlier stages of humankind, like the “missing link,” than they are to modern humans.
    - Also noted that there were other types of offenders, such as mentally ill and “criminaloids” who committed minor offenses due to external or environmental circumstances.
    - Claimed the “born criminals” were the ones that should be emphasized for addressing crime.
      * Born criminals were the most serious and violent criminals in any society.
        + Most criminologists now refer to these individuals as chronic offenders.
    - Claimed that born criminals cannot be stopped from their natural tendencies to be antisocial.
    - On the other hand, Lombroso claimed that despite the born criminals inevitable nature to commit crime, there was a way for societies to prevent or reduce the crimes that they are inevitably going to commit.
      * The way for societies to identify born criminals, even early in life, is through their stigmata.
    - **Stigmata**
      * Physical manifestations of the atavism of an individual, with such physical features being indications of the prior evolutionary stages of development.
  + Lombroso’s List of Stigmata
    - More than five stigmata indicate that an individual is atavistic, and inevitably will be born criminal.
    - What are these stigmata?
      * Constantly changing.
      * For the most part, stigmata consisted of facial and bodily features that deviated from the norm.
        + Abnormally small or large noses; abnormally small or large ears; abnormally small or large eyes; abnormally small or large jaws; etc., or almost anything that went outside the “bell-curve” on normal physical development in human beings.
      * Also threw in some extra-physiological features, such as tattoos and history of epilepsy (and other disorders) in the family.
    - Also claimed he could identify the stigmata of certain types of criminals.
      * Certain stigmata could be identified among certain groups of anarchists, burglars, murderers, shoplifters, etc.
* Lombroso as the Father of Criminology and the Father of the Positive School
  + Father of Criminology
    - Title not given out of respect for his theory or his methods, but it is deserved in the sense that he was the first person to gain recognition in testing his theoretical propositions.
  + Father of the Positive School
    - Because he was the first to gain prominence in identifying factors beyond free will or free choice that were predicted to cause crime.
  + It is important to understand the assumptions of Positivism, which most experts consider somewhat synonymous with the term “determinism.”
  + Determinism
    - The assumption that most human behavior is determined by factors beyond free will and free choice,
  + The Positive School is based on the fundamental prediction that factors outside of free will/choice, such as biological, psychological, and sociological variables, determine the choices we make regarding all types of behavior, especially decisions of whether or not to engage in criminal activity.
  + Lombroso’s Policy Implications
    - Lombroso was called to testify in numerous criminal processes and trials in order to determine the guilt or innocence of suspects.
      * Often included identifying which suspect (often out of many) had committed a crime.
    - Another policy implication that was implemented in some parts of the world was identifying young children on the basis of observed stigmata, which tend to become noticeable in the first five to ten years of life.
      * This led to tracking or isolating certain children based on such criteria.
      * Modern medicine has supported the identification, documentation, and importance of certain physical features as being indications of high risk for developmental problems in life.
        + Minor physical anomalies (MPAs) that indicate developmental problems.

Head circumference out of the normal range;

Malformed ears;

Low-set ears;

Excessively large gap between the first and second toes;

Webbing between toes or fingers;

No earlobes;

Curved fifth finger;

Asymmetrical ears;

Furrowed tongue; and

Simian crease.

* After Lombroso: The IQ Testing Era
  + Theorists and researchers were not ready to give up on eugenics assumption that certain ethnic or racial groups were superior or inferior to others.
  + Binet
    - Created the concept of IQ scores in France to identify youth who were not performing up to par on educational skills.
    - Explicit in stating that IQ could be changed, which is why he proposed a score to identify slow learners, so that they could be trained to increase their IQ.
    - The IQ was calculated as chronological age divided by mental age, which was then multiplied by 100, with average scores being 100.
  + Goddard
    - Utilized IQ test in the U.S. for purposes of deporting, incapacitating, sterilizing, and otherwise ridding society of low IQ individuals.
    - Believed and claimed that IQ of individuals was static or innate.
    - Intelligence was passed from generation to generation.
    - Labeled low IQ as “feeblemindedness.”
    - Specified certain levels of feeblemindedness, which were ranked based on the degree to which the score of the individuals was below average.
      * In order from the best to the lowest intelligence, “morons,” “imbeciles,” and “idiots.”
    - From a eugenics point of view, the biggest threat to the progress of humanity was not the idiots, rather it was the morons.
      * The moron is smart enough to slip through the cracks in reproducing that poses the biggest threat to humanity.
    - Goddard was proud of the increase in the deportations of potential immigrants to the United States.
      * Enthusiastically reported that deportations for the reason of mental deficiency increased by 350 percent in 1913 and 570 percent in 1914 over the average of the preceding five years.
  + Policy Implications
    - Over time he realized that his policy recommendations of deportation, incarceration, and sterilization were not based on accurate science.
      * Deportation
        + After consistently validating his IQ test on immigrants and mental patients, Goddard finally tested his intelligence scale on a relatively representative cross-section of American citizens, namely draftees for military service during World War I. The results showed that many of these recruits would score as feebleminded on the given IQ test.
        + Goddard changed (lowered) the criteria of what determined a person of feeblemindedness; specifically, the criteria changed from a mental age of 12 to a mental age of 8.
    - Toward the end of his career, Goddard admitted that intelligence could be improved, despite his earlier assumptions that it was innate and static.
      * Sterilization
        + Despite his admission that his assumptions and testing was not determinant of individuals’ intelligence certain policies continued based on IQ scores.
        + Specifically, the use of sterilization of individuals, mostly females, was continued in the U.S.

Often the justification was not based on the intelligence scores of the person being sterilized, but on the mother or father of the person.

* + - * + This issued came to the U.S. Supreme Court in the case of *Buck v. Bell.*

*Buck v. Bell* (1927)

Discussed the issue of sterilizing individuals who had scored, or whose parents had scored, as mentally deficient on intelligence scales.

The Court upheld the use of sterilization for the purposes of limiting reproduction among individuals who were deemed as being “feebleminded” according to a test score.

* + - * Sterilizations continued up to the 1970s, when such practices were finally halted.
  + Reexamining Intelligence
    - Hirschi and Hindelang
      * In the 1970s, examined the effect of intelligence on youths.
      * Found that even among youth in the same race and social class, intelligence has a significant effect on delinquency and criminality among individuals.
      * The IQs of delinquents or criminals is approximately 10 points lower than those of noncriminals.
    - Recent studies have shown that certain types of intelligence are more important than others.
      * Low-verbal intelligence has the most significant impact on predicting delinquent and criminal behavior.
* Body Type Theory: Sheldon’s Model of Somatotyping
  + Merged the concepts of biology and psychology.
  + Claimed that in the embryonic and fetal stages of development, individuals tend to have an emphasis on the development of certain tissue layers.
  + These varying degrees of emphasis were largely due to heredity, which lead to the development of certain body types and temperaments/personalities, thus becoming known as somatotyping, or the body type theory.
  + All embryos must develop three distinct tissue layers.
    - The first layer of tissue is the **endoderm**, which is the inner layer of tissues, and includes the internal organs.
    - The middle layer of tissue, called the **mesoderm**, includes the muscles, bones, ligaments, tendons, etc.
    - The **ectoderm** is the outer layer of tissue and includes the skin, capillaries, and much of the nervous system sensors.
  + Body Types
    - **Endomorphic** (obese)
    - **Mesomorphic** (athletic or muscular build)
    - **Ectomorphic** (thin)
  + Sheldon and his research team would grade each subject on three dimensions, corresponding respectively to the body types.
    - Each body type was measured on a scale of 1-7, with 7 being the highest score.
    - A typical somatotype might be 3-6-2.
      * Would indicate that this person scored a 3 on endomorphy, a 6 on mesomorphy, and a 2 on ectomorphy.
      * According to the theory, the hypothetical subject would be a likely candidate for criminality, because he/she scored relatively high on the mesomorphy score.
  + Personality Traits or Temperaments
    - **Viscerotonic**
      * Endomorphic
      * More jolly or lazy
    - **Somototonic**
      * Mesomorphic
      * Risk-taking and aggressive
    - **Cerebrotonic**
      * Ectomorphic
      * Introverted and shy
  + Mesomorphs had the highest propensity toward criminality due to their disposition toward a risk-taking and aggressive personality.
  + Research
    - Most entering freshmen at Ivy League schools, especially Harvard, were asked to pose in three positions for photos.
    - These subjects were told that posing naked in such a way was for their own good (i.e., to check for medical conditions), but it was actually for Sheldon and his colleagues’ research.
    - Many of the individuals included current and recently past politicians.
  + Testing of his theory used very poor methodology.
    - He based his measures on viewing the three perspectives of each subject, and often only from the three pictures.
    - Had trained staff view many of the photos and make a determination of how the individuals scored on each category of body type.
      * The reliability among these scorings was shown to be very weak.
  + The link between mesomorphy and criminality is undisputed; rather the explanation of why this link exists became a theoretical debate.
* Policy Implications
  + One could propose more thorough medical screening at birth and in early childhood, especially regarding minor physical anomalies (MPAs).
    - MPAs are a red flag signaling problems, especially in cognitive abilities, which are likely to have a significant impact on criminal behavior.
  + Having same-sex classes for children in school because they focus on deficiencies that have been shown for both young boys and girls.
  + Far more screening should be done regarding the IQ and aptitude levels of young children to identify which children require extra attention because studies show that such early intervention can make a big difference in improving their IQ/aptitude.
  + A recent summary reviewed the extant literature regarding what types of programs work best for reducing the long-term impact of early physiological risk factors for criminality noted the importance of diagnosing early head trauma and further concluded that one of the most consistently supported programs for such at-risk children are those that involve weekly infant home visitation.
  + Mandatory health insurance for pregnant mothers and children, which is quite likely the most efficient way to reduce crime in the long term.
  + All youths should be screened for abnormal levels of hormones, neurotransmitters, and toxins (especially lead).
* Conclusion

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| Theory | Key Proponents | Factors/Concepts | Key Propositions |
| Craniometry  Phrenology  Physiognomy |  | Brain/Skull Size  Bumps on Skull  Facial/Body Attributes | Larger skull/brain, more superior.  Abnormalities on skull reveal deficiencies.  Certain facial or body features reveal inferiority. |
| Atavism/Born Criminal | Lombroso | Variety of Stigmata identify “Born Criminals” | Stigmata reveal individuals likely to be born criminals. |
| IQ Testing/  Feeblemindedness | Binet (Invented)  Goddard (U.S) | IQ identifies who is superior/inferior | Low IQ person’s likely criminals. |
| Body Type | Sheldon | Tissue layer growth in embryonic stage leads to body type | Body type determines personality and behavior. |