Section III  Modern Applications of the Classical Perspective

Sedelmayer, Christopher M. 2003 Railroaders: The Effects of a New Public Transport System upon Local Crime Patterns. PhD diss., Rutgers University, NJ.


Smith, Martha J. and Derek Cornish 2009 Secure and Tranquil Travel: Preventing Crime and Disorder on Public Transport. London: Jill Dando Institute of Crime Science, University College London.


Townsend, Michael and Aiden Titlebottom 2010 All offenders are equal, but some are more equal than others: Variations in journeys to crime between offenders. Criminology 48 (3): 897-918. http://dx.doi.org/10.1111/j.1745-9125.2010.00355.x.


REVIEWS QUESTIONS

1. What are some specific reasons why public transit offers a good case study of routine activities theory? If you were to design such a study, which elements would you look for that this study did not?

2. In this study, what are some of the characteristics that may explain why the Confederation and Greenboro stations had different results than the other hubs or stations?

3. Which independent variables had the most influence on predicting crime clustering? Which independent factors contributed most to crime being concentrated in certain locations or stations?

SECTION IV

Early Positive School Perspectives of Criminality

In this section, we will discuss the dramatic differences in assumptions between the Classical and Positive Schools of criminological thought. We will also touch on the pre-Darwinian perspectives of human behavior (e.g., phrenology) as well as the influence that Charles Darwin had on the perspectives of all social sciences, particularly criminology. Finally, we will discuss the theories and methods used by early positivists, particularly Cesare Lombroso, IQ theorists, and body type researchers, with an emphasis on the criticisms of these perspectives, methodologies, and resulting policies.

Many decades of dominance by the Classical School (see Sections II and III), academics and scientists were becoming aware that the deterrence framework did not explain the distribution of crime. Their restless lead to new explanatory models of crime and behavior. Most of these perspectives focused on the fact that certain individuals tend to offend more than others and the idea that such "inferior" individuals should be controlled or even eliminated. This ideological framework fit a more general stance toward eugenics, the study of and policies related to the improvement of the human race via control over reproduction, which as we will see was explicitly mandated for certain groups. Thus, the conclusion was that there must be notable variations across individuals and groups that can help determine who is most at risk of offending.

So, in the early to mid-1800s, several perspectives were offered regarding how to determine which individuals or groups were more likely to commit crime. Many of these theoretical frameworks were made to distinguish the more "superior" individuals or groups from the "inferior" individuals or groups. Such intentions were likely related to the increased use of slavery in the world during the 1800s as well as imperialism's fight to quell rebellions at that time. For example, slavery was at its peak in the United States during this period, and many European countries controlled many dozens of colonies, which they were trying to retain for profit and domain.

Perhaps the first example of this belief was represented by craniometry. Craniometry was the belief that the size of the brain or skull represents the superiority or inferiority of certain individuals or ethnic or racial groups. The size of the brain and the skull were considered because, at that time, it was believed that a person's skull perfectly conformed to brain structure; thus, the size of the skull was believed to reflect the size of the brain. Modern science has challenged this assumption, but there actually is a significant correlation between the size of the skull

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and the size of the brain. Still, even according to the assumptions of the craniometerists, it is unlikely that much can be gathered about an individual’s intelligence from the overall size of the brain, and certainly the skull, from simple measurements of mass.

The scientists who studied this model, if they were dealing with living subjects, would measure the various sizes or circumferences of the skulls. If they were dealing with recently dead subjects, then they would actually measure the brain weight or volume of the participants. When dealing with subjects who had died long before, craniometerists would measure the volume of skulls by pouring seeds inside and then pouring those that fit into graduated cylinders. Later, when these scientists realized that seeds were not a valid measure of volume, they moved toward using bucket or ball bearings.

Most studies by the craniometerists tended to show that subjects of White or Western European descent were superior to those of other ethnic groups in terms of brain volume or skull size. Furthermore, the front portion of the brain (i.e., the genu) was thought to be larger in superior individuals or groups, and the hind portion of the brain or skull (i.e., the splenium) was predicted to be larger in inferior individuals or groups. Notably, these researchers typically knew which brains or skulls belonged to which ethnic or racial group before measurements were taken, making for an unethical and improper methodology. Such biased measurements continued throughout the 19th century and into the early 1900s.

These examinations were largely done with the intention of furthering the assumptions of eugenics, which aimed to prove under the banner of science that certain individuals and ethnic or racial groups are inferior to others. The fact that this was their intent is underscored by subsequent tests using the same subjects but performed without knowledge of which skulls or brains were from certain ethnic or racial groups; these later studies showed only a small correlation between size of the skull or brain and certain behaviors or personalities.

Furthermore, once some of the early practitioners of craniometry died, their brains were found to have volumes that were less than average or average. The brain of K. F. Gauss, for example, was relatively small but more convoluted, with more gyri and fissures. Craniometerists then switched their postulates to say that more convoluted or complex brain structures, with more fissures and gyri, indicated superior brains. However, this argument was even more tentative and more vague than the former hypotheses of craniometerists and thus did not last long. The same was true of craniometry in general, thanks to its noticeable lack of validity. However, it is important to note that modern studies show that people who have significantly larger brains tend to score higher on intelligence tests.

Despite the failure of craniometry to explain the difference between criminals and noncriminals, scientists were not ready to give up the assumption that criminal behavior could be explained by visual differences in the skull (or brain), and they certainly weren’t ready to give up the assumption that certain ethnic or racial groups were superior or inferior to others. Therefore, the experts of the time created phrenology. Phrenology was the science of determining human dispositions based on distinctions (e.g., bumps) in the skull, which were believed to conform to the shape of the brain. Readers should keep in mind that much of the theorizing by the phrenologists still aimed to support the assumptions of eugenics and show that certain individuals and groups of people are inferior or superior to others.

It is important to keep in mind that, like the craniometerists, phrenologists assumed that the shape of the skull conformed to the shape of the brain. Thus, a bump or other abnormality directly related to an abnormality in the brain at that spot.

Such assumptions have been refuted by modern scientific evidence, so it is not surprising that phrenology fell out of favor in criminological thought rather quickly.

Like its predecessor, however, phrenology got something right. Certain parts of the brain are indeed responsible for specific tasks. For example, in the original phrenological map, destructiveness was indicated by abnormalities above the left ear. Modern scientific studies show that the most vital part of the brain in terms of criminality associated with trauma is the left temporal lobe, the area above the left ear. Also, most readers know that specific portions of the brain govern the operation of different physical activities; one area governs the action of our hands, whereas other areas govern our arms, legs, and so on. So, the phrenologists had a few things right, but they were completely wrong about the extent to which bumps on the skull could indicate who would be most disposed to criminal behavior.

Once phrenology fell out of favor among scientists, researchers and society in general did not want to depart from the assumption that certain individuals or ethnic groups are inferior to others. Therefore, another discipline, known as physiognomy, became popular in the mid-1800s. Physiognomy is the study of facial and other bodily aspects to indicate developmental problems, such as criminality. Not surprisingly, the early physiognomy studies focused on contrasting various racial or ethnic groups to prove that some were superior or inferior to others.

Given modern understandings of science, it is not surprising that physiognomy did not last long as a respected scientific perspective of criminality. At any time other than the late 1800s, their ideas would not have been accepted for long, if at all. However, the theory emerged at an auspicious time. Specifically, Darwin published his work The Origin of Species in the late 1800s and made a huge impact on societal views regarding the rank order of groups in societies.

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Darwin's model outlined a vague framework suggesting that humans had evolved from more primitive beings and that the human species (like all others) had evolved from a number of adaptations preferred by natural selection. In other words, some species are selected by their ability to adapt to the environment, whereas others do not. In the case of humans, the popular belief of a theory that promoted natural design as opposed to a higher being or creator, Darwin had created a scientific framework that spread like wildfire across virtually all scientific disciplines, particularly criminology.

Darwin was not a criminologist, so he is not considered a father or theorist in the field. However, he did set the stage for what followed in criminological thought. Specifically, Darwin's theory laid the groundwork for what would become the first major scientific theory of crime, namely, Lombroso's theory of born criminals, which also tied together the assumptions and propositions of craniometry, phenology, and physiognomy.

Lombroso's Theory of Atavism and Born Criminals

Basing his work on Darwin's theory of natural selection, Cesare Lombroso (1835–1909) created what is widely considered the first attempt toward scientific theory in criminological thought. Most previous theorists were not naturalists; Cesare Beccaria, for example, was trained in law and never tested his propositions. Unlike the craniometrists and phenologists, Beccaria did not seek to explain levels of criminality. However, Lombroso was trained in medical science, and he aimed to document his observations and use scientific methodology to explain criminal behavior. Lombroso's position was that a person's or culture's criminal behavior was determined by the biological traits that were passed down from previous generations.

Lombroso's Theory of Crime

The first edition of Lombroso's The Criminal Man was published in 1876 and created an immediate response in most Western societies, influencing both their ideas and policies related to crime and justice. In this work, Lombroso outlined a theory of crime that largely brought together the pre-Darwinian theories of craniometry, phenology, and physiognomy. Furthermore, Lombroso believed that certain groups and individuals were atavistic, and that these individuals were more likely to commit crime. Atavism refers to the idea that a person or feature of an individual is a throwback to an earlier stage of evolutionary development. In other words, Lombroso thought serious criminals were lower forms of humanity in terms of evolutionary progression. For example, Lombroso would probably have suggested that chronic offenders are more like earlier stages of mankind—that is, like missing links—that they are like modern humans.

Lombroso noted other types of offenders, such as the mentally ill and criminals who committed minor offenses due to external or environmental circumstances, but he argued that the born criminals should be the target in addressing crime, insisting that they were the most serious and violent criminals in any society. These are what most criminologists now refer to as chronic offenders. Furthermore, Lombroso claimed that born criminals cannot be stopped from their natural tendencies to be antisocial.

On the other hand, Lombroso claimed that, although it was their nature to commit crime, born criminals could be stopped, or at least partially deterred, by society. According to Lombroso, societies could identify born criminals because they are marked by specific physical features, such as a receding hairline, a hooked nose, and a protruding jaw. In fact, Lombroso argued that these features were physical manifestations of the atavism of an individual—that is, features indicating a prior evolutionary stage of development.

Lombroso's List of Stigmata

According to Lombroso, more than five stigmata indicate that an individual is atavistic and inevitably will be a born criminal. Understandably, readers may be wondering what these stigmata are, and given their importance. This is a great question, but the answer varies. In the beginning, this list was largely based on Lombroso's work as a physician; it included features such as large eyes and large ears. Lombroso changed this list as he went along, however, even in the last edition of his book published well into the 1900s, which might be considered poor science.

For the most part, stigmata consisted of facial and bodily features that deviated from the norm, which is almost anything that went outside the bell curve of normal human physical development—in other words, abnormally small or large noses, abnormally small or large ears, abnormally small or large eyes, abnormally small or large jaws. Lombroso also threw in some extra-physiological features, such as tattoos and a family history of epilepsy and other disorders. Although tattoos may be somewhat correlated to crime and delinquency, it is likely they cause antisocial behavior. Given Lombroso's model that people are born criminal, it is quite unlikely that such factors are causally linked to criminality. How many babies are born with tattoos?

Ignoring the illogical nature of many of the stigmata, Lombroso professed that people who had more than five of these physical features were born criminals and that something should be done to prevent their inevitable future offending careers.

As a physician working for the Italian army, Lombroso examined the bodies of war criminals who had been captured and brought in for analysis. According to Lombroso, he first came to the realization of the nature of criminals when a particular individual was brought in for him to examine:

This was not merely an idea, but a flash of inspiration. At the sight of that skull, I seemed to see all of a sudden, lighted up as a vast plain under a flaming sky, the problem of the nature of the criminal—an atavistic being who reproduces in his person the ferocious instincts of primitive humanity and the inferior animals.

This was Lombroso's first encounter with such a criminal, and this account of it was his first acknowledgment of the theory that he created. He expanded on this theory by specifying some of the physical features he observed in this individual:

Thus were explained anatomically the enormous jaws, high cheek bones...solitary lines in the palms, extreme size of the orbits, handle-shaped ears found in criminals, savages and apes, insensibility to pain, extremely acute sight, tattooing, excessive idleness, love of orgies, and the irresistible craving of evil for its own sake, the desire not only to extinguish life in the victim, but to mutilate the corpse, tear its flesh and drink its blood.82

Although most people may now laugh at his words, at the time he wrote this description, it would have rung true to most readers, which is likely why his book was the dominant text for many decades in the criminological literature. In this description, Lombroso incorporates many of the core principles of his theory, including the idea that criminality is a biological throwback from evolution as well as the premise that they can be identified by "stigmata."

A good example of the popular acceptance of Lombroso's "scientific" stigmata was Bram Stoker's use of them in the 1896 novel Dracula, which featured a character based on Lombrosian traits of a villain, such as a high, bridged, thin nose; arched nostrils; massive eyebrows; and pointed ears. This novel was published in the late 1800s, when Lombroso's theory was highly dominant in society and in science. Lombroso's ideas became quite popular among academics, scientists, philosophers, fiction writers, and those responsible for criminal justice policy.

Beyond identifying born criminals by their stigmata, Lombroso said he could associate the stigmata with certain types of criminals— anarchists, burglars, murderers, shoplifters, and so on. Of course, his work is quite invalid by modern research standards.

Lombroso as the Father of Criminology and the Father of the Positive School

Lombroso's theory came a decade and a half after Darwin's work had been published and had spread rapidly throughout the Western world. Also, Lombroso's model supported what were then the Western world's views on slavery, deportation, and so on. Due to this timing and the fact that Lombroso became known as the first individual who actually tested his hypotheses through observation, Lombroso is widely considered the father of criminology. This title does not indicate respect for his theory, which has been largely rejected, or for his methods, which are considered highly invalid by modern standards. It is deserved, however, in the sense that he was the first person to gain considerable attention in the field. It is also deserved in the sense that his ideas gained immediate support in all countries of that time, which is the most likely reason why Lombroso is considered the father of the Positive School of criminology.

It is important to understand the assumptions of positivism, which most experts consider somewhat synonymous with the term determinism. Determinism is the assumption that most human behavior is determined by factors beyond free will and free choice. In other words, determinism (i.e., the Positive School) assumes that human beings do not decide how they will act by logically thinking through the costs and benefits of a given situation. Rather, the Positive School attributes all kinds of behavior, especially crime, to biological, psychological, and sociological variables.

82Taylor et al., New Criminology, 41–42.
ridiculous, modern medicine has supported the identification, documentation, and importance of what are termed minor physical anomalies (MPAs), which it holds may indicate high risk of developmental problems. Some of these MPAs include the following:

- Head circumference out of the normal range
- Fine, “electric” hair
- More than one hair whorl
- Epicanthus, which is observed as a fold of skin extending from the lower eyelids to the nose and appears as droopy eyelids
- Hypertelorism (orbital), which represents an increased interorbital distance
- Malformed ears
- Low-set ears
- Excessively large gap between the first and second toes
- Webbing between toes or fingers
- No earlobes
- Curved fifth finger
- Third toe longer than the second toe
- Asymmetrical ears
- Furred tongue
- Sinian crease

Given that such visible physical aspects are still correlated with developmental problems, including criminality, it is obvious that Lombroso’s model of stigmata for predicting antisocial problems has implications to the present day. Such implications are more accepted by modern medical science than they are in the criminological literature. Furthermore, some modern scientific studies have shown that being unattractive predicts criminal offending, which somewhat supports Lombroso’s theory of crime. About three decades after Lombroso’s original work was published, and after a long period of dominance, criminologists began to question his theory of atavism and stigmata. Furthermore, it became clear that more was involved in criminality than just the way people looked, such as psychological aspects of individuals. However, scientists and societies were not ready to depart from theories like Lombroso, which assumed that certain people or groups of people were inferior to others, so they simply chose another factor to emphasize: intelligence or IQ.

Case Study: Carlton "Stocking Strangler" Gary

Carlton Gary was a significantly violent offender, who was nicknamed “the Stocking Strangler” because he would break into women’s homes in Columbia, Georgia, then beat them up, rape them, and use a stocking or scarf to strangle them. He is believed to have killed seven white women aged fifty-five to ninety using this same consistent method.

One interesting fact is that Gary was a rather handsome man who even worked on local television as a model, and was dating a female deputy sheriff during the time he was committing some of these murders. Additionally, he was a loyal caregiver for his elderly aunt. However, he was not only a murderer but also a drug dealer and pimp.

Gary was clearly slim, perhaps even intelligent, which was how he managed to escape from a prison in Onondaga County, New York, by sawing through bars of his cell; even though he broke his ankle in his jump from the prison wall, he still got away by stealing a bicycle. He also escaped from a South Carolina prison, and in Georgia successfully prolonged his killing career by falsely (and convincingly) accusing another man for one of his murders. So Gary was a chronic offender who had been in and out of trouble since he was a child. But he also had a high IQ and showed near genius-like levels in his creative attempts to escape authorities numerous times. What explains the offending by this individual?

According to Dr. Adrian Raine at University of Pennsylvania, one of the leading experts on biosocial factors in criminality, many of Gary’s problems relate to various biological and social risk factors coming together and creating a type of perfect storm. Specifically, he points out that Carlton Gary never really knew his father, having met him only once when he was twelve. His mother (and her boyfriends) were physically abusive to him when he was very young, and then his mother essentially abandoned him at an early age, so he was passed around to various relatives and acquaintances at least fifteen times before his first arrest as a youth. Gary resorted to living on the streets and, often malnourished, eating out of garbage cans. Beyond the malnutrition, another physiological risk factor was that he was knocked unconscious during school recess at a young age, and was diagnosed with minimal brain dysfunction. Additionally, he had at least five or more minor physical anomalies, such as adherent ear lobes and webbing of his fingers. According to Dr. Raine, the culmination and, more importantly, the interaction among all of these biological and social/environmental factors is very likely the reason why Carlton Gary became such a persistent, predatory killer.


The IQ Testing Era

Despite the evidence that was presented against Lombroso, his theorizing remained dominant until the early 1900s, when criminologists realized that stigmata and the idea of born criminals were not valid. However, even at that time, theorists and researchers were not ready to give up on the eugenics assumption that certain ethnic or racial groups were superior or inferior to others. Thus, a new theory emerged based on what was called “intelligence quotient,” or IQ. At that time, IQ was calculated as chronological age divided by mental age, which was then multiplied by 100, with the average score being 100. This scale has changed enormously over time, but the basic premise was that the test could be used to determine whether someone was above or below average intelligence.
As mentioned previously, Binet had good intentions: He created IQ scores to identify youth who were not performing up to par on academic skills. Binet was explicit in stating that IQ could be changed; the reason he proposed a score to identify slow learners was so that they could be trained to increase their IQs.14 However, when Binet's work was brought over to the United States, his basic assumptions and propositions were twisted. One of the most prominent individuals who used Binet's IQ test in the United States for purposes of deporting, incapacitating, sterilizing, and otherwise ridding society of low-IQ individuals was H. H. Goddard.

Goddard is generally considered the leading authority on the use and interpretation of IQ testing in the United States.15 He adapted Binet's model to examine immigrants who were coming into the United States from foreign lands. It is important to note that Goddard proposed quite different assumptions regarding intelligence or IQ than did Binet. Goddard asserted that IQ was static or innate, meaning that such levels could not be changed, even with training. His assumption was that intelligence was inherited from parents and passed from generation to generation.

Goddard labeled low IQ feeblemindedness, which in the 1900s actually became a technical, scientific term characterizing those who had significantly below-average levels of intelligence. Of course, being a scientist, Goddard specified certain levels of feeblemindedness, which were ranked based on the degree to which scores were below average. Ranging from the highest to the lowest intelligence, the first group were the morons, the second-lowest group were the imbeciles, and the lowest-intelligence group were the idiots.

According to Goddard, from a eugenics point of view, the biggest threat to the progress of humanity was not the idiots but the morons. In Goddard's words, "The idiot is not our greatest problem. . . . He does not continue the race with a line of children like himself. . . . It is the moron type that makes us for our great problem."22 That is, the moron is the one group out of the three categories of feebleminded who is smart enough to slip through the cracks and reproduce.

Goddard received many grants to fund his research to identify the feebleminded. Goddard took his research team to the major immigration center at Ellis Island in the early 1900s to identify the feebleminded as they attempted to enter the United States. Many members of his team were women, who he felt were better at distinguishing the feebleminded by sight.

The people who are best at this work, and who I believe should do this work, are women. Women seem to have closer observation than men. It was quite impossible for others to see how . . . women could pick out the feeble-minded without the aid of the Binet test at all.32

Goddard was proud of the increase in the deportation of potential immigrants to the United States, enthusiastically reporting that deportations for the reason of mental deficiency increased by 350% in 1913 and 570% in 1914 over the averages of the preceding five years.32 However, over time, Goddard realized that his policy recommendations of deportation, incapacitation, and sterilization were not based on accurate science.

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 (i.e., as having a mental age of less than 12) on the IQ test. Therefore, Goddard lowered the criteria for determining feeblemindedness from the mental age of 12 to that of age 8. Although this appears to be a clear admission that his scientific method was inaccurate, Goddard continued to promote his model of the feebleminded for many years, and societies used his ideas.

However, toward the end of his career, Goddard admitted that intelligence could be improved, despite his earlier assumptions that it was innate and static.33 In fact, Goddard actually claimed that he had 'gone over to the enemy.'34 However, despite Goddard's admission that his assumptions and testing were not determinant of individuals' intelligence levels, the snowball had been rolling for too long and had gathered too much strength to fight even the most notable theorists' admonishments.

Sterilization of individuals, mostly females, continued in the United States based on scores of intelligence tests. Often the justification was not a person's own intelligence scores but those of his or her mother or father. Goddard had proclaimed that the germ-plasm determining feeblemindedness was passed on from one generation to the next, so it inevitably resulted in offspring being feebleminded as well. Thus, the U.S. government typically sterilized individuals, typically women, based on the IQ scores of their parents.

The case of Buck v. Bell, brought to the U.S. Supreme Court in 1927, dealt with the issue of sterilizing individuals who had scored, or whose parents had scored, as mentally deficient on intelligence scales. The majority opinion, written by one of the court's most respected jurists, Oliver Wendell Holmes Jr., stated:

We have seen more than once that the public welfare may call upon the best citizens for their lives. It would be strange if it could not call upon those who already sap the strength of the state for these lesser sacrifices. . . . Three generations of imbeciles are enough.35

14Gould, "Mismeasure of Man.
15Again, most of this discussion is taken from Gould, "Mismeasure of Man", because his review is perhaps the best known in the current literature.
18Gould, Mismeasure of Man, 198.
20Ibid., 234.
21As quoted in Gould, Mismeasure of Man, 363.
Thus, the highest court in the United States upheld the use of sterilization for the purposes of limiting reproduction among individuals who were deemed feebly minded according to an IQ score. Such sterilizations continued until the 1970s, when the practice was finally halted. Governors of many states, such as North Carolina, Virginia, and California, have given public apologies for what was done. For example, in 2002, the governor of California, Gray Davis, apologized for the state law passed almost a century earlier that had resulted in the sterilization of about 19,000 women in California.

Although this aspect of U.S. history is often hidden from the public, it did occur, and it is important to acknowledge this blot on our nation's history, especially at a time when we were fighting abuses of civil rights by the Nazis and other regimes. Ultimately, the sterilizations, deportations, and incarcerations based on IQ testing are an embarrassing episode in the history of the United States.

For decades, the issue of IQ was not researched or discussed much in the literature. However, in the 1970s, a very important study was published in which Travis Hirschi and Michael Hindelang examined the effect of intelligence on youths' behaviors. Hirschi and Hindelang found that, among youths of the same race and social class, intelligence had a significant effect on delinquency and criminality among individuals. This study, as well as others, showed that the IQ of delinquents or criminals is about 10 points lower than that of noncriminals. This study led to a redefinition in research regarding intelligence testing within the criminalological perspective. A number of recent studies have shown that certain types of intelligence are more important than others. For example, several studies have shown that having low verbal intelligence has the most significant impact on predicting delinquent and criminal behavior.

This tendency makes sense, because verbal skills are important for virtually all aspects of life, from everyday interactions with significant others to filling out forms at work to dealing with people via employment. In contrast, most people do not require advanced math or quantitative skills at their jobs or in everyday activities. Thus, the fact that low verbal IQ is the type of intelligence that represents the most direct prediction for criminality is most likely due to the general need for verbal skills in routine daily activities. After all, people who lack communication skills will likely find it hard to obtain or retain employment or deal with family and social problems.

This redefinition of the link between intelligence and criminality led to a new perspective on the role of intelligence in criminal behavior. Although this publication changed the terms moron, imbecile, and idiot to relatively benign terms (e.g., cognitively disadvantaged), their argument was consistent with that of the feebblemindedness researchers of the early 20th century. Herrnstein and Murray argued that people with low IQ scores are somewhat destined to be unsuccessful in school, become unemployed, produce illegitimate children, and commit crime. They also suggest that IQ or intelligence is primarily innate, or genetically determined, and that there is little chance of improving it. These authors also noted that African Americans tended to score lowest, whereas Asians and Jewish people tended to score highest, and they believed this offered results from social indicators supporting their argument that the intelligence levels of the latter resulted in relative success in life in terms of group-level statistics.

This book produced a public outcry, resulting in symposiums at major universities and other venues in which the authors' postulates were largely condemned. As noted by other reviews of the impact of this work, some professors at public institutions were sued in court because they used this book in their classes. However, none of these scientific critics has fully addressed the undisputed fact that African Americans consistently score lower on intelligence tests and that Asians and Jews score higher on these examinations. Furthermore, none has adequately addressed the issue that—even within these populations—low IQ scores (especially on verbal tests) predict criminality. For example, in samples of African Americans, the group that scores lowest on verbal intelligence consistently commits more crime and is more likely to become delinquent or criminal. So, despite the harsh criticism of The Bell Curve, it is apparent that there is some validity to the authors' arguments.

With the popularity of intelligence testing and IQ scores in the early 20th century, it is not surprising that this was the period when other psychological models of deviance and criminality became popular. However, one of the most popular involved body type theories.

**Body Type Theory: Sheldon's Model of Somatotyping**

Although there were numerous theories based on body types in the late 1800s and early 1900s, such as Lombroso's and those of others who called themselves criminal anthropologists, none of these perspectives had a more enduring impact than that of William Sheldon. In the mid-1940s, a new theoretical perspective was proposed that merged the concepts of biology and psychology. Sheldon claimed that, in the embryonic and fetal stages of development, individuals tend to have an emphasis on certain tissue layers. According to Sheldon, these varying degrees of emphasis are largely due to heredity and lead to the development of certain body types and temperaments or personalities. This became the best-known body type theory, also known as somatotyping.

According to Sheldon, all embryos must develop three distinct tissue layers, and this much is still acknowledged by perinatal medical researchers. The first layer of tissue is the endoderm, which is the inner layer of tissues and includes the internal organs, such as the stomach, large intestine, and small intestine. The middle layer of tissue, called the mesoderm, includes the muscles, bones, ligaments, and tendons. The ectoderm is the outer layer of tissue, which includes the skin, capillaries, and much of the nervous system tissues. Sheldon used these medical facts regarding various tissue layers to propose that certain individuals tend to emphasize certain tissue layers relative to others, typically due to inherited dispositions. In turn, Sheldon believed that such emphases lead to certain body types in an individual, such that people who have a focus on their endoderm in embryonic development will inevitably become endomorphic, or obese (see Image 4.5a). According to this theory, individuals who have an emphasis on the middle layer of tissue will typically become mesomorphic, or of an athletic or muscular build (see Image 4.5b), while individuals who have an emphasis on the outer layer will end up with an ectomorphic build, or thin (see Image 4.5c).

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21For a review, see Raymond Paternoster and Robert Bachman, Explaining Criminals and Crime (Los Angeles: Roxbury, 2001). Also see Raine, Psychopathology.


Sheldon and his research team graded each subject on three dimensions corresponding to these body types. Each body type was measured on a scale of 1 to 7, with 7 being the highest score. Obviously, no one could score a 0 for any body type because all tissue layers are needed for survival; we all need our internal organs, bone and muscular structure, and outer systems (skin, capillaries, etc.).

Each somatotype always had the following order: endomorph, mesomorph, eumorph. Thus, the scores on a typical somatotype might be 3-6-2, which would indicate that this person scored a 3 (a little lower than average) on endomorph, a 6 (high) on mesomorph, and a 2 (relatively low) on eumorph. According to Sheldon's theory, this hypothetical subject would be a likely candidate for criminality because of the relatively high score on mesomorph. In fact, the results from his data, as well as all studies that have examined the association of body types with delinquency or criminality, would support this prediction.

Perhaps most important, Sheldon proposed that these body types matched personality traits or temperaments. Individuals who were endomorphic (obese), Sheldon claimed, tended to be more jolly or lazy. The technical term for this temperament is viscerotonic. In contrast, people who were mesomorphic (muscular) typically had risk-taking and aggressive temperaments, called somatonic. Last, individuals who were eumorphic (thin) tended to have introverted or shy personalities, which is referred to as cerebrotonic. According to Sheldon, members of the middle group, the mesomorphs, obviously had the highest propensity toward criminality because they were disposed toward a risk-taking and aggressive personality.

Interestingly, many politicians were subjects in Sheldon's research. Most entering freshmen at Ivy League schools, especially Harvard, were asked to pose for photos for Sheldon's studies. The Smithsonian Institution still retains a collection of nude photos of George W. Bush, Hillary Rodham Clinton, and many other notable figures.

Sheldon used poor methodology to test his theory. He based his measures of subjects' body types on what he subjectively judged from viewing three perspectives of each subject and often from only three pictures taken of each subject in the three poses. He also had his trained staff view many of the photos and make their determinations of how these individuals scored on each category of body type. The reliability among these scorings has been shown to be weak, meaning that the trained staff did not tend to agree with Sheldon or among themselves on the somatotypes for each participant.

This is not surprising, given the high level of variation in body types and the fact that Sheldon and his colleagues did not employ the technology that is used today, such as caliper tests and submersion in water tanks, which provide the information for which he was searching. People may alter their weights, given from an eumorphic or mesomorphic build to a more endomorphic form, or vice versa. Presented with the argument that individuals often alter their body types via diet or exercise, Sheldon responded that he could tell what the "natural" body type of each individual was from the three pictures that were taken. Obviously, this position is not a strong one, as demonstrated by the poor interrater reliability shown by his staff. Therefore, Sheldon's methodology is questionable, which casts doubt on the entire theoretical framework.

Despite the problems in his methodology, Sheldon clearly showed that mesomorphs, or individuals who had muscular builds and tended to take more risks, were more delinquent and criminal than individuals who had other body types or temperaments. Furthermore, other researchers, even those who despised Sheldon's theory, found the same associations between mesomorphy and criminality and as related temperaments (i.e., somatonic) and criminality. Subsequent studies showed that mesomorphic boys were far more likely to have personality traits that predicted criminality, such as aggression, short temper, self-centeredness, and impulsivity.

Recent theorists have also noted the link between an athletic, muscular build and the highly extroverted, aggressive personality that is often associated with this body type. In fact, some recent theorists have gone so far as to claim that chronic offenders, both male and female, can be identified early in life by their relatively V-shaped pelvic structure as opposed to a U-shaped pelvic structure. The V-shaped pelvis is said to indicate relatively high levels of androgens (male hormones, like testosterone) in the system, which predisposes individuals toward crime. On the other hand, a more U-shaped pelvis indicates relatively low levels of such androgens and therefore lower propensity toward aggression and criminality. Using this logic, it may be true that more hair on an individuals arms (whether that person be male or female) is predictive of a high likelihood for committing crime. However, no research exists regarding this factor.

Regarding the use of body types and characteristics in explaining crime, many of the hard-line sociologists who have attempted to examine or replicate Sheldon's results have never been able to refute the association between mesomorphs and delinquency or criminality, nor the association between mesomorphy and the somatonic

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[1] See discussion in Brown et al., Criminology, 246.


characteristics of risk-taking and aggression. Thus, the association between being muscular or athletically built and engaging in criminal activities is now undisputed and assumed to be true.

Still, sociologists have taken with the reasons for this association. Whereas Sheldon claimed it was due to inherited traits for a certain body type, sociologists argue that this association is due to societal expectations. Muscular male youths would be encouraged to engage in risk-taking and aggressive behavior. For example, a young man with an athletic build would be encouraged to join sports teams and engage in high-risk behaviors by peers. Who would want more than ten years as members? More muscular, athletic individuals would be better at fighting and performing acts that require a certain degree of physical strength and stamina.

Ultimately, it is now established that mesomorphs are more likely to commit crime. Furthermore, the personality traits linked to having an athletic or muscular build are dispositions toward risk-taking and aggressiveness, and few scientists dispute this correlation. No matter which theoretical model is adopted—whether the biopsychologist or the sociologist—the fact is that mesomorphs are indeed more likely to be risk-taking and aggressive and, thus, to commit more crime than individuals of other body types.

However, whether the cause is biological or sociological is a debate that shows the importance of theory in criminological research. After all, the link between mesomorphy and criminality is not undisputed; the explanation of why this link exists has become a theoretical debate. Readers may make their own determination—if not now, then later.

Our position is that both biology and social environment are likely to interact with one another in explaining this link. Thus, it is most likely that both nature and nurture are at play in this association between mesomorphy and crime, and both Sheldon and his critics may be correct. A middle ground can often be found in theorizing on criminality. It is important to keep in mind that theories in criminology, as a science, are always considered subject to falsification and criticism and can always be improved. Therefore, our stance on the validity and influence of this theory, as well as others, should not be surprising.

Policy Implications

Many policy implications can be derived from the theories presented in this section. First, one could propose more thorough medical screening at birth and in early childhood, especially regarding minor physical anomalies (MPAs). The studies reviewed in this section obviously implicate numerous MPAs in developmental problems (most of them arising in the womb). These MPAs are a red flag signaling problems, especially in cognitive abilities, which are likely to have a significant impact on propensity for criminal behavior. Recent reviews of such MPAs have been found to be very important in identifying red flags for higher likelihood for criminal behavior, even in children as young as age 3. Furthermore, recent studies have found that a high number of MPAs interact with other social factors. Specifically, MPAs have been found to interact with environmental risk factors, such as family disorder or adversity, consistently in prediction of antisocial or criminal adult behaviors.

Other policy implications derived from the theories and findings of this section involve having same-sex classes for children in school because they focus on deficiencies that have been shown for both young boys and girls. Numerous school districts now have policies that specify same-sex math courses for female children.

Conclusion

This same strategy might be considered for male children in English or literature courses because males have a biological disposition for a lower aptitude than females in this area of study. Furthermore, more face screening should be done to determine IQ and aptitude levels of young children in order to identify which children require extra attention because studies show that such early intervention can make a big difference in improving their IQ and aptitude.

A recent report that reviewed the extant literature regarding what types of programs work best for reducing crime 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. Another obvious policy implication derived from biosocial theory is mandatory health insurance for pregnant mothers and children, which is quite likely the most efficient way to reduce crime in the long term. Finally, all youths should be screened for abnormal levels of hormones, neurotransmitters, and toxins (especially lead).

Section IV Early Positive School Perspectives of Criminality

In this section, we discussed the development of the early Positive School of criminology. The Positive School can be seen as the opposite of the Classical School perspective, which we covered in Sections II and III, because positivism assumes that individuals have virtually no free will; rather, criminal behavior is considered to be the result of determinism, which means that factors other than rational decision making, such as poverty, intelligence, bad parenting, and unemployment, influence us and determine our behavior.

The earliest positivist theories, such as craniometry and phrenology, were developed in the early 1800s but did not become popular outside of scientific circles, likely because they were presented prior to Charles Darwin's theory of evolution. In the 1860s, Darwin's theory became widely accepted, which set the stage for the father of criminology, Lombroso, to propose his theory of born criminals. Lombroso's theory was based on Darwin's theory of evolution and argued that the worst criminals are born that way, being biological throwbacks to an earlier stage of evolution. Unfortunately, Lombroso's theory led to numerous policies that fit the philosophy and politics of Fascism, which found useful a theory proposing that certain people were inferior to others. However, Lombroso and many of his contemporaries became aware that the field should shift to a more multifactoral approach, such as one emphasizing how environment and social factors interact with physiological influences.

We also discussed theories regarding low IQ scores, traditionally known as feeblemindedness. Although most recent studies show that there is a correlation between crime and low IQ, this association is not quite as strong as thought in the early 1900s. Modern studies show consistent evidence that low verbal IQ is related with criminality, especially when coupled with sociological factors, such as weak family structure. This is the state of the criminological field today, and it will be discussed in the next section.

Finally, we explored the theories and evidence regarding body types in predisposing an individual toward criminality. Studies have shown that the more athletic or mesomorphic an individual is, the higher the probability that this individual will be involved in criminality. This relationship is likely based on hormonal levels, and this type of association will be explored in the next section.
Ultimately, we have examined a variety of physiological and psychological factors that predict criminal offending according to empirical research. Still, the existence of such influence is largely conditional—that is, based on environmental and social factors.

**SECTION SUMMARY**

- The Positive School of criminology assumes the opposite of the Classical School. Whereas the Classical School assumes that individuals commit crime because they freely choose to act after rationally considering the expected costs and benefits of the behavior, the Positive School assumes that individuals have virtually no free will or choice in the matter; rather, their behavior is determined by factors outside of free will, such as poverty, low intelligence, bad child rearing, and unemployment.

- The earliest positive theories, such as craniometry and phrenology, emphasized measuring the size and shape of the skull and brain. These perspectives did not become very popular because they preceded Darwin’s theory of evolution.

- Lombroso, the father of criminology, presented a theoretical model that assumed that the worst criminals are born that way. Highly influenced by Darwin, Lombroso claimed that born criminals are evolutionary throwbacks who are not as highly developed as most people.

- Lombroso claimed that these born criminals could be identified by physical features called stigmata. This led to numerous policy implications that fit with the societal beliefs at that time, such as Fascism.

- In the early 1900s, the IQ test was invented in France and was quickly used by American researchers in their quest to identify the feebleminded. This led to massive numbers of deportations, sterilizations, and institutionalizations across the United States and elsewhere.

- Modern studies support a link between low verbal IQ and criminality, even within a given race, social class, or gender.

- Merging elements of the early physiological and psychological perspectives are body type theories. The best known of these is somatotyping, which was proposed by William Sheldon. Sheldon found that an athletic or muscular build (i.e., mesomorphic) is linked to an aggressive, risk-taking personality, which in turn is associated with higher levels of crime.

- Despite the methodological problems with Sheldon’s body type theory, many propositions and associations of the perspective hold true in modern studies.

- The early Positive School theories set the stage for most of the other theories we will be covering in this book because they emphasize the use of the scientific method for studying and explaining criminal activity.

**KEY TERMS**

- atavism 140  
- cerebrotonic 150  
- craniometry 137  
- determinism 142  
- ectoderm 149  
- euctomorph 149  
- endoderm 149  
- endomorphic 149  
- eugenics 137  
- feeblemindedness 146  
- mesoderm 149  
- mesomorphic 149  

**DISCUSSION QUESTIONS**

1. What characteristics distinguish the Positive School from the Classical School regarding criminal thought? Which of these schools do you lean toward in your own perspective of crime and why?

2. Name and describe the various early schools of positivistic theories that existed in the early to mid-1800s (pre-Darwin) as well as the influence that they had on later schools of thought regarding criminality. Do you see any validity in these approaches (as modern medical science does)? Why or why not?

3. What were the significant reasons that these early schools of positivistic theories did not gain much momentum in societal popularity? Does this lack of popularity relate to the neglect of biological perspectives of crime in modern times?

4. What portion of Lombroso’s theory of criminality do you find least valid? Which do you find most valid?

5. Most readers have taken the equivalent of an IQ test (e.g., SAT or ACT tests). Do you believe that this score is a fair representation of your knowledge as compared to that of others? Why or why not? Do your feelings reflect the criticisms of experts regarding the use of IQ (e.g., as in feeblemindedness theory) in identifying potential offenders?

6. In light of scientific findings that show that verbal IQ is a consistent predictor of criminality among virtually all populations and samples, can you provide evidence from your personal experience for why this occurs?

7. What portion of Sheldon’s body type theory do you find most valid? What do you find least valid?

8. If you had to give yourself a somatotype (e.g., 3-6-2), what would it be? Explain why your score would be the one you provide, and note whether this would make you likely to be a criminal in Sheldon’s model.

9. Provide somatotypes of five of your family members or best friends. Do the somatotypes have any correlation with criminality according to Sheldon’s predictions? Either way, describe your findings.

10. Ultimately, do you believe that some of the positive theoretical perspectives presented in this section are valid, or do you think they should be entirely dismissed in terms of understanding or predicting crime? Either way, state your case.

11. What types of policies would you implement if you were in charge, given the theories and findings in this section?

**WEB RESOURCES**

- Body Type Theories/Somatotyping  
  http://www.innerexplorations.com/psych/shel.htm  
  http://www.teachem.com/gcse_health/somatotypes.php