

Slide 1

Explaining Crime  
Chapter 3

### Body-Type Theory

Body-type theory is an extension of Lombroso's criminal anthropology, developed by Ernst Kretschmer and later William Sheldon. It says that human beings can be divided into three basic body types, or *somatotypes*:

1. Endomorphic (soft, fat)
2. Mesomorphic (athletically built)
3. Ectomorphic (tall, skinny)

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Slide 2

Explaining Crime  
Chapter 3

### Body-Type Theory

Sheldon found that delinquents were more mesomorphic than nondelinquents, and serious delinquents were more mesomorphic than less severe delinquents.

Sheldon did not consider that delinquents are more likely to be mesomorphic because, for example, mesomorphs are more likely to be selected for gang membership.

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Slide 3

Explaining Crime  
Chapter 3

### Heredity Studies

Several studies have attempted to determine if criminality is hereditary by studying:

- family trees
- statistics
- identical and fraternal twins
- adopted children

All of these methods fail to prove that criminality is hereditary, because they cannot separate hereditary influences from environmental influences.

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Slide 4

Explaining Crime  
Chapter 3

### Modern Biocriminology

Ongoing research has revealed numerous biological factors associated either directly or indirectly with criminal or delinquent behavior:

- chemical, mineral, and vitamin deficiencies in the diet
- diets high in sugar and carbohydrates
- hypoglycemia

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Slide 5

Explaining Crime  
Chapter 3

### Modern Biocriminology

- ingestion of food dyes and lead
- exposure to radiation
- brain dysfunctions

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Slide 6

Explaining Crime  
Chapter 3

### Modern Biocriminology

The **limbic system** is a structure surrounding the brain stem that is believed to moderate expressions of violence.

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Slide 7

Explaining Crime  
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**limbic system**

A structure surrounding the brain stem that, in part, controls the life functions of heartbeat, breathing, and sleep.

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Slide 8

Explaining Crime  
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**Modern Biocriminology**

Violent criminal behavior has also been linked to disorders in other parts of the brain.

Recent evidence suggests that chronic violent offenders have much higher levels of brain disorder than the general population.

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Slide 9

Explaining Crime  
Chapter 3

**Brain Neurotransmitters**

Some criminal behaviors are believed to be influenced by low levels of brain neurotransmitters (the substances brain cells use to communicate).

- Low levels of *serotonin* have been found in impulsive murderers and arsonists.
- *Norepinephrine* may be associated with compulsive gambling.

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Explaining Crime

Chapter 3

### Hormones

Criminal behaviors have also been associated with hormone abnormalities, especially those involving:

- Testosterone (a male sex hormone)
- Progesterone and estrogen (female sex hormones)

Administering estrogen to male sex offenders has been found to reduce their sexual drives.

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