

# What Leads to “Serial Killer” Behavior?

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## ABSTRACT

The paper is a hypothesis/investigative paper that dives into the causes for "serial killer" behavior. The main claim is that the amygdala is one of the main causes of violent behavior. Examples such as Ted Bundy and Ed Gein are described and analyzed to find a connection between their actions and their dysfunctional amygdalas. The crimes of Ted Bundy and his remorseless killings reveals his psychopathic behavior that is most likely caused by the problems with his amygdala. Ed Gein's childhood trauma and unhealthy attachment to his mother lead to schizophrenic behavior after her death, which may have caused problems in his amygdala, which in turn leads to crime.

## Hypothesis and Introduction

### Hypothesis

Lower volumes and functioning of the amygdala leads to serial killer behavior. Many serial killers feel less fear, which means more willingness to commit crime and even no fear of consequences. Additionally, serial killers have a god complex, or also a self-centered mindset, this could be directly related to the functioning of the amygdala, in which threats aren't processed correctly, or at all. Gives the person the illusion that they are a "deity". Nothing can harm them, nothing can even touch them.

### Amygdala

The amygdala is commonly thought to form the core of a neural system for processing fearful and threatening stimuli, including detection of threat and activation of appropriate fear-related behaviors in response to threatening or dangerous stimuli

### Findings

“At least one study indicates that such deficits may appear long before people commit crimes. A study done by University of Pennsylvania and CUNY examined fear conditioning, which is dependent on amygdala function, in a group of 1,795 3-year-olds. The researchers put electrodes on the children's fingers while repeatedly playing two tones: one that was followed by a loud, unpleasant sound and another that was played alone. Subsequently, the difference in sweat responses to each tone by itself yielded a measure of each toddler's fear conditioning. Twenty years later, the team identified participants who had gone on to commit crimes and compared them with noncriminal counterparts, matching them on gender, ethnicity and social adversity. They found that those children who went on to commit crimes had "simply failed" to demonstrate fear conditioning, Raine says. In other words, they were fearless when most of us would be fearful. This finding suggests that deficits in the amygdala, which are indirectly identifiable as early as age 3, predispose to crime at age 23”.

First Source: <https://www.apa.org/monitor/2014/02/criminal-mind>

## Anterior Cingulate Cortex

The anterior cingulate cortex is responsible for a host of cognitive functions, including emotional expression, attention allocation, and mood regulation.

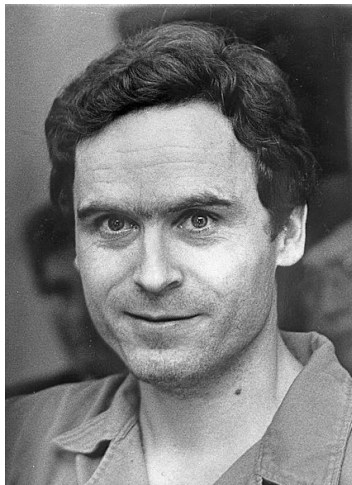
### Hypothesis(Addition)

The lack of volume and function of the ACC may lead to sociopathic behavior, mood regulation and emotional expression may be negatively impacted. May lead to re-offense in crime in later years due to lack of remorse and regret. A certain “high” may develop and the poorly functioning amygdala may contribute to the feeling of “invincibility” and remove the fear of consequences.

“They found that prisoners with lower ACC activity were twice as likely to reoffend four years after they left prison than prisoners with higher ACC activity (*PNAS*, 2013). While such studies need replication and extension, Raine says, they are ‘proof of the concept that there may be added value with bringing on board neurobiological information, including brain imaging information, for future prediction of violence.’”

## Criminal Analysis

### Description and Analysis 1: Ted Bundy



**Figure 1.** Photo from Wikipedia

### *Early and later Childhood*

Behavior is in line with someone who has an amygdala function issue. “Louise's younger sister Julia recalled awakening from a nap to find herself surrounded by knives from the kitchen, and three- year-old Ted standing by the bed, smiling.” Strong Sociopathic behavior displayed at a young age. ACC issue linked to behavior. “Bundy's childhood neighbor Sandi Holt described him as a bully, saying, ‘He liked to terrify people... He liked to be in charge. He liked to inflict pain and suffering and fear.’” In a later interview, Bundy states his affection for his grandfather(Samuel Cowell), saying that he “identified with” his grandfather. “In 1987, however, he and other family members told attorneys that Samuel was a tyrannical bully who beat his wife and dog, exhibited bigotry (including religious intolerance, racism, and xenophobia), and swung neighborhood cats by their tails. In one instance, Samuel threw Julia down a flight of stairs for oversleeping”. Samuel Cowell was also a schizophrenic.

During his later childhood years, Bundy would exhibit an interest in books and comics that depicted illustrations of dead and/or maimed women. Early signs of necrophilia were evident. "To Michaud and Aynesworth, he described roaming his neighborhood, picking through trash barrels in search of pictures of naked women". "to Polly Nelson he said that he perused detective magazines, crime novels, and true crime documentaries for stories that involved sexual violence, particularly when the stories were illustrated with pictures of dead or maimed women."

Bundy's social life was also evident in his sociopathic and ant-social behavior. He tended to talk to few people and "didn't know how to make friends". "He told Michaud and Aynesworth that he "chose to be alone" as an adolescent because he was unable to understand interpersonal relationships.". However, interviews from his peers in high school have stated that he "was well known and well liked". This may hint to his charismatic nature that would be the bait for his victims.

### *Early Adult Life and Crimes*

In college, he became romantically involved with Diane Edwards. Later, Edwards would end their relationship based on the fact that Bundy was "immature" and "lacked ambition". This breakup "devastated" Bundy and was a "pivotal time in his development" according to Psychiatrist Dorothy Lewis. Bundy then met Elizabeth Kloepfer, a single mother living in Utah. He was a father figure to Kloepfer's younger daughter Molly, who was 3 years old at the time Bundy started dating her mother. "As an adult, Molly wrote of incidents beginning at age 7 in which Bundy was abusive or sexually inappropriate with her. Her accounts include Bundy hitting her in the face, knocking her down, putting her at risk of drowning, indecent exposure, and sexual touching disguised as accidents or "games"." Pedophilic and abusive nature evident above, gave "excuses" when he would commit these crimes, evidence of no remorse or regret?

### *Modus Operandi:*

- Would act disabled(wear a sling or walk with crutches) and approach his victim
- Ask them to help him with an item and take it to his car, Brown Volkswagen Beetle.
- Would knock the victims unconscious, and take them to a location quite a distance away from Seattle.
- Sodomize his victims and also would participate in explicit behavior with the unconscious body.
- Would revisit his victims several times
- Victims tended to be young, white, attractive, college students with long hair parted down the middle.

### *Analysis*

Bundy was a serial necrophile and rapist who would lure young women by using guilt and would beat them unconscious, throw their body into his car, drive them a certain distance away, and proceed to sodomize their unconscious body, later, he would kill his victims and sodomize the dead body, displaying necrophilic behavior. Bundy clearly displayed Antisocial behavior, psychopathy and sociopathic nature are linked with the behavior. He showed no remorse and clearly planned out every step to capture his victims methodically. He displayed risk common to psychopathic behavior such as taking evidence from a crime scene during an open police investigation of the area. He also used the same car(Volkswagen Beetle) and the same techniques' ' to lure his victims. He is a "power" or "control" type serial killer which factors into the previous hypothesis regarding the malfunctioning of the amygdala.

### *Description and Analysis 2: Ed Gein*



**Figure 2.** Photo from [https://en.wikipedia.org/wiki/Ed\\_Gein](https://en.wikipedia.org/wiki/Ed_Gein). Sources: <https://www.britannica.com/biography/Ed-Gein>, [https://en.wikipedia.org/wiki/Ed\\_Gein](https://en.wikipedia.org/wiki/Ed_Gein)

### *Early and Later Childhood*

Gein's mother (Augusta Gein) was a fervently religious Lutheran, who preached to her sons about the innate immortality of the world, the evil of drinking, and her belief that women (except herself) are promiscuous and instruments of the devil. This indoctrination and his mother barring Ed from being able to leave the farm and also make friends put a stop on any social development in his childhood, affecting his late years. The demonization of women since a young age has also contributed to the selection of his future victims. He was a shy, weird kid who would laugh randomly and had no friends at a younger age.

### *Adult Life and Losses*

In 1940, Ed Gein's father passed from a heart attack and Ed had to work to pay the bills. They had a generally good reputation amongst the community in Plainfield. However, Ed's brother noted the weird affection that Ed would have for his mother, and his brother would openly speak ill about Augusta in front of Ed and Ed would respond with "shock" and "hurt". Soon Augusta passed from a stroke and left Ed devastated and according to author Harold Schechter, he had "lost his only friend and one true love. And he was absolutely alone in the world."

### *Crime*

Gein was discovered in 1957 after the kidnapping of a hardware store owner named Bernice Worden. He fatally shot and decapitated her. The police found in the house some of the most disturbing scenes the officers have ever seen. Human skin is made into furniture and skulls used as bowls. A human head located in a burlap sack and human skulls placed around the house. Gein even made masks and costumes with female human skin. He reportedly would wear these costumes and dance around his property. In 1958, his house was finally burned down due to an unknown origin.

### *Analysis*

In the trial, Ed Gein admitted to killing the 2 women but he pleaded not guilty by reason of insanity. He was sent to several psychiatric institutions and after the trial, returned to another mental hospital until his death.

Gein had the typical upbringing that causes many problems later in life. Abusive parents and a severe dependence on his mother. After her death, Gein developed schizophrenia ([Penn State, 2018](#)) and also gender dysphoria (as is evidenced when he would wear female skin suits). According to a study done by

various psychiatrists ([National Library of Medicine.2008](#))schizophrenia patients “demonstrated a deficit in amygdala reactivity to negative face stimuli and an alteration, correlated with neuroleptic drug dosage, in the functional coupling between the amygdala and subgenual cingulate.”. Essentially, there is a conclusion that could be drawn that Ed Gein’s behavior not only is affected by his abusive parents, but the dysfunction of his amygdala caused by the death of his mother most likely played a part in his crimes.

## **Question: Why Does the Amygdala Become Defective and What Causes Psychopathy in Adults and Even Children?**

Answer (Source:[https://www.medicinenet.com/damage\\_to\\_the\\_amygdala/article.htm](https://www.medicinenet.com/damage_to_the_amygdala/article.htm)): As supported by the experiences of Ted Bundy and many other serial killers, damage can be done by PTSD, a phobia, etc. These conditions caused by various events such as the death of Ed Gein’s mother which lead him to become the inspiration for Texas Chainsaw Massacre, can lead to the structural and/or functional damage of the amygdala. Another thing is also the way and manner children are raised. Again regarding Leatherface, Ed Gein’s mother raised him to believe that all women(except herself) were promiscuous and instruments of the devil([Wikipedia](#)) and was a furiously devout Lutheran who pushed her beliefs unto Ed as child. This led to Ed’s victims being primarily women.

### **Signs of Amygdala Damage**

- Eating Disorder
- Aphasia
- Expressive expression of fear and/or anger
- A strange curiosity regarding surroundings and objects nearby

### **Final**

Overall, majority (if not all) “serial killer” behavior stems from the structural and functional behavior of the dysfunctional amygdala. Cases of various serial killers such as Ted Bundy and Ed Gein have shown that these criminals are psychopaths and/or sociopaths and their intense trauma and teachings during their younger ages have led to the actions they have committed. The amygdala, responsible for fear and anger, is important for the sense of risk, how one sees himself/herself, and also the behavior exhibited by people. The dysfunction of his gland leads to threatening behavior, and the future looks promising in not finding a cure, but being able to predict and prevent “killer” behavior through therapy and preventive styles of raising children with the potential to do damage if left untreated.

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