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The Role of Psychopathy and Sexuality in a Female Serial Killer

ABSTRACT: The case of Aileen Wuornos, executed in Florida for the serial killing of seven men, is studied to determine her degree of psychopathy and the presence or absence of sexuality or sexual sadism as a motivation or gratification for her crimes. The authors, one of whom evaluated the subject shortly before her death, determined that she evidenced a psychopathic personality (PCL-R score 32). She also met DSM-IV-TR criteria for Antisocial Personality Disorder and Borderline Personality Disorder. While her killings ostensibly were carried out during routine acts of prostitution, there was ambiguous evidence that her crimes were sexually motivated or gratifying. Her articulated motivation was robbery and elimination of the witness/victim. After carefully considering all available data, the authors concluded there was no convincing evidence of sexual sadism in either her personal history or her method of committing serial murder, and it remains unclear whether sexual gratification was to some degree a motivating factor in her commission of these offenses. The confluence of early childhood attachment disruptions, severe psychopathy, other personality disorder pathology, and a traumatic abuse history likely contributed to her having serially murdered seven victims.

KEYWORDS: forensic science, female serial murder, homicide, psychopathy, sexual sadism, modus operandi, crime

Recent FBI Uniform Crime Report data indicate there were 14,054 homicides in the United States during 2002 (1). It is estimated serial murderers account for about 0.5–1.0% of all murders (2,3), or about 70–140 victims a year. Only a small percentage of these offenders are thought to be female (4,5), perhaps 5–10%. Thus, it can be estimated that female serial killers are responsible for the deaths of 4 to 14 persons each year. Regrettably, no reliable national or international data exist to accurately determine the prevalence of female serial killers or their victims.

Unlike their male counterparts who usually kill for sexual reasons (6), most female serial murderers kill either for money, e.g., “black widow” killers, or for excitement and power in institutional settings like hospitals and nursing homes, this latter group sometimes earning the sobriquet “Angels of Death” (7). Poison is by far the most common method they use, and most of their victims are strangers (5). Female serial killers also tend to have longer killing careers than men, presumably because their crimes are more carefully planned, methodical, precise and “hidden” on the whole, although this is not thought to be the case with those women who commit more high profile killings, e.g., shootings, mutilations, or related acts, that draw greater law enforcement attention and investigative efforts (5,7).

Kelleher and Kelleher (8) have categorized female serial killers using seven labels (six of which apply to women who acted on their own): Black Widow, Angel of Death, Revenge Killer, Murder for Profit or Crime, Killer Whose Sanity is in Question, Team

Killer and Sexual Predator. The latter type—encompassing women who commit serial murder based on sexual motives—is an exceedingly rare form of criminal behavior. In the few known cases of serial sexual killing females, there has typically been a male team member involved as well (5,8,9). This begs the question: Would they have acted but for the influence of the accompanying male?

There are arguably only two cases worldwide identified in the last century of women who *independently* committed serial sexual murder: Marti Enriqueta and Aileen Wuornos. Kelleher and Kelleher (8, p. 73) noted, “America has only experienced a single female serial sexual killer in its history—Aileen Wuornos.” For the purposes of this study, sexual murder will refer to an intentional killing during which there is sexual activity by the perpetrator (10). Sexual sadism will be defined as a paraphilia characterized by recurrent, intense sexually arousing fantasies, sexual urges or behaviors involving acts in which the psychological or physical suffering of the victim is sexually exciting (11).

The killing career of Marti Enriqueta of Spain is believed to have occurred mainly in the early 1900s (8). She was arrested, convicted and executed for the sexual molestation and murder of at least six children. Cannibalistic acts were also part of her *modus operandi*. Her last victim who was rescued revealed that Enriqueta had forced her to eat the flesh of another child victim. According to Enriqueta’s confession, she would kill the children, boil their bodies down and use the residue as the main ingredient for her love potions.

Aileen Wuornos, arrested in 1991 for serial murder, is the focus of this present study. She admitted to killing seven men over a roughly one-year period, from 1989 to 1990. Methods used in gathering information about her included an intensive review of her Department of Corrections (DOC) files and a clinical interview by co-author W. M. Permission was obtained from the DOC for this review. Three questions about her case are addressed: (1) Did she have a psychopathic personality? (2) Did she have other personality disorders? and (3) What role, if any, did sexuality or sexual sadism play in her crimes?

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The Case of Aileen Wuornos

Psychosocial Background

Like most serial killers, Aileen Wuornos had a troubled upbringing. She was born on February 29, 1956 in Troy, Michigan to adolescent parents who divorced around the time of her birth. Her father was an alcoholic child molester and was never a part of her life. He committed suicide by hanging while serving a life sentence in a Kansas prison for raping a 7-year-old girl. Her mother was also an alcoholic and abandoned her before her first birthday. Aileen's alcoholic grandparents adopted her and her brother. Her grandfather was emotionally and physically abusive. He called her derogatory names, i.e., "whore," and physically beat her on a repeated basis. Her grandmother was passive, overlooking her husband's abuse, and also emotionally abusive of Aileen.

Aileen had multiple early behavior problems. According to an aunt, she had an explosive temper as a child, and this made it difficult for her to maintain friendships; she would repeatedly end up fighting with other children and alienating them. By the age of nine she began stealing from family and friends, and around this time she had an accident playing with fire that left her face and hands severely burned. Aileen set at least three fires during her childhood: she set her home on fire at age 9, set the girl's bathroom at school on fire at age 13, and set a field on fire at age 14.

During junior high Aileen was found to have hearing and visual problems that were contributing to her poor adjustment. Her IQ was tested at 81 (borderline intellectual functioning) and school officials urged that she receive counseling for her behavior problems. Her grandmother refused to give permission for this intervention. The school unsuccessfully tried to improve her behavior through the use of a mild tranquilizer.

At the age of 13 Aileen became pregnant. The identity of the father was unclear, but she claimed a family friend raped her around that time. There was also some question as to whether the pregnancy was the result of an incestuous relationship with her older brother (she gave conflicting reports regarding the nature of their relationship). She kept the pregnancy a secret for six months for fear of her grandparents' response. Upon learning of the pregnancy, they sent her to a home for unwed mothers and forced her to give up her infant son for adoption.

Aileen started drinking alcohol regularly at age 12 and running away from home at age 15. Her behavior as a teenager evolved into a pattern of running away, hitchhiking, drinking and using drugs, then returning home for short periods of time. When away from home she would make money panhandling, hustling pool and prostituting. In 1971, while Aileen was living on the streets at only 15 years of age, her grandmother died from hepatic cancer. Aileen returned for the funeral. Shortly thereafter she was found by the police living in the woods and placed in a girl's training school for several months. After her release she briefly returned to her grandfather's home. However, he evicted her within weeks, and thereafter she relied primarily on prostitution to support herself. In the following years, while still an adolescent, she was reportedly raped on multiple occasions.

By age 20 Aileen Wuornos was living in Florida, and shortly after arriving there she married a 69-year-old man. The marriage ended after 60 days because he was abusive. In this same year, 1976, her brother Keith died from cancer. During this same period her grandfather committed suicide.

At the age of 22 she attempted suicide by shooting herself in the stomach after being rejected by a lover. She was hospitalized for two weeks, and a week after discharge she overdosed on tranquilizers.

These were two of six suicide attempts occurring between the ages of 14 and 22.

While working as a prostitute she drank heavily and reported being beaten, maced, or raped by "johns" at least 12 times. She attempted to get other work, but her employment expectations were often unrealistic. She once applied for a position as a lawyer even though she had no education beyond early high school. She also desired to work in law enforcement despite her criminal record.

Wuornos had arrests in at least three states with charges including being dangerous in public when under the influence of narcotics, public intoxication, assault, obstructing an officer, unlawful use of a license, burglary, shoplifting, auto theft, disorderly conduct, armed robbery, grand larceny, and forgery. During her encounters with law enforcement she used several aliases. The armed robbery by Wuornos occurred in 1981, at age 25, and resulted in a two-year prison sentence. She reportedly robbed a convenience store while wearing a bikini to get attention from her boyfriend with whom she was having an argument. She then attempted suicide by consuming multiple beers, a half-pint of liquor and four chlordiazepoxide tablets (Librium).

There is limited information on the psychosexual history of Wuornos. She had many short-term, unstable relationships, primarily with men. One relationship she had with a woman lasted four years. This was her relationship with Tyria Moore, who later assisted in Wuornos' capture and conviction. They met in a Daytona Beach bar in 1986. Their relationship was initially sexual, but became more sisterly over time. While they were together, Wuornos continued to work as a prostitute, spending most of her money on alcohol, while Tyria worked regular jobs to help support them. There also is a historical fragment that suggests the possibility of a sadomasochistic component to Wuornos' psychosexual make-up: she had revealed to a former boyfriend, Dick Mills, a fantasy in which she is lying in bed when a hooded man climbs in the window and rapes her (12).

The Murders

Wuornos admitted to killing seven men over a 12-month period, from December 1989 to November 1990, when she was 34 years old. Table 1 summarizes her crime characteristics and *modus operandi*. Table 2 provides victimology information. All of the victims were middle-aged to late middle-aged Caucasian males. She gave conflicting stories regarding the reasons for the killings, particularly the first victim. Her initial claim was that she thought he was going to take back the money he had paid her for sex and also possibly beat her, so she shot him. She later revised this story and said he did not pay her but still tried to have sex with her, which led to a physical altercation. During this fight they struggled over her purse and she grabbed her gun and shot him. In her most dramatic account—the one portrayed in the film *Monster* starring Charlize Theron—she claimed he did not pay her, tied her to the steering

TABLE 1—*Crime Characteristics and Modus Operandi*.

Seven victims over a 12-month period
White males between ages 41–65
Procured victims by hitchhiking; all were victims of opportunity
Victims killed by multiple .22 caliber rounds (2–9 gunshots per victim)
At least three victims were left nude
Bodies generally left in wooded areas off of state or interstate highways
Victims' cars left many miles away, found in different counties in 6 cases
Time between discovery of victims' bodies and cars ranged from 1–12 days
Money or personal belongings stolen from most of the victims

TABLE 2—Victimology.

Demographics	Occupation	Home	Date/Location Car Found	Date/Location Body Found/Condition	Number of GS Wounds Sustained/Stolen Items
51yr white male	Electronics repair store owner	Clearwater, FL	12/1/89; Ormond Beach, Volusia County	12/13/89; wooded area off I-95 near Ormond Beach in Volusia County; fully clothed	Four wounds; took radar detector, camera and money (?)
43yr white male	Construction worker	Winter Garden, FL	5/20/90; near C.R. 318 and I-75, Ocala, Marion County	6/1/90; wooded area east of U.S. 19 in Citrus County; nude except for a baseball cap	Six wounds in torso; money?
41yr white male	Unknown	Missouri	6/7/90; near C.R. 484 and I-75, Marion County	6/6/90; wooded area off S.R. 52 and I-75 in Pasco County; nude	Nine wounds in lower chest and upper abdomen; money(?)
50yr white male	Delivery truck driver	Ocala, FL	7/30/90; off S.R. 19, Marion County	8/4/90; Ocala National Forest off S.R. 19 in Marion County; severe decomposition	One wound in abdomen, one in back
56yr white male	Child custody investigator and former police chief	Crystal River, FL	9/19/90; near Live Oak, Suwannee County	9/12/90; wooded area off C.R. 484 near I-75 in Marion County; fully clothed	Five wounds in torso, one in head; about \$300
60yr white male	Security guard	Cocoa, FL	11/24/90; Brevard County	11/18/90; undeveloped subdivision off U.S. 19 in Dixie County; nude	Three wounds in back, one in base of head; ring from finger, money (?)
65yr white male	Missionary	Jupiter, FL	7/4/90; wrecked car found, Marion County	Body never found (last seen alive 6/7/90); stated she left his body off highway in Georgia	Unknown; \$300–400

wheel and raped her vaginally and anally. After the sexual assault he reportedly poured alcohol into her eyes, vagina, and anus and threatened to kill her. She managed to struggle free, get her gun, and kill him in self-defense. Later, while on death row, Wuornos vacillated in interviews between having killed her victims in self-defense and in the course of robbery. For instance, during a 2002 interview with a filmmaker, Wuornos proclaimed, in order to “come clean and cleanse [her] spirit in the name of Jesus Christ (12)”:

“I killed those 7 men in 1st degree murder and robbery. . . . Not so much for thrill kill, I was into the robbery biz. I was into the robbery and to eliminate witness[es]. . . . I pretty much had ‘em selected that they were gonna die . . . there was no self-defense [sic].”

In a later 2002 interview with author W. M., Wuornos warned she would continue to kill were she ever released from prison, and prior to her arrest she had planned to kill a minimum of 12 men but was thwarted due to her arrest. This interview was conducted shortly before her death by author W. M.

All of her victims were found in secluded areas off main roads and had been killed by multiple shots from a .22 caliber firearm. Findings from ballistics testing were compatible with a handgun retrieved from Rose Bay (in Volusia County near Daytona Beach) where she had told the police she disposed of the gun. On January 9, 1991, she was arrested and eventually found guilty of six counts of murder. The body of the seventh victim, whom she admitted to killing, was never found. His body was reportedly dumped in an area off of a main highway in Georgia, the only victim out of seven not disposed of in Florida. She was executed by lethal injection in Florida on October 9, 2002.

The Psychopathy Checklist-Revised

The PCL-R is a standardized instrument that yields a quantitative score concerning degree of psychopathy by utilizing a clinical interview and a comprehensive review of records (13,14). It has demonstrable reliability and validity in the measurement of psychopathy, a construct that is composed of two factors: an interpersonal/affective factor and a social deviancy factor. Meloy (9) referred to these two factors as “aggressive narcissism” and “chronic antisocial behavior,” respectively. The instrument is scored on a 20-item, 40-point scale, and the validated research cutoff for determination of a psychopathic personality is a score of 30 or above (13).

Although psychopathy research with incarcerated females is quite limited, there is a growing body of research that indicates reliability and validity of the instrument. Hare has established norms for the PCL-R by aggregating a large sample of North American female offenders ($N = 1,218$) with excellent interrater reliability coefficients of 0.87 (ICC) and 0.84 (alpha) (13). Item response theory analysis of female offender scores indicates that the interpersonal and affective items (factor 1) are more important in measuring and generalizing the construct of psychopathy in women than the socially deviant items (factor 2) (13). Predictive validity studies suggest that females with higher psychopathy scores offend at a significantly greater rate than females with lower psychopathy scores (15). Loucks and Zamble (16) found a large effect size (0.82) in the ability of the PCL-R to predict a new offense in female offenders after a 3-year follow-up. Factor 1 seems to be a more important predictor than factor 2 for general recidivism in women.

Other concurrent validation studies suggest that female psychopaths are different from female nonpsychopaths in a prison setting. Widom (17) developed an empirical taxonomy of female offenders using cluster analysis and identified four distinct types, one of them being a group she called “primary psychopaths.” Kalinian

TABLE 3—Clinical Examples and Consensus Scores for the 20 PCL-R Items.*

1. *Glibness/Superficial Charm*: (1)—Some superficiality and charm noted on interview and per records, but not enough to warrant a score of 2.
2. *Grandiose Sense of Self-Worth*: (1)—She bragged about the amount she could drink and the number of men she had slept with (her estimate was “about 250,000”); her demeanor during interviews was often cocky and self-assured.
3. *Proneness to Boredom/Need for Stimulation*: (2)—Her history supported an excessive need for stimulation. She drank heavily, used cocaine frequently, hitchhiked, worked as a prostitute, and had multiple, volatile relationships.
4. *Pathological Lying*: (2)—She used multiple aliases, at least once lied about having children in order to get sympathy from a prospective “john,” and family members recalled she lied frequently as a child.
5. *Conning/Manipulative*: (2)—She had a history of multiple, concurrent relationships, forged checks, used various aliases, and quoted lower prices for sex in the woods versus hotels in order to guile her victims into secluded areas so she could kill them.
6. *Lack of Remorse or Guilt*: (2)—She often said it didn’t bother her that the victims were dead. She reported in her 2002 clinical interview she had wanted to kill at least 12 men.
7. *Shallow Affect*: (2)—During interviews she often appeared cold and unemotional; at other times she had dramatic, short-lived changes in affect (e.g., acute rage reactions).
8. *Callous/Lack of Empathy*: (2)—Evidenced by her crimes.
9. *Parasitic Lifestyle*: (2)—She worked as a prostitute as needed, spending much of her money on alcohol while her girlfriend worked a regular job to help support them. Although able-bodied, she consistently avoided steady, gainful employment.
10. *Poor Behavioral Controls*: (2)—She had a bad temper as a child, was rebellious as a teenager (e.g., she attacked a friend with a shish-ka-bob after a trivial disagreement), and had multiple adult charges consistent with poor self-control.
11. *Promiscuous Sexual Behavior*: (2)—She had innumerable casual sexual encounters for many years as a prostitute.
12. *Early Behavior Problems*: (1)—She had multiple early behavior problems including fighting, stealing and fire-setting.
13. *Lack of Realistic Long Term Goals*: (2)—She lived a somewhat nomadic, day-to-day existence, worked as a prostitute and believed she could become a police officer or lawyer despite her limited education and criminal record.
14. *Impulsivity*: (2)—Based on multiple examples of poor impulse control throughout her life.
15. *Irresponsibility*: (2)—She quit school at age 15; her longest period of employment was for about nine months.
16. *Failure to Accept Responsibility for Own Actions*: (1)—She vacillated between accepting responsibility for her crimes and denying them.
17. *Many Short-Term Marital Relationships*: (1)—Based on the definition of “marriage” as any live-in relationship that involved some degree of commitment from one or both partners, she had at least two legal marriages and a live-in relationship with her girlfriend at the time she was arrested.
18. *Juvenile Delinquency*: (1)—History of minor offenses as a juvenile.
19. *Revocation of Conditional Release*: (0)—There were no indications that she had ever violated a conditional release or escaped from an institution.
20. *Criminal Versatility*: (2)—Based on the broad range of legal charges (≥ 6) she accrued during her life.

*0 = item doesn’t apply; 1 = item partially fits; 2 = item a reasonably good fit.

(18) neuropsychologically tested a sample of female parolees and found the psychopaths showed significantly more executive dysfunction in conceptual reasoning, problem-solving skills, and cognitive flexibility than the nonpsychopaths. Cunliffe (19) studied a sample of female incarcerated offenders with the Rorschach and found the psychopathic females to be significantly less functional in interpersonal relatedness and reality testing, and had a more disturbed self-perception when compared to nonpsychopathic females in prison. Gacono and Meloy (20) found in a sample of moderately to severely psychopathic female inmates (PCL-R >20) that their prototypical personality was “marked by unmodulated affect, a part-object dominated representational world, emotional detachment, and an abnormally undervalued or overvalued sense of self (p. 117).” There is also suggestive research that psychopathy correlates with dismissive attachment patterns in women and leads to higher rates of their voluntary relinquishment of young children, a behavioral measure of a lack of bonding to their offspring (21).

Department of Corrections material reviewed for this report included transcripts of courtroom testimony, depositions, police reports, forensic pathology reports, forensic psychiatric reports, psychological reports, newspaper articles, magazine articles, and DOC staff observations and related documentation.

After an in-depth review of her files by a three-member team—a forensic psychiatrist who had interviewed her (author WM), a forensic psychiatry fellow and a senior medical student—a consensus score was then determined using a group discussion format for each of the PCL-R items. (Author WM, who has used the PCL-R for many years both in research and clinical settings, trained author EG and the senior medical student in the use of the PCL-R.) Most items were scored identically at the outset by each of the three raters. Some items required deliberation and further review of specific documents to reach a mutually agreed upon consensus score. Scoring accuracy was finally reviewed by author JRM who

has been formally trained through workshops conducted by Robert Hare, consults with him as needed on specific PCL-R questions, has a number of scientific publications regarding psychopathy (24-25), and has used the PCL-R and its first version, the PCL, for the past twenty-five years. Table 3 lists clinical examples and consensus scores for the 20 PCL-R items. The final PCL-R score was 32 (Factor 1 score was 13; Factor 2 score was 16).

Other Personality Disorder Diagnoses

In addition to psychopathy, Wuornos met criteria for two additional DSM-IV-TR (11) personality disorders. First, she met criteria for antisocial personality disorder (ASPD) given her pervasive pattern of disregard for and violation of the rights of others occurring since age 15 years. Behaviors and emotional qualities she demonstrated that fulfilled essentially all antisocial criteria (three of seven are necessary for the diagnosis) included (1) failure to conform to social norms with respect to lawful behaviors as indicated by repeated arrests; (2) deceitfulness as indicated by lying, use of aliases, and conning others for profit; (3) impulsivity and failure to plan ahead; (4) irritability and aggressiveness as indicated by repeated assaults; (5) reckless disregard for safety of self and others; (6) consistent irresponsibility, as indicated by repeated failure to sustain consistent work behavior; and (7) lack of remorse, as indicated by being indifferent to having killed seven men. Furthermore, there was evidence of conduct disorder with onset before age 15 years (e.g., stealing, firesetting, and fighting), a necessary finding to apply the diagnosis.

Aileen Wuornos also met DSM-IV-TR (11) criteria for borderline personality disorder (BPD) based on her pervasive pattern of instability in interpersonal relationships, self-image, and affect, and marked impulsivity. In particular, specific criteria she met (five of nine criteria are necessary for the diagnosis) were (1) frantic efforts

to avoid real or imagined abandonment as indicated by manipulative suicide attempts; (2) a pattern of unstable and intense interpersonal relationships characterized by alternating between extremes of idealization and devaluation (e.g., 60-day marriage and her relationship with Tyria Moore); (3) an identity disturbance with a persistently unstable self-image; (4) impulsivity (e.g., promiscuous sex, substance abuse); (5) recurrent suicidal behavior; (6) affective instability due to a marked reactivity of mood (e.g., intense mood swings); and (7) inappropriate, intense anger and difficulty controlling it.

Discussion

The severity of psychopathy in this case is expected given the accumulating data on the presence of psychopathic personality among sexual offenders, sexual murderers, and serial murderers (10,22,23). We would clinically expect a subject such as Aileen Wuornos to score in the moderate (20–29) to severe (30–39) range for psychopathy. Such an expectation could introduce bias into any forensic study, but the consensus scoring of this PCL-R and the high rates of interjudge reliability across studies (13) would suggest otherwise.

Aileen Wuornos' PCL-R score of 32 places her at the 97th percentile for a large, aggregated sample of North American female offenders ($N = 1,218$) (13). The standard error of measure for female offenders with at least two averaged ratings is 2.0, indicating that there is a 95% probability that her PCL-R score falls between 28 and 36. The average score on the PCL-R for female offenders is 19 ($SD = 7.5$) (13). On factor 1, interpersonal/affective, her score is at the 93.1 percentile. On factor 2, social deviancy, her score is at the 92.8 percentile. The severity of psychopathy in this case would provide Aileen Wuornos with the emotional callousness and cruel aggression to carry out a series of murders. Psychopaths are both affectively (reactively) and predatorily (instrumentally) more violent than nonpsychopathic criminals, they have generally low levels of anxiety, they do not form stable, secure bonds, and their low levels of autonomic arousal and efficient orienting to threats give them the hard wiring to be successful intraspecies predators (24,25).

Although psychopathy is independent of most Axis I disorders except for substance dependence, it moderately to strongly correlates with certain DSM-IV-TR personality disorders in females, including antisocial, histrionic, borderline, and passive-aggressive (26). In this case, it is apparent that Aileen Wuornos met threshold criteria for the diagnosis of both antisocial and borderline personality disorder.

An ASPD diagnosis in this case can be considered a gross categorization that needs to be further refined through the use of a dimensional measure of psychopathy, as we have done. Research has shown that the seven criteria of ASPD can be treated as a dimensional measure, and the more criteria, which are met, the higher the psychopathy score (13–14,24). Meloy (23) hypothesized that psychopathy may be a biologically-loaded genotype that is relatively stable in the species, but is phenotypically expressed to various degrees across cultures through the diagnosis of ASPD; which, unlike the first factor of psychopathy, is influenced by socioeconomic status, education, and intelligence (13). There is also abundant evidence that ASPD subjects who are not psychopathic are different across a variety of measures when compared to ASPD subjects who are also psychopathic (13), including recent fMRI studies which indicate that psychopaths process emotion and abstract language differently than nonpsychopathic controls (27–28).

Although BPD, unlike psychopathy, was probably not a causative factor in Wuornos' serial murdering, this diagnosis may have contributed an emotional instability, behavioral unpredictability, and rage stimulated by sexual-tactile intimacy with a stranger that lowered the threshold for her homicidal impulse. The development of a borderline personality disorder could be partially caused by her traumagenic upbringing and the physical and sexual abuse inflicted upon her. Severe trauma can disrupt the ordinary structuralization of the mind at various developmental points and result in more primitive, dissociative, and splitting defenses to ward off the intensity of emotional and sexual stimulation that cannot be integrated as a child (29). Such defenses in adulthood are no longer prosocially adaptive, but may serve the serial killer's ability to compartmentalize continuing violent episodes that are then projectively attributed to the behavioral provocation of others (25).

The developmental pathway for psychopathy and other personality disorders in adults is just beginning to be investigated, but two trends are apparent: first, there are likely to be both biological and social learning contributions to character pathology (13,24); and second, in severe cases of psychopathy there is a greater likelihood of a biological loading (dispositional inheritance) for the disorder, and a lesser likelihood of an abusive and neglectful upbringing (30). Longitudinal studies concerning the development of psychopathy in females have yet to be done. In Wuornos' case, it is impossible to tease apart her abusive upbringing from any biological predispositions toward violent criminality inherited from her absent father (31,32).

Although there is an empirical relationship between sadism and psychopathy (33), and sexual sadism is prominent among serial murderers (34), there is no evidence that Aileen Wuornos was a sexual sadist. The sadomasochistic fantasy reported by an ex-boyfriend is an unreliable bit of hearsay, and there was no evidence that any of the male victims were anally assaulted, bound, or tortured before death—three common crime scene features of sexually sadistic criminals (35).

Were her killings sexually motivated or sexually gratifying? Although three victims were found naked, suggesting a sexual overtone, several competing hypotheses come to mind: first, the victims were more vulnerable to being killed while in a state of undress, therefore the nakedness was an element of her *modus operandi*; second, the victims refused to pay her after sex and it was then that she decided to kill them; or third, their nakedness was psychosexually gratifying and therefore a signature linking her crimes by reflecting an individualized aspect of her sadomasochistic desires. Wuornos herself denied specific sexual gratification from her crimes, instead arguing that she was driven by a motivation to rob and eliminate the victim/witnesses. Given the ambiguity of the evidence, and multiple competing hypotheses, we think it exceeds the data to label her a “sexual predator” (8) or sexually sadistic. Her serial killings, however, do meet the general definition of sexual homicide as found in the forensic literature: an intentional killing during which there is sexual activity by the perpetrator (10). This definition is admittedly broad, but is intended to capture the universe of individuals who could be sexually aroused before, during, or after an intentional killing; and therefore could engage in a variety of sex acts to gratify their lust. It also captures a range of possible motivations for sexual homicide, from the careful planning of the sexual sadist to the impulsive killing of the angry rapist. Unfortunately, in this case there was little evidence to measure in a refined manner the psychodynamics and interpersonal expression of her sexual arousal during the crimes.

The case of Aileen Wuornos, an unusually rare form of female serial killer who used overt, daring aggression to dispense with her

victims, captured the morbid attention of American culture and beyond. The confluence of early childhood attachment disruptions, a high degree of psychopathy, Axis II pathology, and a traumagenic abuse history likely contributed to the nature of her ultimate crimes. Although the horror of her upbringing was inexcusable, her behavioral choices as an adult proved to be exceedingly dangerous both to herself and others.

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