Reliability, Validity, and Utility of Criminal Profiling Typologies

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Criminal profiling has received attention from the academic community and from the entertainment world since the FBI first published accounts of its profiling principles. It became popular through films such as Silence of the Lambs and the X-Files making headlines. However, beyond the victims' pin pictures that help create the sensationalism in these resources, there have been few, if any, reliable criminal profiling classification designs. This work examines deductive and inductive profiling models that classify crime scene activity including the first systematic review of the FBI's organized and disorganized profiling typology. The paper concludes with a discussion about how to turn profiling from an art too more a scientific process through the use of investigative process management research.

INCE ITS EMERGENCE, criminal profiling has been given several different terms to describe the technique. For instance, psychological profiling, criminal profiling, criminal personality profiling, criminal investigative analysis, and behavioral evidence profiling. Regardless, though, of the descriptive label applied, profiling as investigative tool today is entirely intuitive based and represents a less than educated attempt to provide law enforcement agencies with detailed information about the behavior of an unknown individual who has committed a crime. For example, most published accounts of profiling, which details the methods employed by various individuals, have tended to take the form of semi-autobiographical books and journalistic articles rather than systematic academic work and, hence, are difficult to evaluate from an accuracy or scientific point of view. As such, the one

major flaw of current profiling methods is that most all profiles emphasizes the various psychological functions that murder has for the offender not what varieties of action the murder actually consists of. Consequently, these profiles make little distinction between the overt crime scene behaviors as they occur in murders and the psycho-dynamic processes that are taken to account for or produce that behavior. Hence, there is little attempt by profilers to differentiate between aspects of the offender's motivations and life-style from aspects of his offending behavior. Another problem, which exist with profiling, is many profilers view profiling as 'crime scene reconstruction' and completely ignore aspects of psychology.

Most published accounts that claim 'new' or 'recent' findings in criminal profiling are often a part of the cultural baggage past down over the years and are fraught with frailties of human thinking such as confirmation bias and selective thinking (Holmes, 1996; Turvey, 1999). Current profiling attempts are predominantly anchored in opinions based on what has already been written or told in the past. On the one hand, some profilers claim that patterns associated with serial offending occur as a result of recognizable mental illness or mental disorder in the offender and these disorders directly relate to and can be classified using a personality theory. On the other hand some profilers attempt to guess at the motive of an offender based on his crime scene actions and refer to this process as behavioral profiling. However, profiling from a true behavioral approach considers the individual differences between offenses (not offenders) by looking at crime scene actions that can be observed rather than guess at the individual's internal workings or motivations for the crime.

The Origins of the FBI's Criminal Profiling Project

The FBI's initial project on serial murder began in 1978 (Ressler, Burgess, & Douglas, 1988). The impetus for the project was to conduct personal interviews with serial murderers about their crimes in order to find out how they were successful at avoiding capture. The FBI serial murder project was given added attention in Washington, DC in the early 1980s due to public outcry of the murder of a six year old boy in Florida by a serial murdered (Ressler, et al., 1988). Therefore, due to public pressure, the FBI serial murder project was brought to the forefront and given the necessary US Government funding, which eventually lead to a unit being established in Quantico, Virginia called the Behavioral Science Unit (BSU) (Ressler, 1988). In 1995 a restructuring phase combined the BSU, Violent Criminal Apprehension Program (VICAP), and the National Center for the Analysis of Violent Crime into one unit, calling it the Critical Incident Response Group (CIRG) (Douglas & Olshaker, 1995).

The primary purpose of the serial murder project was to use interviews with convicted killers as a basis for constructing future classifications, which then could be used to aid police investigations. A series of interviews with 36 incarcerated offenders, of whom 25 were defined as serial murderers (i.e., the killing of three or more individuals over time) took place between 1979 and 1983 in the USA. The interviews were guided by an unstructured checklist of questions. Prior to the interviews, data sources on each offender and his crimes were obtained by reviewing crime scene photos, physical and psychiatric reports. However, no detailed analysis of this material has ever been presented. Instead, a simple dichotomy was claimed to emerge from the project by which offenders were classified either as organized or disorganized. The assignment of the offendeither the organized disorganized category was based on the appearance of the victims' attire or nudity, exposure to the victims' sexual parts, insertion of foreign objects in body cavities, or evidence of sexual intercourse.

The FBI posits in the literature that the organized and disorganized scheme was developed to classify a sub-group of serial murderers, that is, sex-related murders, where motive was often lacking) (Ressler, 1988). This also can be interpreted that where the murderer is emotional and no organization can be deciphered from his actions at the crime

scene, there is no motive. Because of the apparent lack of motive, FBI profilers decided to look for evidence of planning, irrationality, or some form of discord at the crime scene to determine whether the offender was organized or disorganized. The organized and disorganized typology is then used to classify the murderer's personality, depending on the category of the crime scene.

There are weaknesses in the organized and disorganized dichotomy. For example, there is no explanation in the literature of the differences between the organized and disorganized serial murderer. Rather the organized and disorganized dichotomy seems to describe the different levels of aggression in serial murderers, although no literature source acknowledges this.

The difference in organized and disorganized crime scenes are usually explained in the form of a psycho-dynamic drive; the dynamic drives are: 10 revenge, and 2) sadistic (Ressler, 1988; Lester, 1995). The focus of these drives is seen in terms of lasting urges, formed through early life experiences. These experiences are organized especially around conflict.

The differences between the two types appear to originate from several traditional theories of aggression and personality disorders. For example, it is alleged that the organized offender has the ability to maintain some control over his aggressive behavior, while the disorganized offender is unable to maintain control. There is, however, a third type, the mixed offender, which is rarely discussed in the literature. The mixed type was added to accommodate offenders who did not fit into either the organized or disorganized category (Ressler, Douglas, Burgess, & Burgess, 1992).

The Organized Profiling Typology

According to the FBI classification, the organized (nonsocial serial murderers are generally assumed to be cunning, and spend vast amounts of time planning murders, whether consciously or not, and this behavior is reflected at their crime scenes. Another assumption is that the serial murderer's planning is expressed in his preoccupation with, and constant need for control (Brown, 1991). FBI profilers claim that crime scenes tend to echo this aspect through the condition of the body, the body's state of dress, selection of restraints and weapons, body disposal sites, and method of approach (Hickey, 1997; Douglas & Burgess, 1986).

The organized serial murderer is described as one who is positively antisocial but often more gregarious, quite normal on the outside, maintaining normal relationships. He will be more forensically aware. mobile. creative. adaptive; he often has a certain preferred type of victim. Although victims' bodies are normally concealed, he will tease the police by leaving some bodies open to view. The FBI posit that the organized type serial murderer is out to shock and offend the community and taunt the police because he fees so much more powerful than them. The offender will likely be a police buff and usually collects items relating to law enforcement (Hickey, 1997).

In the FBI study, imprisoned serial murderers classified as organized were assumed to have had an angry frame of mind at the time of the murder, but their behavior was calm and relaxed during the commission of the crime (Ressler, 1988). The organized crime scene is described as having a "semblance of order existing prior to, during, and after the

murder. It is suggested that the murder is planned, and the offender is likely to used a con or ploy to lure his victims to their deaths. For example, the individual may strike up a conversation or pseudorelationship with his victims. For organized killers, who consciously plan their murders, selection of the victim is believed to be a first step in acting out their fantasy; victims are thought to be chosen because of their symbolic similarity to someone in the killer's life or because of meanings the offender assigned to particular actions, such as hitch hiking. However, the FBI provides no empirical research supporting its theory that serial murderers target specific victims for psychological reasons.

The organized offender is seen as one who usually remembers his thoughts prior to each murder and improves on his planning with each subsequent killing. The offenders' planning and control over their victims are noted by the use of restraints, for example, ropes, chains, handcuffs, belts, or clothing. The offender is most likely to bring a weapon to the crime scene and take it with him when he leaves. The organized serial murderer is also forensically aware, and rarely leaves incriminating evidence behind. The FBI suggests that the organized serial murderer is more likely to rape and torture victims prior to death, while the disorganized types are more likely to mutilate and perform postmortem sexual acts. However, these assumptions have been challenged by several researchers (Meloy, 1997; Hickey, 1991).

The organized typology has several shortcomings. The FBI suggests that organized serial murderers kill to act out their "control and dominance," while at the same time they maintain that prior to the murder, the offender is feeling frus-

tration, hostility, anger, agitation, and excitement, all of which indicate that the crime is emotional, and revenge seems to be the primary drive. In other words, the FBI claims that serial murderers who kill in an emotional rage have control of their behavior at the crime scene (FBI Law Enforcement Bulletin, 1985).

The revenge (nonsocial) drive explanation for repetitive murder is that it is the offender's unconscious effort to discharge aggressive drives toward another person who represents a significant other from past life experience. The act supposedly originates from the Oedipal trauma of a seductive or rejecting mother and a punitive or absent father. ego's defenses cannot prevent the action, but can direct it towards an alternative object, the victim. The rationale of the revenge formulation is that the relationship between a child's parents sets the pattern not only for sexual and aggressive behavior, but for general standards of expressing and prohibiting all sorts of behavior.

The drawback to the aggressive revenge drive theory is it assumes that conflicts invariably express themselves in Oedipal language. This may be true for some serial murderers, for example, David Berkowitz, Son of Sam, who shot couples in their cars apparently as standins for the biological parents who had abandoned him. The revenge focus for serial murder may have some validity, however, the Oedipal theory neither explains why some serial murderers need to seek revenge repeatedly, nor why convicted killers do not necessarily demonstrate weakened defenses in other aspects of their lives. It seems reasonable to conclude that an individual who is so tortured by Oedipal thoughts that he acts them out is going to reveal similar behavior in other areas of his life. Clearly, the revenge focus seems too broad an explanation for describing individual differences in serial murderers.

The Disorganized Profiling Typology

Freud concluded in his Theory of Sexuality that with such perversions as sexual murder and necrophilia, "It is impossible to deny that in their case a piece of mental work has been performed which, in spite of its horrifying result, is the equivalent of an idealization of the instinct." Freud's statement seems to set the direction for the classification of the serial murderer's aggression as a sexual perversion, and many theorists have argued that the disorganized murderer kills primarily for sexual gratification (FBI Law Enforcement Bulletin, 1985).

The asocial (disorganized) serial murderer is described as a liner, withdrawn, and more cowardly in his crimes (Holmes & Holmes, 1996). His crimes are often committed without a plan, and the victims are usually attacked in a blitz style. Some researchers suggest that the disorganized crime scene reflects a serial murderer whose motivation that the disorganized crime scene reflects a serial murderer whose motivation consists of uncontrolled sexual drives, reflected by the murderer's inability to control impulsive behavior or change his action in consideration of others."

Other researchers suggest that the psychological gain for the disorganized serial murder is sexual exploitation of the victim in the form of torture. However, the term "torture" was not defined by the researcher. The literature asserts that a sadistic sexual drive is the impetus for the disorganized serial murderer) (Ressler, 1988; Hickey, 1997; Hickey, 1991). What is derived form this perspective are biases gleaned from offend-

ers' self-reports. Consequently, no exploration of the different emphases murder has for different offenders is considered.

Traditionally, the sadistic aggressive explanation suggests that the offender derives sexual gratification by the infliction of pain and degradation on living victims. It is argued in the serial murder literature that the etiology for serial murder is sexual gratification (Dietz, 1985). The sexual attack is posited to be a way to degrade, subjugate, and ultimately destroy the victim. In the sadistic drive formulation, it is postulated that the offender kills out of sexual frustration because of a specific need for an object he can humiliate and torture. Some researchers also claim that sadism reassures the individual of his power by easing his worries about, for example, castration. However, Storr (1972) discounts the sadistic sexual gratification theory. Rather, he suggests that the murder has less to do with sex and more to do with pseudo-sexual activity, power and control. Fox and Levin (1994) concur with Storr's view, and point out that domination is a crucial element in serial crimes with a sexual theme. problem is the traditional definition of sadism. For example, no consideration has been given to the offender's perspective – that during the course of a violent attack, determining when sadistic gratification begins or ends is problematic. It may be more logical to consider violent behavior as a continuum of actions.

The disorganized offender is also describe as one who shows no forensic awareness, often leaving fingerprints, bloody footprints, semen, and evidence of little or no preparation for the murder by selecting weapons of opportunity. Ressler and his colleagues point out that the disorganized serial murderer is not

likely to use restraints because the victim is killed immediately) (Ressler, 1988). In the disorganized type murder, the victim is depersonalized by cuts and stab wounds to specific areas of the body. Other examples of depersonalization and sadistic acts on victims occur in the form of inserted objects, which the FBI suggests is a form of regressive necrophilia and sexual substitution rather than an act of mutilation or control (Ressler, 1988; Douglas and Burgess, 1986). Additional sexual exploits may include features such as mutilation, disembowelment, amputation, and vampirism.

The literature suggests that victims of the disorganized killer typically show signs of overkill and excessive blunt trauma to the facial area, which is thought to indicate that the victim knew her attacker) (Ressler, 1988). Also, the lack of organization is often noted by the offender making no attempt to conceal the victim's body, leaving her in the same location in which she was killed.

Discrepancies in the Organized and Disorganized Dichotomy

If we look closely at the FBI's description of organized and disorganized types, there appear to be some discrepancies in their "narrative descriptions" when compared to the respective "crime scene checklist". The narrative version of the disorganized type actually seems to contain a number of organized types of behaviors such as post-mortem sexual activity, revising the crime scene, and the use of gloves would appear to indicated cognitive planning and an instrumental focus. However, the checklist, which is the list of descriptive words that are assigned to each crime scene type (cf. Ressler et.al., 1988), seems to reflect more a mixture of revenge and expressive aggression. The actions of blunt trauma to the face and blitz attack are embedded with a primary focus, sexual gratification. The combination of these modes of behavior is commonly cited as indicative of the organized serial murderer, however, actually they appear to represent disorganization rather than organization. The hypothesis that serial murderer who perform mutilations, postmortem sex, and cannibalism are also disorganized is certainly open to question.

In addition to these discrepancies, there are two further shortcomings in the organized and disorganized offender typology. First, the behaviors that describe each type are not mutually exclusive; a variety of combinations could occur in any given murder scene. This is, of course, a weakness in all the murder classification schemes discussed in this chapter. Second, there is no discussion of why serial murderers have the need to repeatedly murder. Both the revenge and sadistic drives seem too vague. The organized and disorganized scheme also provides no reason why serial murders select some victims and pass up others. The organized and disorganized labels appear to be clinical assessments, similar to those found in the DSM-III-R. Hare argues that the antisocial personality disorder criteria in DSM-III-R is primarily a measurement of antisocial and criminal behavior and does not measure the affective and interpersonal characteristics of the personality disorder commonly associated with individuals displaying psychopathological behavior (Hare, 1991).

Reliability of the FBI's Original Profiling Sample

In the FBI project, 36 killers were interviewed, 25 of whom were classified as

serial murderers and 11 single or double killers. A sub-sample of the 36 offenders were classified as disorganized and organized (Ressler et al., 1988; Lester, 1995; FBI Law Enforcement Bulletin, 1985). Thirty-three of the offenders who participated in the interviews were white. The offenders who agreed to participate in the final project were reportedly motivated by various reasons, such as making restitution to victims, to obtain attention, or to gain some legal advantage. For example, some of the offenders interviewed "had not completely exhausted their legal appeals prior to the interviews" (Ault & Reese, 1984). Furthermore, the offenders who refused ot be interviewed were predominately white, intellectual, and motivated not to participated on advice from their attorneys, and were most likely to have organized behavior, which could account for the higher ratio of disorganized to organized murderers. Rather than interviewing a representative sample of killers, the FBI examined a small, select set of incarcerated offender who were interested in volunteering. Thus, the FBI sample must be viewed as biased, although exactly how much is difficult to tell without a description of the population the subjects were drawn form to compare with the sample.

Inferring Behavior from Fantasy in Profiling

One theme that dominates profiling typologies is the role that fantasy has in facilitation of the murders. Ressler and his colleagues argue that "sexual murder is based on fantasy" (Ressler et al., 1988). Several methodological constraints become relevant when inferring motivation through fantasy, for example the distortion most likely found in self-report studies. The FBI's serial murder classification relies on self-reports of

personal history background and elements of how the crime was committed. However, research by Lewis, Pincus, Bard, Richardson, Prichep, Feldman, and Yeager (1988) in a study that required independent confirmation of reports at the time of the incident), found that convicted killers tend to under-report histories of trauma and deny symptoms of psychiatric disorders. For example, during the interviews with serial murderers, the FBI researchers ultimately found the disorganized murderer's suspicions were not aroused about whether retrospective accounts of the offenders' fantasy state prior to the murders were accurate.

In a later study, Prentky and his colleagues examined the role of fantasy in serial sexual murder by comparing 25 serial sexual murderers taken from the FBI sample with 17 single-victim sexual killers (Prentky, Burgess, Rokous, Lee, Ressler, & Douglas, 1989). The study found that the serial group differed significantly form the single homicide group on measures of intrusive fantasy. However, the Prentky study has several weaknesses. First, part of the data sample was borrowed form the FBI serial murder project, which, as discussed earlier, has inherent biases. Similar to the FBI's studies, the Prentky study is so embedded with a mixture of clinical motivational assumptions that no clear differences are made between fantasy and planning. Shapiro (1981) cautioned that historical explanations of pathology are simply too narrow a base from which to derive the complicated forms of sadism. Second, the Prentky study used a control group, single sexual murderers, but the study methods were not matched to those used with the serial murderer group. This is rather vexing because there were no interviews of the offenders in the single-victim group. Instead, data were

taken from police archives. DeHart and Mahoney (1994) point out that researchers who choose to distinguish between one-victim murderers and serial murderers run into ambiguities in scientific and legal classification of serial murderers, which may diminish the validity of the data. Third, the Prentky study compared a distinct sub-group of serial sex murderers with single-victim murderers who, over time, may not be likely to have the opportunity to exhibit bizarre sexual behaviors as the serial. Finally, the study used fantasy to distinguish between the types of offenders, which is highly susceptible to subjective interpretation.

Further complications come to light when using inferred motives and fantasies to develop a classification model of serial murder. Serial murderers often alter or exaggerate their claims for egocentric or status reasons. The FBI classification model of serial murder is constructed under the assumption that normal people do not have sadistic fantasies, or if they do, the fantasies are different from those experienced by serial One assumption is that murderers. childhood fantasy is usually positive, and thus serial murderers' childhood fantasies are oddly violent. Another assumption is that serial murderers show an unusually early onset of fetishistic behavior, when in fact the literature suggests that fetishism begins to develop in children somewhere around the age of five (Caputi, 1987).

Fantasy is described in the FBI motivational model as a linear relationship between a dominant mother, abusive personality, and arousal levels (Burgess, Hartman, Ressler, Douglas, & McCormack, 1986). However, Terr (1991) found that abused children could become either aggressive or withdrawn, and children with non-abusive backgrounds

demonstrated a range of responses from psychosis through neurosis. This suggests that subtle vet crucial distinctions may be overlooked when an interviewer inquires only whether or not the offender's mother was dominant in his childhood. Lion (1991) further suggested that inferring fantasy from violent crimes such as rape and serial murder is problematic. Gresswell and Hollin (1994) point out that little research out that little research has been published on how pervasive sadistic fantasy is within the general population or on the precise relationship between fantasy offending and real offending.

Validity of the FBI's Profiling Model

Using a five-stage development criteria, Bush and Cavanaugh (1986) examined two classification models of serial murder proposed by the FBI. They determined that serial murder typologies generally fall into two stages: 1) unfounded statements not supported by data collection, and 2) unevaluated case reports without rigorous evaluation of other contributory factors. The remaining stages of the criteria were 3) scientific case reports of individuals or small groups, 4) select population studies of particular sub-groups, and 5) epidemiological studies of larger random samples or a significant proportion of a small population.

Busch and Cavanaugh (1986) concluded that serial murder typologies were weak because they were descriptive and were not generalizable to the full population of serial murderers at large. They also found that the two studies depended on ad hoc data, which tended to confirm the assumptions of the researchers. Busch and Cavanaugh (1986) further argued that the motivational model for se-

rial murder proposed by the FBI lacked statistical support, and warn that conclusions drawn from the crime scene variables inevitably produced a bias favoring confirmation of the assumptions. Canter (1994) also questioned the motivational based profiling typologies by pointing out that the offender's actions are known to police, but not his motivation.

Lack of Empirical Operational Definitions

A continual source of conflict in the FBI's serial murder model is the lack of defined concepts in the organized and disorganized dichotomy. An example of lack of defined concept is, in the FBI project, fantasy which positively coded if the daydreaming content included intentional infliction of harm in a sadistic or sexually violent way (Prentky et al., 1989). The problems with this form of deductive reasoning are demonstrated in one serial murder case where, on one hand, the FBI profilers interpreted the bizarre positioning of a victim's body to represent a Hebrew letter as evidence of planning rather than fantasy, and on the other hand, they interpreted the refinement in techniques used to immobilize victims as evidence of fantasy rather than planning. Katz (1988) points out that any model of serial murder, which accepts blanket statements about motivation and does not carefully examine victim/offender interaction of behavioral sequences in the actual murder may be misleading.

False Dichotomization of Variables

A typical example of false dichotomization of variables and the lack of mutually exclusive concepts in the FBI typology is demonstrated in the following scenario:

how would a police investigator classify an organized serial murderer with good intelligence, sexual competence, and who is geographically mobile (car) who commits a spontaneous, depersonalizing murder in which the victim's body is left at the crime scene, which are characteristics of a disorganized killer? In this example the profilers assume that the motivational factor that caused the violent criminal behavior will be indicated by study of the patterns in the external characteristics of violent offenders. Their assumption is that the antecedent factor for a series of murder is due to both an emotional outburst and some intrinsically abnormal personality in the offender, and that the offender's personality will be reflected in the way he carries out his crimes. This perspective sees motivation and personality as the same process, and neglects that emphasis that each explanation may have for different individuals.

Utility of the FBI Profiling Model

The theories on which the FBI serial murder classification is built are rather perplexing. First, there is the clinical classification which sees difference in offenders rather than crimes. These classification typologies seem to paint a picture of the offenders' mental illnesses, rather than trying to distinguish between their crimes (Burgess et al., 1986). Here, motive is thought to be some form of anger or rage towards society or a targeted group of individuals, and the offender harbors his emotional reactions to the point where they explode. These trends may be explained in terms of displacement of anger from other targets, or the feeling of lack of power. Stephenson (1992) has reviewed such displacement theories as general explanations of criminal behavior and found little evidence for them. Second, there is the motivational classification that suggests that the internal forces or predispositions that drive a sadistic killer to murder repeatedly are mental representations of vicarious gratifications. In other words, the murderer, who has no conscious emotion, is driven by thoughts and fantasies.

This perspective is usually derived by relying on self-reports of serial murderers to classify the offender's mental state, and in turn to classify crime scenes. However, the FBI profilers suggest that the sadistic serial killer is influenced by a continual fantasy. The problem with this form of deductive reasoning is that motives are inferred and are assumed to be related to intrinsic thoughts and mental illness, and the exploration of behavior is totally neglected.

Not surprisingly, in a recent study of different profiling approaches, Wilson and his colleagues (1997) examined the validity and utility of diagnostic evaluations and profiles developed from crime scene analysis (cf Ressler et al., 1988). Wilson and his colleagues (1997) concluded that the "majority of profilers are mildly to severely flawed." Other approaches to profiling appear to be not much better. Given this, it might be more productive to adopt an approach that focuses more on behavior such as investigative psychology.

The Personality to Behavior Confusion in Profiling

The actions of serial murderers from a behavioral approach looks at behaviors that can be observed rather than the individual's internal workings. As John B. Watson argued many years ago, "only individuals can observe their perceptions and feelings, but someone else can ob-

serve your actions" (Hilgard, 1977). Consequently, it seems more reasonable to consider crime scene actions as experiences of behavior rather than particular manifestations of intrinsic psychopathology.

The behavior approach to classifying serial murderers' actions suggests that an individual's actions are the result of interaction between offender's characteristics and the social and physical conditions of the situation. An inductive behavioral approach to profiling sees behavior as mostly being consistent across a number of situations rather than specific to a particular environmental con-By employing the inductive behavioral approach, trends in how offenders behave from one crime to the next can be explored. Researchers often assume that personality traits are consistent, so that an offender can be characterized according to enduring personality characteristics. However, individuals are not uniformly rewarded across different crimes. The offender may learn to discriminate between contexts win which certain behavior is appropriate and those in which it is not. Rather, aggressive actions are differentially rewarded, and learned discriminations determine the situations in which the individual will display a particular behavior. This suggests that diverse behaviors do not necessarily reflect variations of the same underlying motive but often are discrete responses to different situations. Therefore, a behavioral classification model of serial murder may be more representative of serial murders at large than a model developed from personality traits.

Holmes' Profiling Approach

Other researchers have developed profiling typologies (Dietz, Hazelwood, & Warren, 1990; Keppel & Walter,

1999; Holmes & Holmes, 1996). For example, Holmes and Holmes (1996) classified serial murderers into four types:

- 1. Visionary serial murderers, whose impetus to kill is propelled by voices they hear or visions they see
- Mission serial murderers, whose impetus to kill is a need on a conscious level to eradicate a certain group of people
- 3. Hedonistic serial murderers, who are labeled lust or thrill murderers, and whose crimes have sexual overtones to them
- Power/control serial murderers, whose impetus to kill are driven by a need for sexual gratification and the complete domination of their victims.

The Holmes' classification scheme appears to be a type of story line offering reasons serial murderers murder rather than an empirical model distinguishing offenses. offenders and between Gresswell and Hollin point out three weaknesses in the Holmes' serial murder typology: 1) the classifications are not mutually exclusive, 2) the classifications are not exhaustive, and 3) the classifications fail to pick up interactions between the murderer, the victims, and the environment, and do not appear to be flexible enough to accommodate a serial murderer who may have different motives for different victims or changing motives Another weakness in the over time. Holmes' classification model is that the data is not provided on which the conclusions are based.

Hickey's Profiling Approach

Hickey's study on serial murderers and their victims is base on data collected on 203 serial murderers of 34 females and 169 males (Hickey, 1991; Hickey, 1997). The dates of the crimes range from 1795 to 1988. Hickey's research focused mainly on victims of serial murderers rather than the offenders' crime scene behaviors (Hickey, 1997). Hickey's study on serial murder is considered to be one of the most thorough in the literature and could be robust for developing profiles related to victimology. Hickey developed a taxonomy of motives from his data, and he states that serial murderers' motives appear to focus on "financial security, revenge, enjoyment, and sexual stimulation." However, there are several problems with Hickey's motive types. It is likely that most researchers would exclude many of the females who could be labeled as "black widows," meaning that they usually killed for profit (Hickey, 1997). Of the 34 female murderers in his study, 53% killed for profit sometimes, while in 41% the motive for murder was entirely financial profit. It is interesting to note that Hickey did not rely on self-reports but rather data obtained from case files.

The data on male serial murders was less than forthcoming in Hickey's study. He did not discuss many behavioral characteristics, and when they were highlighted, they were used descriptively. Consequently, no attempt made to empirically explore the relationship between serial murderers who murdered out of revenge and the distances they traveled to commit their crimes, and although he did discuss differences in spatial behavior, it was not in relation to crime scenes actions.

Despite the shortcoming in Hickey's study, he does provide a useful descriptive model on predisposition factors and facilitators that could useful in profiling the serial murderer. He refers to his model as the "trauma-control model for serial murder" (Hickey, 1997). Hickey suggests that the triggering mechanism in the serial murderer may be some form of trauma in which the individual is unable to cope with the stress of traumatic events. Hickey points out that individuals deal with traumatic events differently, and some deal with past trauma in a more destructive framework.

One interesting finding in Hickey's study was, although no exact percentage figure is given, he found that serial murderers who were serial rapists were also abused. In a similar vein, Hazelwood and Warren (1989) reported in their study on 41 serial rapists that 76% had been sexually abused as children. This finding is interesting because it could give an indication that a common feature in a serial murderer's backgrounds could be some form of a traumatic experience.

The Dietz Profiling Approach

Dietz and his colleagues made a descriptive study of 30 sexually sadistic serial murderers (1990). The purpose of their study was to gather information on personal characteristics and crime scene details common among such murderers. Seventeen of the subjects were classified as serial murderers, five of who were originally in the FBI's sample population (Dietz, Hazelwood, and Warren, 1990). The remaining subjects were drawn from a pool of cases maintained in the FBI's National Center for the Analysis of Violent Crime. The data used were archival documents (i.e., self-reports and police describing the offenders' records)

crimes. The study found that 93% of the sexual sadists were organized, and suggested that fantasy was the motivational factor behind the murders.

The ratio of organized to disorganized offenders in the Dietz study was considerably higher than in the FBI's project. The high proportion of organized offenders was probably due to biases in the sample; that is, a distinct sub-group of offenders, sexual sadistic murderers who were most likely to have organized behavior. Another form of bias in the Dietz study was the combination of a small sample size with a priori diagnosis suppositions mad about the offenders, which appear to confirm the assumptions of the researchers. These weaknesses make the Dietz study weak for profiling purposes.

Keppel and Walter's Profiling Approach

Keppel and Walter (1999) proposed a theoretical classification by which sexual murderers' motivations could be profiled. They described four types of sexual murderers: 1) power-assertive rapemurderer, 2) power-reassurance rapemurderer, 3) anger-retaliatory rapemurderer, and 4) anger-excitation rapemurderer (Keppel & Walter (1999). The power-assertive rape-murder is described as a series of acts which the rape is planned and the murder is an unplanned response of increasing aggression to ensure control of the victim. The actions are characterized by forceful aggression and intimidation. In the power-assertive rape-murder, Keppel and Walter suggests that the homicide becomes one of maintaining control over a vulnerable victim, and the killer demonstrates mastery of the situation by taking charge by the use of an assertive image and dominating violence. The power-reassurance rapemurderer is described as rape that is planned followed by an unplanned overkill of the victim. In this type of sexual murder, the authors suggest that the killer is motivated by an "idealized seduction and conquest fantasy." Keppel and Walter point out that this type of killer expresses his sexual competence through seduction and when that fails, the murder allows the offender to reintroduce the fantasy system. The anger-retaliatory rap-murder is where the rape is planned and the initial murder involves overkill. This type of offender murders for purposes of retaliation, getting revenge on women due to poor past relationships with women. The final type of sexual assault and murder are planned for the purpose of inflicting pain and terror on the victim for personal gratification. This type of murder involves sadistic acts precipitated by highly specialized fantasies.

Keppel and Walter appear to have borrowed their profiling typology from a previous theoretical rape classification scheme first proposed by Cohen in 1971, which was revised later by Groth et al. in 1977, and again modified by Hazelwood and Burgess in 1987. Some of the weaknesses in the original rape classification scheme are still prevalent in the Keppel and Walter model. The caveat of overlapping behaviors is problematic in the Keppel and Walter sexual murder model, and there is no discussion of any systematic analysis from which the described offender types may be validated. As a result, the perspective derived from the Keppel and Walter typology emphasizes the various psychological functions that sexual murder has for the offender, not the actual varieties of action the murder consists of. Consequently, the classification scheme makes little distinction between the overt crime scene behavior as

it occurs in murder and the psychodynamic processes that produce that behavior. There is little attempt to differentiate aspects of the offender's motivations and life-style from aspects of his offending behavior. Any attempt to understand the actions that occur in murder offenses require the classification of offense behavior as distinct from classification of the offender in either psychological or sociological terms.

There are also several unique weaknesses to the Keppel and Walter sexual murder typology originally not found in the rape classification scheme. The profiling typology gives no consideration for an offender who commits a completely random crime. In each of the sexual murder types, either the rape or murder is planned. In an attempt to validate their sexual murder typology, Keppel and Walter surveyed a group of incarcerated murderers at the Michigan State Penitentiary who were given the four classification types and asked to describe which type fit them best. This process could hardly be considered scientific. In sum, Keppel and Walter's sexual murder types are described and then illustrated by case studies, and the differences between them are briefly discussed. The lack of data does not allow for exploration of the general applicability of the proposed classifications, because no background information on samples or population has been published. Hence, these are generalized classification in need of empirical refinement before they can be considered robust for criminal profiling.

Heuristics and Biases in Profiling Decision Making

As previously discussed, the reliability, validity and utility of deductive profiles generally offered to police investigations are weak and have met

with continual criticisms. For example, Godwin (1978) argues that profilers are playing a blindman's bluff, groping in all directions in the hope of touching a sleeve. Levin and Fox (1985) point out that, offender profiling as we know it today is vague and general and thus basically useless in identifying a killer. Blackburn (1993) echoes similar concerns and points out that profiling is more an art than a science, and evidence for its validity is limited. Broadly, current criticisms of profiling are borne out of studies on conventional investigative approaches that suggest there is nothing special about detective work experience or clinical expertise (see Ekman, 1991; Kohnken, 1987; Alison & Canter, 1997).

Confirmation Bias

Numerous studies have demonstrated that people generally give an excessive amount of value to confirmatory information: that is, information which is positive or which supports a position (Schwenk, 1988). Confirmation bias refers to a type of selective thinking whereby one tends to notice and to look for what confirms one's beliefs, and to ignore, not look for, or undervalue the relevance of what contradicts one's beliefs. This type of thinking results from relying on deductive inferencing without any supporting inductive research. For example, Wiseman, West and Stemman (1996) found in cases where psychics had contributed to a police investigation the psychics and the investigators they advised were only likely to remember those aspects of the case they were correct about and forget a considerable number of assertions that were totally incorrect. Gilovich (1993) suggests that the most likely reason for excessive influence of confirmatory information is

that it is easier to deal with cognitively. In other words, for profilers it is much easier to see how a piece of information supports a position than it is to see how it might count against the position. This form of confirmatory thinking is prevalent in criminal profiling and often results in misleading information and wasted man-hours.

Selective Thinking

Selective thinking is the process whereby a profiler selects out favorable evidence for remembrance and focus, while ignoring unfavorable evidence. This kind of thinking is sometimes referred to as 'tunnel vision' within criminal investigative circles. Selective thinking occurs when an investigator or profiler rejects alternative explanations in favor of simpler ones. This form of thinking is referred to as 'Occam Razor.'

Post Hoc Fallacy

Post hoc fallacy, also called post hoc ergo proper hoc (after this therefore because of this) fallacy is based upon the mistaken notion that simply because one thing happens after another, the first event was a cause of the second event. This form of reasoning in profiling is the basis for many erroneous conclusions. For example, you have a "vision" that a body is going to be found in the water near a tree and later a body is found in the water near a tree.

However, to establish the probability of a causal connection between two events, controls must be first established to rule out other factors such as chance or some unknown causal factor (Riere, 1998). Anecdotes from law enforcement officers who use this approach and swear by it, does not count as establishing the

probability of causal connection. Rather, a controlled study, comparing success rates with true detectors and fake ones, is the only way to establish the probability connection between two events.

From the previous discussion on the frailties of human thinking, we should be aware that offender profiles and many conclusions about what may have happened in a crime are distorted by easily recalled events and selective perception and expectations that bias the observations and conclusions. This process is called "illusory correlation," which encourages the belief that unrelated variables; events, crime scene actions, etc. are correlated when in fact no associations exist.

To change profiling from an art to more a science what is needed are alternative approaches that give rise to systematic and scientific processes which will aid in reducing illusory correlations, hindsight bias and improve the way in which crimes are profiled and how offender profiles are generated as well as testing their accuracy and applicability to criminal investigations.

Conclusions

On the whole, criminal profiling methods are inherently flawed due to weak operational definitions and inferred deductive assumptions made about offender actions and characteristics. In its present form, this leads to empirically unsound and misleading profiles. For example, as mentioned earlier, Prentky and Ressler suggest that fantasy is the motive for serial murder, however, they provide no literature to support their theory. Their claims appear to be deductive conclusions based on offenders' self-reports, which are highly susceptible to misleading and false information.

Profiling typologies reviewed in this paper, outside of Hickey's study, seem rather vexing. No explanations are given regarding how the offender's criminal personality is formed. Some profilers argue that the offender is affected by some manifestation of mental illness, while others argue that pre-disposition and sometimes fantasy is the motive for murder. The problem is that neither mental illnesses nor fantasies are motives, therefore, it is not possible to specify exactly what is responsible for the offender's actions. An offender who is mentally ill may have different reasons for murder than an offender who appears normal, yet may be driven by fantasies.

Investigative Process Management

Given the problems with the deductive profiling approaches, how should we proceed? One way might be through the inductive profiling approach of Investigative Process Management (IPM) (Godwin, 2000, 2001, 2003).

A Move Towards a Facet Classification of Serial Murderers

An alternative to classifying serial murderers into rigid types, organized and disorganized, for example, is the inductive investigative process management method that sees the criminal's behavior s shaped by daily life experiences and interpersonal relationships with others. In other words, the way the individual treats others when he is not offending may affect the way he carries out his crimes.

Investigative process management offers a new approach to profiling that may be practical for police investigations. There are two immediate advantages. First, police investigations are faced with a great deal of information of investigative value that may be derived from simple overt aspects of an offense. Research carried out in investigative process management can be helpful in that crimes often involve subtle behavioral information which has value, but human biases drawn about the overt actions of the offenses usually overshadow these subtle actions. One example of how the investigative process management profiling could assist police in a serial murder investigation is a study carried out by this author on the spatial behavior of 54 U.S. serial murderers (Canter and Godwin, 1997). The study found that the locations at which victims were abducted were centrally located close to the offenders' home bases rather than at any number of the body dump locations.

Second, investigative process management relies on offense and offender variables that have been inductively related and empirically replicated for linking crimes to a common offender without having to rely on the unreliability and weak validity and utility of deductive profiles.

As Canter (1997) clearly pointed out: Detectives and police investigators are particularly vulnerable to the creative fictions of 'profilers' because their task is very similar to that of a novelist. Investigators feel the need to invent a narrative that makes sense of all the facts and also indicates the psychological processes that gives the plot its dynamics, usually rather ambiguously referred to as the 'motive.' If this invention adds weight to their own loosely formulated notions it is even more attractive (Canter, 1997).

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