

## **Differentiating Stranger Murders: Profiling Offender Characteristics from Behavioral Styles**

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The literature on “offender profiling” suggests that different “styles” of homicide will reflect differences in the background characteristics of the offender. To test this suggestion, hypotheses were drawn from studies of aggression to propose that murder crime scenes would reveal stylistic distinctions in the role of the aggression in the offense. It was further hypothesized that these distinctions would be clearest for those crime scene indicators that reflect the instrument (cognitive) actions that shape the offense rather than the more expressive (impulsive and emotional) components. Hypotheses about associated offender characteristics were also deduced on the assumption that the murder scene theme revealed the killers’ typical styles of interpersonal transaction.

To test these hypotheses MDS analyses were carried out on the crime scene and offender characteristics derived from 82 single offender, single victim stranger homicides. A multivariate structure resulted, including all three hypothesized styles, allowing 65% of the cases to be assigned to unique styles and a further 36% to be assigned to appropriate hybrids. Offender characteristics related in the anticipated way to the different crime scene styles, providing a basis for law enforcement inferences about offenders in stranger murders. Copyright © 1999 John Wiley & Sons, Ltd.

### **INTRODUCTION**

Offender profiling is the process of inferring the characteristics of an offender from the way that offender acted when committing the crime (Canter, 1995). Such inferences may contribute to law enforcement by helping investigators to narrow their search for the most likely culprit from amongst a number of possible suspects. This

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would be achieved by providing an indication of what characteristics would distinguish the likely offender from the array of people whom the police are considering.

As a number of people have emphasized, the profiling inference process is rather problematic and the claims of 'profilers' often go far beyond the scientific support for those claims (Canter, 1994; Davies, Wittebrod & Jackson, 1997). Thus, although there has been some recent success in proving a framework for deriving the general characteristics of arsonists, from the ways in which they commit their crimes and the targets they select, (Canter & Fritzon, 1998), there is virtually no published research that provides the same degree of support for the profiling of homicides.

One of the main areas of concern regarding investigative profiling has been the general lack of empirical studies on the psychological processes underpinning it. The lack of any robust empirical studies has led to a lack of validity and reliability of current investigative profiling methods. The question therefore which has been pertinent to the study of the profiling of offenders' actions at crime scenes is whether the process that leads to the classification of these actions is clear and stable enough for application to police investigations. Indeed, determining what information can be used from the crime scene and exactly how this links to characteristics of the offender are important steps to establish.

Most homicides are committed by people who have a known, existing relationship to their victim (e.g. Wolfgang, 1958). The investigation of these poses fewer demands for the police than those in which the offender is, to some degree, a stranger. However in the case of stranger homicides there is little information directly available to investigators other than that available from the crime scene and associated aspects of the crime, such as the details of the victim, the time and the location of the crime. The ' profiler' must therefore also take as their starting point the information available to the police investigators.

In order for valid inferences to be drawn from the crime scene and associated information, the salient features of that material have to be identified and the patterns that they form, recognized. It then needs to be demonstrated that those patterns relate in some systematic way to distinguishing characteristics of the offender. In a rather more formal sense this is what Canter (1995) has called solving the  $A \rightarrow C$  equation (where A are the salient actions that are revealed by the crime scene and C are the distinguishing characteristics of the offender).

There are thus two distinct stages to any empirical development of a model for profiling stranger homicides. One is the differentiation of homicide crime scenes into their notable constituents. The second is the relating of these constituents to distinct aspects of the offender.

## VARIATIONS IN VIOLENT BEHAVIOR

Most aggression research agrees on the fact that the action of homicide is an intrinsically emotional reaction to a stressful situation. Zillman (1979) explains that cognitive or thinking processes are greatly impaired at extreme levels of emotional arousal. At very high levels of emotional upset, hostile or aggressive behaviors are likely to become 'impulsive' as the behaviors have been so well learned that they appear quickly and without thought. They seem to be "mindless." Impulsive behavior then is not unusual out-of-character behavior. It reflects habitual responses that might be rejected by the individual under low arousal or normal conditions.

Distinctions between violent behaviors have further classified aggressive and violent actions into an instrumental and expressive dichotomy. Feshbach (1964) in particular proposed that offenders can be classified into one of two types of aggression; Hostile (expressive) and Instrumental aggression, which are distinguished by their goals or the rewards they offer the perpetrator. The hostile type of aggression occurs in response to anger-inducing conditions such as insult, physical attack, or personal failures. The goal is to make the victim (the person) suffer. Most homicides, rapes, and other violent crimes he suggests are directed at harming the victim and are precipitated by hostile aggression and anger. The instrumental type of aggression comes through the desire for objects or the status possessed by another person, such as jewelry, money, or territory. Here the offender tries to obtain the desired object regardless of the cost. Usually there is no intent to harm anyone, although if someone interferes with the thief's objective, they may feel forced to harm that person or risk losing the desired goal. This expressive/instrumental distinction comes through in much of the work on violence and aggression, under various titles. Meloy (1988), as an example, looked at a clinical sample, and described a psychopathic continuum, which on one hand those who perceived themselves as justified in their killing, only using force in their dealings with others (expressive-like behavior), and on the other had those who manipulated, were more erotic in their relations, and used love in bargaining for power (instrument-like behavior).

However, one of the critical problems in distinguishing instrumental and reactive violence in a group of adult violent offenders is that many violent offenders have a history of both instrumental and reactive violent offenses (Cornell, Warren, Hawk, Stafford, Oram, & Pine, 1996). In addition, an offender who is actually committing an otherwise instrumental crime may become angry with the victim and engage in reactive (expressive) aggression. Further, previous classification systems that have dealt with instrumental and expressive behaviors have based the description of these behaviors upon psychiatric descriptions, which may be more difficult to use reliably.

Cornell *et al.* (1996), in an attempt to clarify this problem, set up a study proposing a modified group distinction, based on 106 male inmates incarcerated for various offenses. The subjects were allocated to one of three groups: non-violent offenders (where there was no indication of known violent criminal or social history), reactive violent offenders, and instrumental violent offenders (where there was at least one instrument crime in the offender's record, regardless of the number of reactive crimes for which they had convictions). The results of their study emphasized that criminal offenders need not be exclusively instrumental or reactive in their violent offenses. Reactive violence appears to be the more pervasive form of violent crime, with instrumental violence characterizing a smaller subgroup. Perhaps reactive violent should thus be considered the most basic form of aggression among criminal offenders, and instrumental violence should be considered a marker of a more pathological development in the ability to use aggression for goal-directed purposes.

The challenge is to show that the actual actions in a crime will reveal both the more common behaviors during actions of homicide such as the violent reactive nature of the aggressive act, and behaviors that are more cognitive and instrumental in nature that may be what define different subgroups of offenders.

Canter and Heritage (1990) analyzed 66 stranger rapes committed by 27 offenders in order to establish whether the behavior as they occurred at crime scenes had any coherent patterns of co-occurrences to them. Their results showed that the behaviors as they occurred at rape crime scenes could be differentiated in terms of five different ways the offender interacted with the victim. Based on this analysis, Canter (1994) modified these five different themes to his three-way model of Victim as Object, Vehicle, and Person, this model illustrating that there is not only a certain consistency to an individual's behavior at crime scenes but also that patterns of crime scene behaviors could be coherently differentiated and reliably associated with offender characteristics.

The general attitude towards the victim in the Victim as Object cases is one of lack of feeling. The victim is little more than an object to be explored and played with. Because the real lives of their female victims are so irrelevant to these men, the women tend to be vulnerable victims of opportunity. This group would include other vulnerable victims such as elderly people as well. These men do not stalk or target specific victims. If the situation allows it, any woman may become a victim.

In the Victim as Vehicle cases, the victim is a vehicle for the offender's desires. The narratives these offenders portray are ones of the tragic hero, living out in their act of violence the sense of freedom and power that they feel is absent in the other stores they are forced to live. Their ability to make contact with others will often mean that their initial approach will be apparently open and non-threatening, and, because their victims mean something to them, a certain kind of victim will be targeted, as will the place in which the crime occurs.

In the Victim as Person cases we find the rapist who has shattered a woman's life by telling her that she should be more careful because next time, somebody might not be so kind to her! Here it is important that the victim is a particular person, not just a body or a representative of a person. The victim is known to the offender, and the offender tends to have a chequered criminal history behind him.

## CONSISTENCIES IN OFFENDERS' ACTIONS

Toch (1969) suggest that most violent episodes can be traced to well learned, systematic strategies of violence that some people have found effective in dealing with conflictful, interpersonal relationships. Violence therefore not only becomes an impulse but also a learnt habitual response. Indeed he postulated that if the histories of violent persons were examined, surprising consistency in their approaches to interpersonal relationships would be discovered.

Heusmann and Eron (1989) concurs that a substantial portion of the individual differences in characteristic levels of aggressiveness among humans can be attributed to learning. They hypothesize that social behavior is controlled to a great extent by responses that have been learned during a person's early development and propose that they learnt responses for social behavior in general, and for aggressive behavior in particular, are largely controlled by what they term "cognitive scripts," learned and memorized during the young child's daily experiences and persisting into adulthood. These scripts are stored in a person's memory and are used as guides for behavior and social problem solving, suggesting how the person should behave in response to events, and what the likely outcome of

these behaviors would be. Within this framework, a habitually aggressive child is one who regularly retrieves and employs scripts for social behavior that emphasize aggressive behavior. Once established, these networks of scripts may be extremely resistant to change. Through elaborate rehearsal of specific scripts, more general abstract scripts for social behavior are formed which are equally resistant to change. The result is a set of cognitive structures that promote consistent forms of social behavior over time and across situations (Huesmann & Eron, 1989). Within this framework a habitually aggressive child is one who regularly retrieves and employs scripts for social behavior that emphasize aggressive responding.

Not only does aggression as a characteristic way of solving problems appear to emerge early in life, but there is also accumulating evidence that each individual develops a characteristic level of aggressiveness and that this aggressiveness remains relatively stable across time and situations into adulthood (e.g. Huesmann, Eron, Lefkowitz & Warder, 1984; Gottfredson & Hirschi, 1990). Although specific antisocial behaviors in childhood might not predict phenotypically similar behaviors (i.e. the way they are manifested) in later adulthood, they may still be genotypically associated with behaviors that are conceptually consistent with those earlier behaviors (Caspi & Bem, 1990; Caspi & Moffit, 1992).

Evidence thus suggests that the interpersonal interactive strategies that individuals adopt are likely to stay thematically consistent across an individual's lifespan. The hypothesis is that these strategies are consistent not only across time, but also across similar conflictful situations. In this way it may be suggested that offenders will not only act consistently during their crimes, but that there will also be a link between their crime scene behavioral theme and their interactional theme for the rest of their life. In this way, an offender's background characteristics may be linked to their crime scene behavioral theme.

### **LINKING CRIME SCENE BEHAVIORS TO OFFENDER CHARACTERISTICS**

Although the criminological literature deals with both different types of homicide and the demographics of different offenders, few studies have endeavoured to link actual behaviors at a crime to the characteristics or previous experiences of an offender. Only a few recent studies have dealt with relating patterns of crime scene behaviors to offender background characteristics.

The study by Davies, Wittebrod, and Jackson (1997) on rape reports that an offender exhibiting extreme violence at the crime scene, was almost three and a half times more likely than not to have previous convictions for violence. They also show that if an offender steals from the victim or employs forced entry at the crime scene, there is a higher probability than not that they have previous convictions for theft and burglary. However, although this study found many occasions between offense behaviors and offender characteristics, they merely present a one item to one item modeling of behavior at the crime scene to previous convictions characteristics.

The model does not attempt to establish themes of co-occurring offense behaviors, and so does not establish the basis for the pattern of relationships between the different variables. Similarly, the study does not correlate background

characteristics to themes of co-occurring crime scene behaviors. Instead it correlates single items to other single items. The danger with only relating one single variable to another single variable, without taking account of the co-occurrences with the other variables present, is that it does not allow for the fact that a rapist might not use that exact same behavior each time, but instead might use another single behavior, which is similarly themed. An example would be an offender who binds one victim, but gags another.

These represent two separate single behaviours, yet thematically they are similar (see Canter & Heritage, 1990).

The FBI's classification (Ressler, Burgess, & Douglas, 1993) of crime scene behaviors into the Organized/Disorganized dichotomy was the first proposal that looked at the patterns and themes in offender murder crime scene behavior. Their research points to the thematic links between an offender's behavior at the crime scene and their most likely background characteristics by pointing out that offenders exhibiting a particular behavioral theme at the crime scene (i.e. Organized or Disorganized) are likely to exhibit the same theme in their background.

However, although Ressler *et al.* have alerted us to the fact that crime scenes are rich sources of information for analyzing the psychology of murder, there are several inherent difficulties with their work. Their classification system only looks at the theme of the behaviors and does not take into account of the influence of their frequencies in their inherent ability to discriminate between individuals. Any behavior which occurs in the majority of all cases is unlikely to aid differentiating offenders into two different groups. Their data originates from interviews with 36 incarcerated murderers who have volunteered to supply information about themselves and their crimes as well as from the cumulated expertise of some of their agents. Firstly, although detailed, this is a very small sample and secondly, because the offenders are volunteers, they are likely to have, as an example, a more extrovert type of personality, and this is likely to bias the results and limit any generalizations that could be made from the data. The fact that many of the variable which are used to discriminate between the Organized and the Disorganized typology are variables which one come from the offender's own testimony, and secondly are variables which can not actually be used by the police as it is not a behavior visible to the crime scene (e.g. "controlled" and "minimal" conversation, see Ressler *et al.*, 1993). Further, as the FBI themselves state; "at present there have been no systematic efforts to validate these profile-derived classifications" (Ressler, Douglas, Burgess, & Burgess, 1992, p. 22). What is needed is to subject their classification system to empirical test.

If behaviors can be differentiated empirically then the ground work is prepared for linking these actions to offender characteristics in a systematic way. This will provide further insight into the varieties of homicide as well as being of value to law enforcement agencies.

## AIMS OF STUDY

The aim of this study was twofold. Firstly, it aimed to illustrate that a thematic structure to the actions which occur at homicide crime scenes will be evident. Previous studies of aggression suggest that murder crime scenes would reveal

stylistic distinctions in the role of the aggression in the offense. These distinctions it is hypothesized will center on the thematic distinctions of more instrumental (cognitive) crimes and expressive (impulsive) crimes.

Based on the idea that an individual is consistent in their use of previously learnt and encoded interpersonal strategies, the second hypothesis suggests that offenders will display similar interactional themes through their actions during the homicide as will be evident in their previous actions.

Empirical support for these hypotheses would indicate that there are structured variations in stranger homicide offense behavior and related offender characteristics providing a solid scientific basis for proposing a model of offense behavior which may be used to classify offenses and offenders for the purposes of offender profiling.

## DATA

Data from police reports of homicide crime scenes are rich in information about the actions that occurred. These police files were content analyzed to reflect actions which were seen to reflect both instrument and expressive modes of action and offender characteristics.

The sample consisted of 82 British single offender–single victim solved stranger homicide cases from the 1980s to the early 1990s collected from various British police forces around the country. “Stranger” in these cases was defined as cases where, at the time the crime was discovered, the police did not know the identity of the offender. This definition did not preclude that, at the time the offender was identified, they were known to the victim.

For empirical analysis, the key offense behaviors relevant to the three different modes of offender–victim interaction were identified in the offense descriptions. These variables were recorded in dichotomous form with yes/no values based on the presence/absence of each behavior in any one offense. Dichotomies were used because the information was drawn from police records not initially collected for research purposes. Previous research has demonstrated that content analysis any more refined than presence/absence dichotomies is likely to be unreliable (Canter & Heritage, 1990).

48 variables were analyzed across the 82 cases of stranger homicide to reflect the actions by the offenders on the victim, traces of behaviours left at the crime scene, as well as variables reflective of the characteristics of the offender and the characteristics of the victim. Variables which occurred in more than 90% of cases or in less than 10% of cases were excluded from the analysis as they were either too common or too rare to aid in the classification of these offenses.

## SAMPLE DESCRIPTION

### Victim and Offender Ages and Gender

The victim age range was between 1 year and 70 years, with the mean age 45 years (of the 75 cases where the age was known), and the offender age range between 15 and 49 years, with a mean age of 27 years (of the 78 cases where the age was

known). In terms of gender distribution, 45% of victims were male, and 72% of offenders were male.

### **Crime Scene Demographics**

The majority of the victims were found at the scene of death (76%). In the majority of the cases (66%), death had occurred in the evening. Forty-four percent were found in their own homes and 44% were found outside, that is, not inside a house or a building. Non-identifiable property (20%) and/or property of value (40%) were stolen from the victim or the scene. Judging from the crime scene evidence, 12% of the cases were sexual in nature.

### **Offender Demographics**

The majority of the offenders knew the victim to some extent (74%), despite the fact that the police had classified these cases as "stranger" homicides, i.e. where the offender was not known to the police at the time the crime was discovered. Seventy-nine percent were familiar with, if not local to the area. Almost half (48%) were married or cohabiting, and almost a quarter (23%) had been married in the past. Forty-one percent were unemployed. An over-representative proportion of the sample were women (28%), compared to average Home Office figures of 12% (Home Office Statistics, 1993). Twelve percent had previously served in the armed services.

In terms of the offenders' previous criminal record, 40% had served at least one prison sentence in the past. In descending order, offenders had previous convictions for theft (56%), burglary (45%), violent personal offenses (37%), damage to property (30%), disorder (30%), traffic offenses (23%), vehicle crimes (22%), possession of drugs (16%), and sexual related offenses (12%).

### **SMALLEST SPACE ANALYSIS (SSA) OF BEHAVIOR MATRIX**

The data was analyzed using SSA-I (Lingoes, 1973). Smallest Space Analysis allows a test of hypotheses concerning the co-occurrence of every variable with every other variable. In essence the null hypothesis is that the variables have no clear relationship to each other. SSA is a non-metric multidimensional scaling procedure based upon the assumption that the underlying structure, or system of behavior, will most readily be appreciated if the relationship between every variable and every other variable is examined.

Initially, association coefficients between all variables are computed. It is these coefficients that are used to form a spatial representation of items with points representing variables. The more often variables co-occur during homicide, the closer will be the points representing those variables in the SSA space. The pattern of points (regions) can hence be examined and thematic structures delineated.

The hypotheses of this study are built on the assumption that actions with similar underlying themes will be more likely to co-occur than those which imply different themes. These similarly themed actions will co-occur in the same region

of the plot. This regional hypothesis has previously been seen as an appropriate way of interpreting co-occurrences of behaviors, and has successfully been used to interpret both studies of emotion and personality (see Plutchik & Conte, 1997).

The coefficient of alienation<sup>1</sup> (Borg & Lingoes, 1987) is an indication of how well the spatial representation fits the co-occurrences as represented in the matrix. The smaller the coefficient of alienation is, the better the fit, i.e. the fit of the plot to the original matrix. However, as Borg and Lingoes (1987) emphasize there is no simple answer to the question of how "good" or "bad" the representations. This will depend upon a combination of the number of variables, the amount of error in the data and the logical strength of the interpretation framework. In the present study the data is mainly derived from police crime records which are not created for research purposes and thus do not adhere to strict collection protocol and procedures. It would therefore be expected that the data is not error free and would contain considerable "noise" that would reduce the possibility of interpreting the results. A relatively high coefficient of alienation would therefore be acceptable, provided the plot produced a meaningful interpretation.

Although SSA and similar techniques have been widely used by social scientists over the last 30 years (e.g. Canter, 1985), using multidimensional scaling (MDS) techniques in the study of crime is a relatively new concept (e.g. Canter & Heritage, 1990). Using MDS for classifying homicides and for linking these different classifications to characteristics of the offender is unique in the study of homicide.

Using this methodology to analyse the co-occurrences of both actions at a crime scene, and the co-occurrences of these with the other aspects of an offender's background, enables a test of the hypothesis that sets of actions which co-occur to form the themes of expressive and instrumental homicide crime scenes and offenders. This will allow for the establishing of a model of homicide crime scene actions and related offender characteristics based on themes of co-occurring sets of variables, rather than isolated one-to-one item correlations.

## RESULTS OF SSA

The SSA was carried out on 30 crime scenes across the 82 cases. The resulting analysis showed a co-efficient of alienation of .22 indicating an adequate fit for this data. Each point in the SSA plot (see Figure 1) is a variable describing an offense behavior and the closer any two points are, the more likely it is that the actions they represent will co-occur in offenses in comparison with other actions. High frequency variables in this case occurred in the middle of the plot, and low frequencies at the edges of the plot.

The way in which the SSA functions can be appreciated if, for instance, the two variables 'face up' (the body found face up) and 'property of value' (property of value being taken from the victim or the crime scene) are considered (see Figure 1). These two variables are at opposite sides of the SSA plot and so are therefore very unlikely ever to have occurred at the same crime scene in the sample (eight cases). These variables therefore reflect very different types of homicide theme.

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<sup>1</sup> All SSAs were analyzed using Jaccard's correlation coefficient.

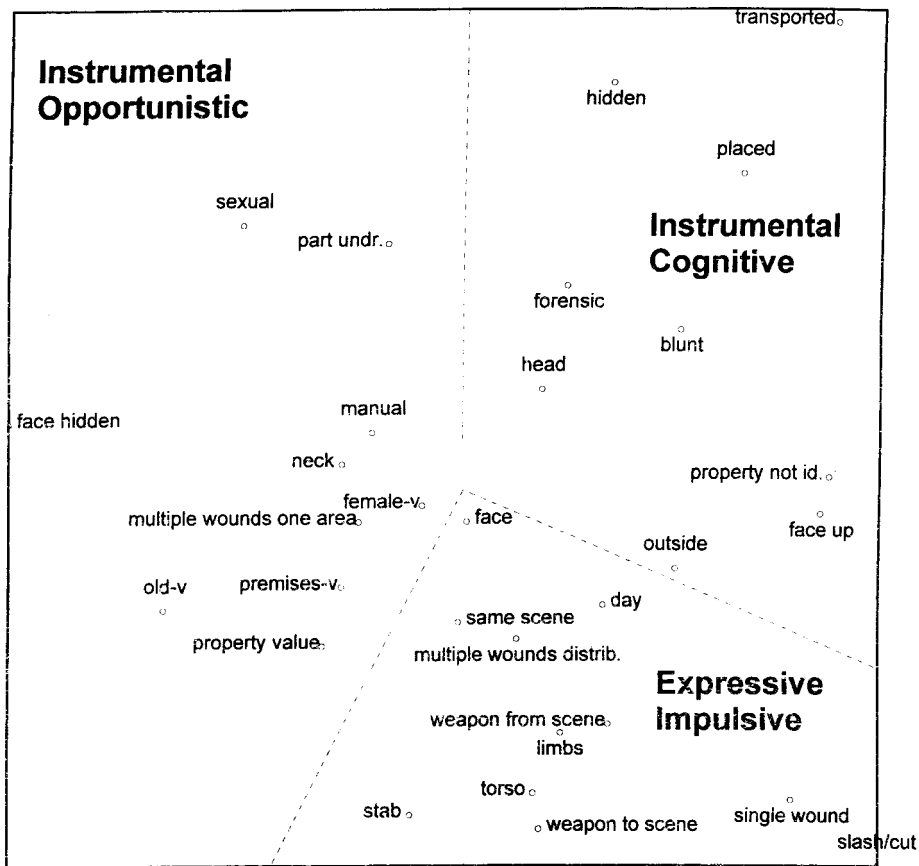


Figure 1. Homicide crime scene themes

### BEHAVIORAL THEMES

The regional hypothesis is that items which have a common theme will be found in the same region of the SSA space. In order to test the hypothesized framework of homicide crime scene behaviors and their related offender characteristics, it is therefore necessary to examine the SSA configuration to establish whether distinct themes of offender–victim crime scene interaction can be identified in distinct regions of the SSA space. The next stage is to establish whether any themes identified can be associated with thematically related offender characteristics.

Three themes of actions committed at the crime scene were evident through the visual examination of the plot (see Figure 1). These three themes were labeled Expressive (Impulsive), Instrumental (Opportunistic), and Instrumental (Cognitive). As can be seen from Figure 1, there were three regions of the configuration in which the variables co-occurred. These helped to indicate where the division of the plot were to be made. Further, this geometric differentiation was supported by the way the sets of actions within each of the three regions were thematically and theoretically different from one another. Any variables that fell in between two

regions were allocated to the region whose theme is best reflected. This was done both by the psychological meaning of the variable itself, as well as through the meaning of the variable when taking into consideration its co-occurrence with the other variables in that region.

An example of this, was the variable 'face' (wounding to the victim's face). This variable spatially occurred close to the meeting of the boundaries of all three regions. This relates to this variable occurring in a high proportion of cases (40%), and so was rather less important in thematically distinguishing between the cases. Indeed it may be that this variable occurred for different reasons in each region. In this way it would occur in the instrumental (Cognitive) region because of its forensic equality, such as obliterating any features of the victim to delay identification of the body. Its meaning within the Instrumental (Opportunistic) theme would be one of "shame" where the offender objectified the victim by obliterating their features. However, the variable was included in the Expressive (Impulsive) region because the meaning of this variable was best interpreted through its co-occurrences with the other variables in this theme. Here the offender strikes out at the victim's face because, as it reflected in much of the clinical work in this area, the victim had a certain emotional meaning to the offender. In this case, the victim's face represented the victim and was thus targeted.

### **The Expressive (Impulsive) Crime Scene Theme**

As can be seen from Figure 1, there is a collection of frenzied and eclectic impulsive behaviors in the Impulsive theme, incorporating variables such as multiple wounds distributed across the victim's body, many different types of wounds such as slash/cut wounds and stab wounds, bringing a weapon to the scene and using a weapon from the scene. Many of the victims in these cases also have injuries to the face which may indicate a very emotional attack where the offender is attacking the core of the representation of that person.

### **The Instrumental (Opportunistic) Crime Scene theme**

Behaviors in the Opportunistic Victim theme had a distinct theme of opportunistic victims being targeted, such as women and old age pensioners. Actions within this region centered around property of value being stolen, at the victim's premise. Injuries were inflicted manually, emphasizing that the power inherent in a weapon was not needed to incapacitate the victim. The injuries were located around the neck (possibly because the variable "manual" included strangulation) and the face was hidden. There was also a sexual element to this area, at the top of the region, and victims here were left partially undressed and sexually assaulted. These cases would be defined as cases where the offender used the victim as an object through which to attain an ulterior motive such as money or sex.

### **The Instrumental (Cognitive) Crime Scene Theme**

Behaviors in the Cognitive crime scene theme had a highly cognitive emphasis to them. These crime scene behaviours indicated that the offender was attempting to

hide their crime by either committing it outside or disposing of the body outside where it is not only harder to find but also where it is harder to relate back to a crime scene and thus the evidence that may lead directly back to the offender, transporting the body and hiding it from view making it harder to find and stealing non-identifiable property which again is more difficult to trace back to the victim and thus to the offender. Further, the offenders appear to be aware of cognitive evidence in that they attempted to remove evidence such as body fluids, fingerprints, the weapon used, etc.

### TESTING THE FRAMEWORK

In order to test this facet framework of homicide crime scene behaviours, each of the 82 offenses in the dataset was individually examined to ascertain whether it could be assigned to a particular crime scene theme on the basis of the variables which occurred during the incident. Every offense was given a score for each of the three major themes, reflecting the number of Impulsive, Opportunistic, and Cognitive variables that occurred during the crime. The criterion for assigning a crime to a particular theme was that the dominant theme had a greater number of crime scene variables present than the sum of the other two themes.

Using this system (see Figure 2), a total of 65% (53 out of 82 cases) could be classified as either exhibiting a dominantly Impulsive, Opportunistic, or Cognitive crime scene theme. This result would seem to suggest that the themes of crime scene behavior as revealed by the SSA (see Figure 1) is a fairly good representation of behavioral themes of homicide. Indeed, it is interesting in itself that offenders do tend to follow such dominant criminal behavioral patterns.

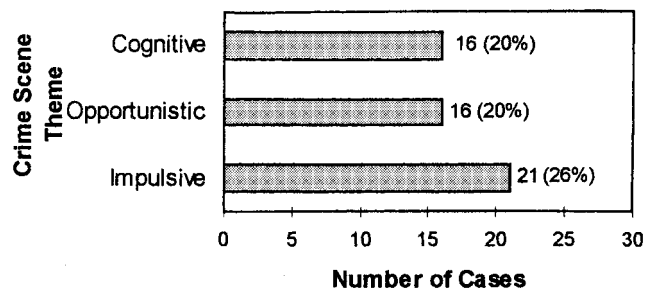


Figure 2. Distribution of cases across "pure" crime scene themes

Breaking these 53 cases down, it could be seen that 21 (26%)<sup>2</sup> followed an Impulsive theme of homicide crime scene behaviors, 16 (20%) an Opportunistic theme, and 16 (20%) a Cognitive theme. This confirms the literature which suggests that the Impulsive theme, where spontaneous and reactive behaviors are found, is the more common theme in homicide.

<sup>2</sup> Percentages rounded up to first whole number.



Table 1. Background characteristics in Expressive (Impulsive) theme

<b>Background characteristics</b>
Previous violent offenses
Previous offenses for public disorder
Previous offenses for damage to property
Previous sexual offenses
Previous traffic offenses
Previous drugs offenses
Married at the time of the offense
Previous marriage
Female offender

relationships in general. Their narrative is one of conflict against people, who they may find it difficult to deal with in a normal and socially acceptable manner.

### **Instrumental (Opportunistic) Offender Characteristics**

The offender characteristics (see Table 2) linked to Opportunistic types of homicide often follow the same theme as the crime scene behaviors, with offenders being unemployed, and having previous convictions for theft and burglary. This is an offender who is used to breaking into other people's homes and stealing from them. They usually know the victim whom they later brutalize and they live close to the crime scene.

### **Instrumental (Cognitive) Offender Characteristics**

The offender characteristics (see Table 3) associated with crime scenes which had a Cognitive theme, chooses aggression and violence as a lifestyle and will reinforce their narrative both through their lifestyle (e.g. by being in the armed services or as

Table 2. Background characteristics in Instrumental (Opportunistic) victim theme

<b>Background characteristics</b>
Previous offenses for theft
Previous offenses for burglary
Previous vehicle theft offenses
Having previously come to police notice
Unemployed
Familiar with the area of the crime
Knew victim

Table 3. Background characteristics in Instrumental (Cognitive) theme

<b>Background characteristics</b>
Served in the Armed Services
Having served a prison sentence

evidenced by having served time in prison) and through their social associations. Other people to them mean nothing, and are but obstacles that get in their way.

### **Implications of the present findings**

The findings in the present study show that not only can behaviors at crime scenes be used to successfully analyze themes of actions, but also that these themes can successfully be thematically linked to characteristics of the offender.

The value of using police homicide files for the purpose of delineating and analysing the different actions as they are carried out by the offender at the crime scene has been demonstrated. In particular, the analysis has shown that using actual traces of behaviors as the unit of analysis is a valuable process.

Few previous studies have used behaviors as revealed from the description of the actions carried out by the offender at the actual crime scene, as recorded in police files of homicide. Mostly, studies of homicide have concentrated on narrative accounts given by the offender, which, if relied on for objective information, are both biased and unreliable; or on studies of psychiatric groups of murderers, which are too narrow a subgroup from which to make generalization about homicide.

The results from this analysis of homicide crime scene behaviors shows that the information which is contained in police files can be detailed and extensive enough to allow for a comprehensive modeling of actions during homicide. The results also indicate that behaviors are a useful unit of analysis to help distinguish between offenses and offenders, in terms of their Expressive and Instrumental components.

The present study, by taking the first steps in the development of a system of accurately profiling stranger homicide offenders, presents a basis for generating hypotheses concerning associations between the offense (in terms of crime scene behaviors) and the offender responsible.

Through establishing classifications of patterns of behaviours at homicide crime scenes, and relating these different patterns to characteristics of the offender, investigative decision support systems may be devised. These decision support systems can ultimately lead to a quicker and more accurate assessment of the type of homicide the police are dealing with, and consequently the likely type of offender involved. This identification of certain pertinent offender characteristics will enable the police to prioritize suspect selection, and, ultimately, this will save on valuable resources and lead to a quicker identification and conviction of the perpetrator.

### **CONCLUSIONS**

The results from this empirical study of actions and characteristics of homicide offenders have helped to establish a classification system of homicide crime scenes and its related offenders that go beyond the individual experience of any one "profiler." It has been possible to establish the foundations for a scientific approach for the study of criminal behavior in a way that is relevant to police investigations, and, by so doing, demystifying the hitherto shrouded process which has been called "psychological" or "investigative" profiling. This in turn has led to a more informed conception of what can be expected from this process.

The application of psychological research to the study of homicide must now further perfect the development of an empirically tested theory encompassing the variations among homicide offenders in terms of both their crime scene behaviours and their background characteristics. This will further promote a better understanding of those who commit homicide and will have invaluable implications for their investigation and apprehension. A necessary first step has been taken in this study in the development of the current model notably through the identification of the variations that exist among homicide offenders in terms of their crime scene actions and their thematically associated background characteristics.

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