

Exploring Investigative Psychology’s approach to homicide analysis: A study of Crime Scene Behaviours

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INTRODUCTION

BACKGROUND

This poster presentation contains aspects of a thesis submitted in partial fulfillment of a Masters Degree in Criminology and Criminal Psychology from the Institute of Criminal Justice Studies, University of Portsmouth. Aspects of the thesis not covered here include cultural and diversity influences on crime scene behaviours, the influence of behavioural scripts on crime scene behaviours, a critique into the methods and evidence base for offender profiling and a critical analysis into the theory of expressive and instrumental aggression.

RELEVANCE TO POLICING

Identifying and utilising crime scene behaviors is a critical part of any homicide investigation. Getting the maximum yield of useful and reliable information from crime scene behaviours is a priority for investigators. While forensic and other evidence are the mainstay of investigative products yielded from crime scene behaviours, the psychological interpretation of them is also potentially useful.

The psychological interpretation of crime scene behaviors to aid police investigations in identifying unknown offenders falls within the topic area of offender profiling. Its use in Scottish homicide investigations is very limited. This limited use is understandable as offender profiling can, at best, only produce probabilities, not certainties. On the few occasions when profiles are requested by homicide investigators their use is very controlled to ensure minimum impact on investigative decision making.

While offender profiling’s use is limited investigators must be satisfied it has a solid evidence base, as the validity of any information used in an investigation is critical. Poor or incorrect information of any kind can misdirect an investigation, resulting in serious consequences. If there is not a solid evidence base for offender profiling then its use by homicide investigators must be questioned.

Homicide Investigators need to critically engage with offender profiling to understand its evidence base. This will help them to decide whether to use this area of expert advice in real investigations. One of the ways to achieve this critical engagement is for investigators to conduct independent exploratory research with real homicide data.

OFFENDER PROFILING PARADIGMS

Any literature review reveals that offender profiling is a complicated field containing various approaches and schools of thought. However, the field can be broadly broken down into three paradigms. These are Diagnostic Evaluation (psychodynamic interpretations of motive and behaviour), Crime Scene Analysis (FBI approach) and Investigative Psychology (Scientific approach). Diagnostic Evaluation and Crime Scene Analysis have a poor evidence base for a number of reasons...

- No openness to assessment
- Absence of empirical data
- Methods are not testable or falsifiable
- No openness and transparency
- Evidence base relies upon retrospective consumer satisfaction surveys of perceived success and personal experience

Unlike other paradigms Investigative Psychology claims to apply rigid statistical and theoretical principles. The importance of this kind of approach is asserted by Muller, when she states “*the reality of criminal profiling is that without some solid theoretical and empirical basis on which to build a profile of an offender, we may as well just base it on psychic visions*” (2000). Investigative psychology publishes its research in peer reviewed journals thus address the problems listed for the other two paradigms.

Investigative Psychology’s research to date does not provide a compelling evidence base for offender consistency (serial offenders’ criminal behaviours are consistent over time) and even less evidence for offender homology (offenders who display similar crime scene behaviours will have similar characteristics). This questions the two fundamental assumptions of all offender profiling techniques and paradigms.

METHODS

THE INVESTIGATVE PSYCHOLOGY APPROACH

Investigative Psychology’s methodologies identify, through statistical analysis of large datasets, that certain groupings of crime scene behaviours from solved crimes can be interpreted and categorised into themes defined from established psychological theories. These themes are then matched to offender characteristics identified from the same solved crimes according to defined statistical probabilities and again guided by psychological theoretical constructs. It is hypothesised that the results of this process can then be used to infer offender characteristics from crime scene behaviours in unsolved crimes.

Critical to its approach is the empirical identification of salient crime scene behaviours. These are features of a crime which are behaviourally significant. These can then be utilised as the basis for reliable scientific study and in turn develop valid and reliable profiles. Central to salience is the empirical differentiation between consistent features. This is necessary to differentiate between offenders; the more empirically different the consistent features the more accurate and usable profiling can be.

FACET THEORY

Investigative Psychology research and models rely on Facet Theory. Facet Theory is essentially an attempt to understand datasets where relationships between variables are complicated. Within the context of Investigative Psychology, facets are identified through the use of MDS (Multi Dimensional Space) analysis. Here crime scene behaviours of a number of the same crime types are presented on a scatter chart which visually represents their relationship to each other. Clusters of behaviours identified within the chart can then be interpreted as being of a particular offence based psychological style. Further research can then be completed to match these offending styles with offender characteristics.

AIM

APPLY INVESTIGATIVE PSYCHOLOGY’S APPROACH TO A DATASET OF SCOTTISH HOMICIDES

OBJECTIVES

- IS IT POSSIBLE TO IDENTIFYING AND COLLECT RELEVANT CRIME SCENE BEHAVIOURS AND OFFENDER CHARACTERISTICS FROM A SCOTTISH DATASET
- USING MDS ANALYSIS IS IT POSSIBLE TO IDENTIFY EXPRESSIVE/ INSTRUMENTAL HOMICIDE STYLE FACETS FROM WITHIN THE SCOTTISH HOMICIDE DATASET?
- TO WHAT EXTENT IS IT POSSIBLE TO CATEGORISE HOMICIDES WITHIN THE DATASET ACCORDING TO EXPRESSIVE/ INSTRUMENTAL HOMICIDE STYLES?
- TO WHAT EXTENT CAN CATEGORISED HOMICIDES BE USED TO INFER OFFENDER CHARACTERISTICS?

RESULTS

I) IDENTIFY AND COLLECT RELEVANT CRIME SCENE BEHAVIOURS AND OFFENDER CHARACTERISTICS FROM A SCOTTISH DATASET

This study successfully collated a data-base of 85 homicide cases. The database contained 36 crime scene behaviours and 6 offender characteristics per case. All crime scene behaviours and offender characteristics were dichotomously coded as either ‘present’ or ‘not present’ (1 or 0).

The rules applied when identifying dichotomous crime scene behaviours were...

- chosen dichotomies are required to have the power to differentiate cases.
- if behaviours are found in a high frequency across a sample they will only highlight the general features of that sample. As a result, such high frequency behaviours cannot differentiate between cases
- crime scene behaviours ‘present’ need to emphasis the more criminal side of the dichotomy.
- crime scene behaviours cannot be misinterpreted, but must clearly reflect the crime which is being studied
- crime scene behaviours must be instructive in relation to the offender’s psychological involvement with the victim.

The offender characteristics collected were gender, victim - offender relationship (friends, blood relative, intimate, stranger) and post event conduct (turned self into police, confessed, denied, no comment to police). It was hypothesised that certain characteristics would be linked to certain homicide styles. For example, it was hypothesised that the offender turning himself in and confessing would present a positive correlation to expressive homicides. The basis for such hypothesis was expressive homicide style presents an emotional outburst, where the victim is of emotional significance to the offender; the victim is therefore important to the offender and resulting feelings of shame and guilt may encourage surrender and confession.

II) USING MDS ANALYSIS IDENTIFY EXPRESSIVE/ INSTRUMENTAL HOMICIDE STYLE FACETS FROM WITHIN THE DATASET

MDS analysis of the crime scene behaviours was a success. The distribution of the crime scene behaviours can be clearly seen within the MDS plot (see Figure 1 below). Through a visual examination of the MDS plot it is possible to identify two clusters of crime scene behaviours. After careful examination of associations between these crime scene behaviours and the meanings of those associations within the plot these clusters could be defined in terms of the theory of instrumental and expressive aggression (Fesbach, 1964).

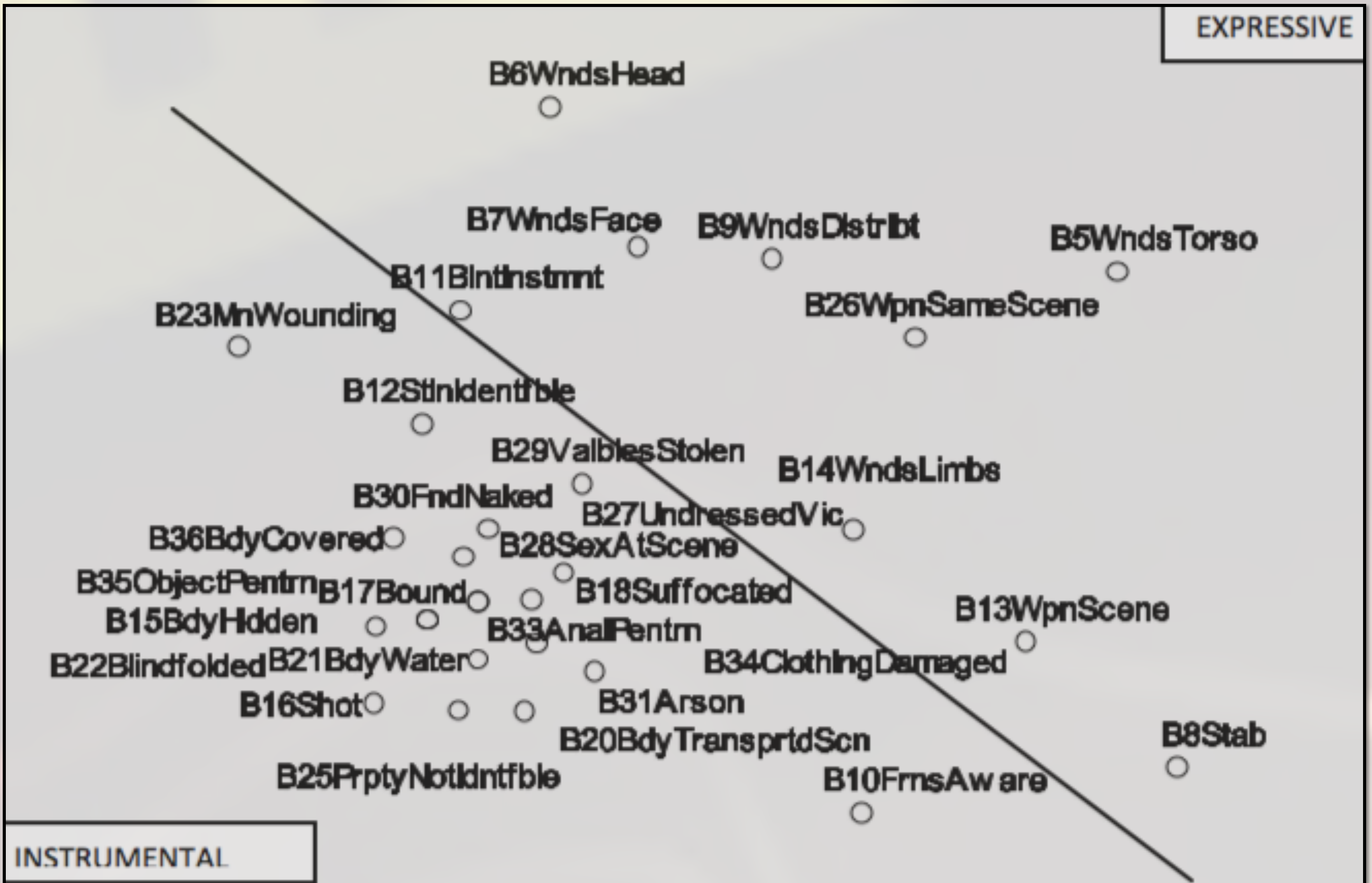


Figure 1: MDS results of the Scottish Data set

EXPRESSIVE AGGRESSION

The expressive cluster is consistent with the theory of Expressive aggression. The cluster shows homicides consisting of fatal injuries predominantly through stabbing and blunt instruments. The areas of the body where the wounds are inflicted are the torso, head, face and limbs. There are a high percentage of wounds being distributed across the whole body. This spread of multiple injuries across the body is suggestive of an emotional, frenzied and extreme physical attack. The violence used in the expressive cluster can be identified with ‘over kill’; going beyond what is necessary to kill. The attack on the face and head can be understood in terms of the killer attacking the core representation of that particular person, suggesting the person as being of emotional significance to the offender.

Within the expressive theme we also see weapons being brought to the scene which is suggestive of anticipating violence of some kind: not just with the victim per se but as part of a violent life style. In addition, the expressive theme contains ‘weapon from scene’, this when coupled with the everyday items used as weapons in this theme (blunt instruments and knives) is indicative of a sudden unplanned outburst of violence.

INSTRUMENTAL AGGRESSION

The Instrumental cluster is consistent with the theory of instrumental aggression. It appears to present a more controlled picture of aggression whereby controlling the victim is the objective. This is exemplified in the behaviours “multiple wounds to one area’, ‘bound’, ‘blindfolded’ ‘suffocation’ and focused attacks to the ‘neck’. The behaviour ‘shot’ was also found within the cluster. This suggests a more planned use of violence due to the difficulty in obtaining and the non routine nature of firearms in Scotland. The high frequency behaviour of ‘manual wounding’ was found within this cluster which suggests that the power inherent in a weapon was not needed to incapacitate the victim.

The instrumental cluster contains behaviours which do not reflect a focus on the victim as a person. This is reflected in all the theft (B12, B25, B29) and sex (B28, B29, B33, B34, B35) related behaviours being found within this cluster. These theft and sex behaviours present a focus on some kind of material gain.

Instrumental aggression is also reflected in the deliberate and controlled offender behaviours related to post-mortem treatment of the victim and deconstruction of the crime scene. This is exemplified with the behaviours of ‘arson’, ‘body hidden’, ‘victim transported from locus’ and ‘victim found in water’ taken along with the behaviour ‘forensically aware’.

III) CATEGORISING HOMICIDES WITHIN THE DATASET ACCORDING TO EXPRESSIVE/ INSTRUMENTAL HOMICIDE STYLES

To explore whether the expressive/ instrumental behavioural distinction is a useful way of classifying individual homicides an attempt was made to classify each of the 85 homicides as belonging to a dominant style (see Figure 2 below). A proportional count method (proportion of instrumental and expressive crime scene behaviours for each case) and stringent criterion for dominance (the proportion of homicide style behaviours had to be two times greater than the other before classification could be made).

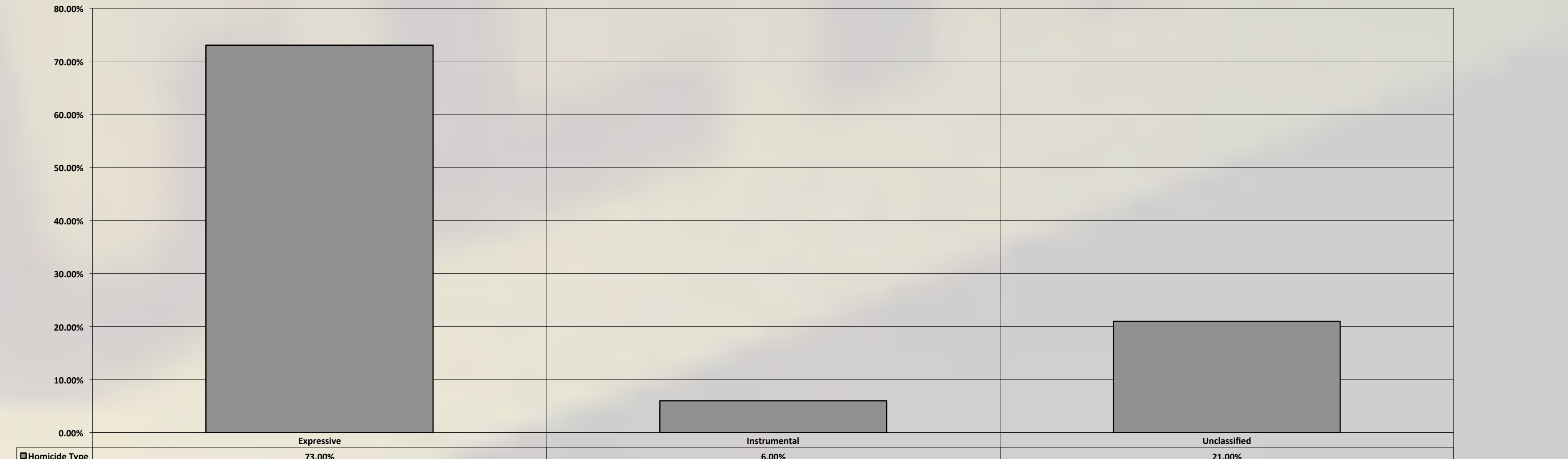


Figure 2: Classification Table

The existence of unclassified cases and the presence of both instrumental and expressive behaviours within the majority of individual cases emphasise that any homicide being classed as expressive or instrumental is only an indication of the dominant style within that case rather than an independent homicide type. Not with standing this point, the strength of the dominant style within each expressive/ instrumental classification homicide is clear. This is further emphasised when the 1 ½ times rather than the two times dominance criterion is used to classify the dataset. This results in only one case being classified differently. Therefore, it is apparent that the behaviour of offenders at a homicide scene is not random and that crime scene behaviours are informative of the psychological mechanisms taking place within the homicide event.

IV) USING CATEGORISED HOMICIDES BE USED TO INFER OFFENDER CHARACTERISTICS

Of the six offender characteristics were utilised only one statistically significant inference was identified. Here, if the offender was a blood relative of the victim then the homicide would be unclassified (not instrumental or expressive in style).

DISCUSSION

SALIENCE

Using expressive/ instrumental homicide style to infer offender characteristics was unsuccessful. This is typical of other Investigative Psychological research. The critical reason for this failure is lack of salient crime scene behaviours. There are a number of possible reasons for this lack of salience...

- A number of the cases have offender characteristics which can be associated with both Instrumental and expressive style. For example, an offender who is committing an instrumental crime has the capacity to become angry or enraged with the victim and commit a homicide more consistent with expressive behaviours.
- The crime of homicide may not be laden with crime scene behaviours which are useable for MDS based studies.
- A lack of sufficiently unusual homicides within the single-offender single-victim dataset used in the study. The effect of unusual homicides is suggested by some commentators as generating a greater number of salient behaviours and therefore more distinct differentiation.
- Attempts by the present study to find straight forward associations between offender characteristics and expressive/ instrumental homicide styles may not exist. It maybe that if crime scene behaviour to offender characteristics correlations actually exist they will be more complex.

DATA LIMITATIONS

The exploration reveals that crime scene behaviours cannot be attributed equal degrees of reliability for research and analysis. For example, crime scene behaviours such as the ‘number of wounds’ and ‘weapon used’ can be accurately ascertained by the identification of wound to weapon correlation. However, the crime scene behaviour of position of ‘the body when killed’ may be less reliable as this is often reliant on secondary sources. It often relies on the memory recall of the victim or witnesses and also accurate recording by police. This is because the body is often moved when initially found by witnesses, ambulance staff and police.

OTHER LIMITATIONS

While attempts were made to improve the reliability of the results using a Monte Carlo Simulation of the Multinomial Sampling Distribution the low number of cases ($n = 85$) and the very disproportionate spread between the classifications (73% - 6% - 21%) had a detrimental impact on the reliability of the study.

The identification of the linear division of the MDS plot into expressive and instrumental clusters is subjective. This is apparent though boundaries within the plot being identified by the author’s interpretation of where the boundaries should be in relation their understanding of expressive/ instrumental theory. This can be criticised for not sticking to the empirical results but creating arbitrary groupings of variables.

CONCLUSION

The findings of this study show that homicide style is not a distinct type but rather a dominant theme within any given homicide case. The use of a robust classification criteria showed that within the majority of homicides there is a clear dominant theme based on expressive or instrumental offending styles. Therefore, it can be said that the crime scene behaviour of individuals committing murder is not random but reflects an underlying psychological process.

Investigative Psychology’s demonstration of the coherence of the crime scene behaviours within single-offender single-victim homicides is only the first level of analysis for predicting offender characteristics. The second level of analysis; correlating them to offender characteristics, has only presented very poor evidence. This second level of analysis is dependant on the theory of offender homology. The present study’s findings support the existing research which criticises the theory of homology.

This small study is a simplistic and limited exploration of one aspect of one paradigm of offender profiling. However, it adds to the existing research questioning the use of offender profiling by homicide investigators.

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