

South African Serial Homicide: A Victim-Focused Behavioural Typology

AMBER M. HORNING¹, C. GABRIELLE SALFATI^{2,*}
and GERARD N. LABUSCHAGNE^{3,4}

¹*John Jay College of Criminal Justice & The Graduate Center, City University of New York,
New York City, USA*

²*Department of Psychology, John Jay College of Criminal Justice, City University of New York,
New York City, USA*

³*Forensic Services Division, South African Police Service, Pretoria, South Africa*

⁴*Division of Forensic Medicine and Pathology, University of the Witwatersrand
Johannesburg, South Africa*

Abstract

This current study assessed the value of the Interpersonal Model in differentiating serial homicide offences in South Africa, notably in terms of how the offender may display behavioural patterns that are indicative of them dealing with the victim as a Person, an Object, or a Vehicle. The sample consisted of 302 offences committed by 33 offenders that occurred from 1953 to 2007 in South Africa. Multidimensional scaling analysis was used to test the Interpersonal Model and results indicated that crime themes did not directly correspond to the threefold model. Instead, two crime scene types were present: Victim as Object (where the focus was on tangible gains, interaction with the victim throughout the phases of the crime was limited, and victims included men and live women) and Victim as Vehicle (where the victim might be construed as a conduit through whom the offender could realise their specific psychological needs, the interaction was extensive, and victims tended to be vulnerable). South African serial homicides did not appear to have a specific sub-theme of Victim as Person, suggesting that the themes engaged in centred more on instrumentally focused actions but in qualitatively different ways. However, victim types were integral to the overall behavioural model. Using the Victim as Object/Vehicle dichotomy, 85.7% of the offences could be seen to engage dominantly in one of the two patterns at the crime scene. This not only supported the results of a twofold model, but having these many offenders showing a dominant crime scene type also shows that the model is an excellent representation of serial homicide offending in South Africa. Copyright © 2014 John Wiley & Sons, Ltd.

Key words: serial homicide; classification; crime scene themes; victim types

*Correspondence to: C. Gabrielle Salfati, Department of Psychology, John Jay College of Criminal Justice, City University of New York, 524 West 59th Street, Psychology-10th floor, New York, NY 10019, USA.
E-mail: gsalfati@jjay.cuny.edu

INTRODUCTION

There is a great need to understand types of serial homicide within different national contexts. To date, the majority of studies on serial homicide have been carried out in Western countries, specifically the US. Reports of general serial homicide offending and demographic patterns have relied upon studies carried out in Europe and the US (e.g. Canter, Alison, Alison, & Wentink, 2004; Canter & Wentink, 2004; Canter & Youngs, 2009; Canter & Youngs, 2012; Harbort & Mokros, 2001; Hickey, 2006; Salfati & Bateman, 2005; Santilla *et al.*, 2008). In order to build a more integrated understanding of serial homicide offending, empirically based behavioural typologies should be tested, particularly in those regions that are underrepresented in the literature.

The research emphasis should not only be more inclusive of non-Western countries but should also focus on regions where violent crime rates are high and where analysis will be most beneficial. South Africa has one of the highest homicide rates in Sub-Saharan Africa and in the world (United Nations, Office on Drugs and Crime, 2003). The homicide rate, including serial, is nine times the international average, with 27 murders occurring every day (SAPS: Crime Information Analysis Centre website, 2002, as cited in Hodgskiss, 2004). The recorded serial homicide rates from 1990 to 1996 show an increase of almost 900% in the average annual incidence of serial murder (Hodgskiss, 2004), and there are approximately five new series identified per year (Salfati, Labuschagne, Horning, Sorochinski, & De Wet, 2015b). There is a great need to identify specific patterns of South African serial homicides.

Elements of the cultural environment should not be ignored when formulating or testing a typology. According to Heft (2007), because of the psychological importance of place, it is not possible to completely extract psychological and social processes from the environment. Violent strategies of action that influence crime scene behaviours may be shaped by previous interactions with other people, but they occur in a particular habitat or geographic landscape, and they may be influenced by specific local social customs. Serial offenders may use knowledge of geographic space, the societal position of others, and how others use space, in order to more successfully commit crimes. All of these factors can contribute to crime scene behavioural styles, including victim selection, pre-crime and during crime interaction with victims, and post-crime behaviours. The type of model selected should allow for incorporation of local factors in various countries yet should be adaptable in that it will be testable across nations.

An exploration of serial homicide within the South African context may not only reveal patterns of South African serial homicide but may expand upon the construct of serial homicide in general. Although there have been a number of earlier studies on thematic models of serial homicide (e.g. FBI's organised/disorganised and the Holmes and Holmes typology), evaluation studies of these systems have shown that they have little utility (Canter & Wentink, 2004; Canter *et al.*, 2004). Later works testing serial homicide classifications that showed some utility and integrated offender–victim dynamics were the Expressive/Instrumental Model and the Interpersonal Model of Salfati and Bateman (2005) illustrated in the paper of Canter and Youngs (2009, 2012), and they all focused on the offenders' interpersonal style in relation to the victim.

Interpersonal style in the criminal context

There is a great deal of earlier literature about violent crime, such as homicide and rape, where researchers have described these types of criminal events as situated transactions

(Luckenbill, 1977), as interpersonal transactions (Salfati & Canter, 1999), or as social events (Silverman & Mukherjee, 1987). These more extreme social interactions are often described as having at least two actors, and some researchers have alluded to the idea of performance. Perhaps, this analogy enables an easier visualisation of the unpleasant event and some psychological distance; however, this idea dovetails with how sociologists describe non-criminal social interactions. Social interactions are often described as performative or as akin to a performance (Goffman, 1959, 1967). Aside from other contextual factors, key components to the quality of any social exchange are ways that the actors in the dyad interact or their interpersonal styles. Offenders' interpersonal styles have been explored as situated within violent events.

Salfati and Canter (1999), Salfati (2000), and Salfati (2003) defined offender interpersonal styles in terms of the *functional use of violence* when analysing homicides. These interpersonal styles were thought to have been formed through prior conflictual interactions (Toch, 1969), and through a system of positive and negative reinforcement, these styles became habitual (Huesmann & Eron, 1989; Toch, 1969). With the long-standing theoretical idea that aggressive behaviour is dichotomised as instrumental or expressive (Feshbach, 1964; Toch, 1969, Megargee, 1966, Zillman, 1979), Salfati and Canter (1999) and Salfati (2000) conceptualised the function of aggression in homicides using this dichotomy. The expressive style involves an attack where the primary intent is to make the victim suffer (Salfati & Canter, 1999). This style represents an emotional act, whereby the offender is able to exact violence on the victim as a person. The instrumental style centres on other gains where the victim does not appear to have meaning to the offender, and the focus is on taking items of value or raping the victim (Salfati, 2000). This way of modelling aggressive interpersonal styles to classify homicide has been replicated in a number of studies on single homicide (Salfati & Dupont, 2006; Salfati & Haratsis, 2001; Santtila, Häkkänen, Canter, & Elfgrén, 2003; Salfati & Park, 2007), as well as one study on serial homicide (Salfati & Bateman, 2005), showing empirical support for this model across different national samples and in both single and serial homicide.

Another approach to classifying interpersonal styles as situated in violent events was formulated by Canter and Heritage (1990) and Canter (2000) where they chose to focus on how the offender perceived the victim. How the offender viewed the victim dictated the aggressive interpersonal style. This Interpersonal Model is composed of three thematic interaction styles: Victim as Person, Victim as Vehicle, and Victim as Object. The Victim as Person theme involved pseudo-intimacy towards the victim where the offender engaged in activities such as kissing, caressing, or complimenting the victim (Canter, 2000). Similarly, in serial homicide, this theme has been shown to consist of crime scene actions that normalise the interaction such as covering the victim's body post-mortem, which is thought to show some type of humanity, albeit distorted (Canter & Youngs, 2009). The Victim as Vehicle theme involves the victim having some symbolic meaning to the offender with a focus on the exploitation of the live victim (Canter & Youngs, 2009), and the Victim as Object theme centres on depersonalising or dehumanising the victim (Canter & Heritage, 1990; Canter & Youngs, 2009). This way of modelling aggression, which was originally developed for understanding rapes, is similar to the Expressive/Instrumental homicide model in terms of outcomes, but theoretically, they differ, because in the Interpersonal Model, offenders' interpersonal styles are more directly linked to *how offenders' view* victims. This model showed utility in identifying themes in rape (adapted from Canter & Heritage, 1990 in Canter & Youngs, 2009, 2012), attempted homicide (Fritzon & Ridgway, 2001), stalking (adapted from Canter & Ioannou, 2004 in Canter & Youngs, 2012), and serial homicide

(adapted from Canter *et al.*, 2004 in Canter & Youngs, 2009, 2012). Canter and Youngs (2012) demonstrated the ability to classify many types of violent/sexual crimes using this threefold model. There is empirical support for this classification system in live victim, as well as serial homicide incidents.

The Interpersonal Model not only emphasises the role of the victim but also explores the amount of interaction between the offender and the victim and the quality of the interaction or what may be thought of as the *function of the victim* to the offender. For example, in the Victim as Object scenario, the victim's personal identity, or individuality, may have little actual importance in them being selected as a victim, and therefore, the interaction with the victim (pre-crime and during crime) may be limited. When the role of the victim is a vehicle, there may be more interaction between the victim and the offender as the victim may have some psychological import to the offender. The level of interaction may relate to the quality of interaction between the offender and the victim.

The Interpersonal Model was initially designed to differentiate rape offenders. Therefore, some variables used in early studies of rape (Canter & Heritage, 1990) and, later on, attempted homicide (Fritzon & Ridgway, 2001) are not as readily available at homicide crime scenes because of a lack of a living victim who cannot recount the events to authorities. Although it is more difficult to uncover the interaction between the victim and the offender when analysing homicides, it is still possible to include variables within the behavioural model that illustrate the nature of the interaction (Salfati, 2000).

Victim types and the offender–victim exchange in homicide

The challenge in homicide, where there is not a victim statement, is to identify variables that illustrate the interactive quality of the offender–victim exchange. Including different victim types within behavioural typologies is one way to gain a better understanding about the role that the offender assigns the victim. The type of victim targeted by the offender may be helpful in distinguishing the theme of the crime and give an indication as to the type of offender involved. For example, offenders who target sex workers may do so because they are easy to procure, dominate, and control (Salfati, 2009) as compared with offenders who attack men.

Gender and culture

The victim's gender may influence how the offender acts towards the victim, and if the offender attacked multiple victims such as a couple, then this may not only reveal something about the offender's interactional style but may also be influenced by the cultural values of the country where the crime takes place. In South Africa, gender-based violence in general may be 'normalised' as there are few social pressures to deter men from violence against women, and women are often perceived as objects and possessions that can be controlled (Fourie, 2004). Sexual coercion and violence towards women, particularly young women, are not uncommon in South Africa (Outwater, Abrahams, & Campbell, 2005), which has one of the highest estimated rates of rape (Russell, 2001) and had a total of 63,818 sexual offences reported from 2007 to 2008 (SAPS: Crime Information Analysis Centre website, 2002). These cultural aspects of gender relationships and perceptions of sex can be important contributors to patterns of interpersonal violence and should therefore be considered in any evaluation of violence.

Male victims

Salfati and Bateman (2005) found that male serial homicide offenders had 52% female and 48% male victims. Whereas in other studies, it is found that serial homicide offenders tend to target women (Harbort & Mokros, 2001; Hickey, 2006; Pakhomou, 2004), Hickey (2006) found that nearly half (47%) had at least one male victim in their series. Fourie (2004) discussed causes for high rates of domestic violence and rape in South Africa and theorised that South Africa's history of social and political dislocation and current economic problems resulting in high levels of unemployment and unmet expectations may contribute to male insecurity and higher levels of violent behaviour in men. Although she discusses this in relation to men acting violently towards women, in a society where men are expected to be strong and are main providers in financial matters (Fourie, 2004), men may act violently towards other men as a means of gaining status. For men who are denied legitimate means of asserting their masculinity, some may use crime as a means of 'doing masculinity' (Messerschmidt, 1993). Although serial homicide is uncommon and the more extreme form of interpersonal violence, features of the socio-national environment may manifest in crime scene themes. Further, this type of victim, men, may be perceived as more difficult to control; therefore, the interaction with the male victim may be brief as they may need to subdue them quickly or use a weapon. Further, offenders' may not seek extensive interaction with male victims but may rather focus on tangible gains to enhance status. Male victims may thus be within the Victim as Object theme as the interaction is thought to be limited and depersonalised.

Couples

A number of notorious homicide series with high victim counts attacked couples such as in the Newcastle series, committed by Themba Anton Sukude (Labuschagne, 2010). The idea of doing masculinity may also be relevant when couples are attacked. When couples are attacked, it may be a goal of the offender to try to gain status by taking the male victim's female companion. In the South African national context, the types of victims targeted may be in part be related to internalised cultural values and aspects of the social context.

Vulnerable victims

Karmen (1983) discussed the vulnerability of an individual or group and stated that 'certain lifestyles expose individuals and their possessions to greater threat and danger than others' (p. 241 as cited in Egger, 2002). Egger (2002) proposed that serial homicide offenders may target vulnerable victims because they are more easily controlled and dominated or because they are from marginalised groups. Vulnerable and/or marginalised victims may be more easily procured, and further, they may not be noticed as missing.

Egger (2002) posited that serial homicide offenders often target vulnerable victims such as migrant workers, prostitutes, children, homosexuals, the homeless, and those that are alcohol or drug addicted. According to Hodgskiss (2004), the three most common victim groups targeted by serial homicide offenders in South Africa were children, women seeking employment, and sex workers. These findings are consistent with the more vulnerable victim groups in a US sample (Hickey, 2006). Salfati *et al.* (2015b) also found that in South Africa, some common victim groups were women seeking employment and children, but sex

workers were rarely targeted. According to Egger (2002), certain members of society are deemed as having less 'human worth', and therefore, they are more subject to violence.

Vulnerable groups specific to South Africa

The unemployment rate in South Africa is 23.5%,¹ and consequently, there is a high rate of poverty and people who are in need of employment. In South Africa, it is not uncommon for a stranger to offer a job prospect and for that person to follow the stranger to meet a potential employer. In South Africa, women seeking employment constitute one of the most targeted groups of victims (Pistorius, 2002; Salfati *et al.*, 2015b). Some serial homicide offenders have used this point of vulnerability as a way of luring their willing victims to follow them to isolated locations. The offender may befriend the victim and ask that she follow him in search of a supposed job opportunity only to murder her (Hodgskiss, 2004). The most prolific South African serial homicide offender, Moses Sithole, lured 38 victims into isolated areas with a promise of employment and then raped and killed them (Hodgskiss, 2004; Pistorius, 2002). Vulnerability is a subtype of offending that has been reported in homicide across studies, but the specifics of how that vulnerability is displayed in contexts may be particular to the national context in which it occurs.

Another high-risk group is migrant workers and/or undocumented immigrants who come to South Africa from other African countries. According to different estimates, the number of undocumented immigrants in South Africa is anywhere between three and six million (SAPS: Crime Information Analysis Centre website, 2002). In South Africa, most legal citizens are fingerprinted very young and apply for an identity document from the age of 16 years. Anyone seeking legal employment must present their South African identification document. Further, in the case of a homicide, the South African Police Service (SAPS) compares the homicide victim's fingerprints with the Department of Home Affairs fingerprint database in order to quickly identify the victim. A victim whose fingers are intact at the point of discovery, that is, not decomposed or burned, and whose fingerprints cannot be found in the fingerprint database may thus be from a more marginalised group, such as an illegal immigrant or from a poorer area, and therefore not documented.

Vulnerable victims may thus be targeted as part of the Victim as Vehicle theme; they serve as an easy target for the offender to use them for their own agenda.

Live victims within the series

The more obvious way of analysing the interaction between offenders and victims in serial homicide series is to also include the victims who did not die as a result of the attack. Salfati (2008) suggested that in order to gain a more complete understanding of the influence of offender–victim interactional factors, serial homicide series need to be looked at in the entirety of the series of crimes committed by the offender, such that other interpersonal crimes that occur between the homicides (such as assaults and rapes) are looked at, to determine the influence of these on the development of the interpersonal pattern as a whole across the series. Indeed, Salfati and Taylor (2006) showed the usefulness of understanding separate legally defined crimes such as rape and homicides that included sexual assault within one all encompassing theoretical framework by looking at how the two separate types of crimes showed similar patterns, with only few distinguishing factors, notably the extent of the lethal

¹Mid-year population estimate 2009. Official Statistics South Africa.

violence engaged in by offenders. Significantly, this framework offered the first attempt to use a more inclusive model of violent (sexually based) crime. As discussed previously, Canter and Youngs (2012) demonstrated that the Interpersonal Model is a general framework that is useful to understanding patterns of different kinds of violent/sexual crime. This concept may be particularly important in the analysis of violent serial offending where an offender may engage in attempted homicide, rape, and homicide within a series and the end result of each incident may be due to circumstance such as being interrupted, experimentation, or even development. Although rape and homicide are legally distinct, it may be that these offences are fundamentally similar and should be included as a part of the analysis of violent serial offending. It may also be that non-homicides in the series will affect the subsequent behaviour in future homicides in the series. As such, including these non-homicides in the analysis will allow for a more in-depth analysis of similarities and differences between homicides and non-homicides that one individual offender may engage in. Additionally, during an investigation, it may not be clear where in the series a crime is, so it is important to have information on all crimes within a series and then later analyse if there is a difference between crimes at different stages of the series.

Summary

As the Interpersonal Model emphasises the interaction between the offender and the victim and as culture centres on social relations (Barth, 2002), the model may tap into patterns of violence that are specific to South Africa. Features of culture may be embedded in social learning and may be identifiable in violent action, that is, homicide behavioural themes. Prior studies on serial homicide have only been conducted in Western countries limiting knowledge about serial homicide offender types in different countries and the influence of the context on the way in which such crimes are carried out. As the Interpersonal Model centres on the offender's perception of the victim, it may be essential to determine the types of victims targeted to establish the *function of the victim* to the offender. Further, the type of victim selected may be influenced by both the social structure, for example, the victim's social status, and the environmental context, such as accessibility of victims. An exploration of victim types in relation to crime scene themes may reveal if offenders act differently towards specific victim types.

AIMS

The first aim of this study is to assess if the Interpersonal Model can be used to differentiate South African serial homicide offences.

The second aim is to test the framework and to determine if South African offences can be classified as dominantly within one of the three behavioural themes outlined in the model: Victim as Object, Victim as Vehicle, and Victim as Person.

METHOD

Data

The data were from finalised, fully adjudicated serial homicide cases obtained from the Investigative Psychology Section of SAPS. This section was created in 1996 in response

to the increase in murder series detected by SAPS. This section assists nationally in the investigation of serious offences, including serial homicide, and has a comprehensive archive of cases files from South Africa (1953–2007). Files were archived at SAPS head office in Pretoria, South Africa.

All identifiers, including names of victims, suspects, offenders, members of the police departments, correctional agencies, were removed. Only aggregate data were reported. Files typically contained medical examiner and investigative reports, offender confessions, witness statements, statements by victim's family (if identified), live victim accounts, and forensic reports, such as DNA/ballistics, crime scene and autopsy photographs, and the investigation diary.

A recently agreed-upon definition of serial homicide by researchers and practitioners requires the intentional, unlawful killing of at least two or more individuals (Morton & Hiltz, 2005). For this study, the definition not only requires at least two victims at separate incidents, but the definition was expanded to include criminal events within the series where the victim survived, that is, attempted homicide or rape. The total sample included offences committed by 33 offenders against 302 victims. Of these, 75.5% (228/302) were homicides, 8.9% (27/302) were attempted homicides, 9.6% (29/302) were rapes, and 6% (18/302) included victims who were found alive but who later died of their injuries. Live victims (attempted homicides and rapes) comprised 18.5% (56/302) of the victims.

There were 254 crime scenes where the number of victims killed at the same crime scene was known. In eight crime scenes, the number of victims killed at that crime scene was unknown, and this was eliminated from the calculation. For example, investigators found multiple bodies in the same location without information about when each was killed. Of the known crime scenes, 13% (33/254) had multiple victims.

Prior studies used subsamples in order to test serial violent crime classification systems (Canter & Wentink, 2004; Canter *et al.*, 2004; Salfati & Bateman, 2005; Sorochinski & Salfati, 2010). By eliminating crimes within a series, important information may be lost as offenders may change patterns and develop as series progress (Salfati, 2008). If only the first few crimes of each series or the third crime in each series are included, then the classification may be inaccurate as the subsequent crimes may show new patterns; therefore, the full series are included to test the model.

Measurement

The variables used in this study were coded using the Homicide Profiling Index (HPI), Version 4[©] (HPIv4[©]), which was specifically designed to be used with police case files. The HPIv4 coding dictionary consists of 217 variables, 147 of which are in a dichotomous or categorical form, 38 of which are measurements, for example, age, distance, and number of arrests, and 32 of which are qualitative. The variables in the HPIv4 account for behavioural indicators of crime scene actions, for example, location, weapons, forensics, control and sexual behaviours, and post-mortem behaviours, as well as detailed demographics of the offender and the victim. Each variable has a detailed description and guidelines that coders follow in order to reliably code for the presence of the variable. Most variables are constructed such that they must be measured according to a strict category of present, absent, or unknown. All variables were coded in a dichotomous form with 1 signifying present, 0 referring to the absence of the behaviour or characteristic, and 999 indicating missing information.

Added variables

These variables were obtained from HPI qualitative details and were coded quantitatively to facilitate the analysis of this specific study.

Pre-crime interaction variables

In addition to the HPI variables, pre-crime interaction variables were obtained in order to capture how the offender approached and interacted with the victim before the crime.

Con/lure approach

The con or lure approach could have included a promise of work, a pseudo-romance, or any pretense by the offender to gain the victim's confidence in order to lure the victim into accompanying them. This approach generally involved extensive interaction. This variable was derived from the confidence approach as outlined in the paper of Canter and Heritage (1990) and Fritzon and Ridgway (2001).

Surprise approach

The surprise approach was when the offender lay in wait or had minimal dialogue or a pause between the approach and the physical attack of the victim. There was little pre-crime interaction. This variable was re-conceptualised from the surprise approach of Canter and Heritage (1990) and Fritzon and Ridgway (2001) definition of a.

Blitz approach

The blitz approach was when the offender approached the victim and immediately began attacking. This variable was derived from the paper of Canter and Heritage (1990) and Fritzon and Ridgway (2001).

Location variables

Location variables may indicate if the offender selected an area where the offender could spend time with the victim.

Isolated location

An isolated location was an area that was not visible to the public and/or where there was little chance of being seen by others. Often, the offender could spend extensive time alone with the victim without being witnessed because of the remoteness of the area. For example, the offender could take the victim to a sugar cane field, which is often vast areas and provides cover and privacy because of the density of the sugar cane stalks.

Public view

Public view describes a place where there were, generally, people, such as a public street or a populated neighbourhood. The offender would most probably not be able to spend a long period with the victim.

Victim types

The type of victim selected may indicate the meaning of the victim to the offender.

Couples

The victim was a part of a couple and was with a paramour, boyfriend/girlfriend, or significant other when the attack began.

Live female

The victim was a female and did not die as a result of the attack. In many of these instances, the victim was raped but not killed.

Women looking for work

The female victim was actively seeking employment, and the offender promised the victim work.

Unidentified

The victim was not identified by SAPS and was possibly an illegal immigrant or from a poor or rural area.

The interpersonal model

The variables selected for each of the respective themes (Person, Vehicle, and Object) were based upon the theoretical concepts of this interaction-based model and prior studies testing the Interpersonal Model (i.e. Canter & Heritage, 1990; Canter & Youngs, 2009, 2012; Fritzon & Ridgway, 2001; Salfati & Canter, 1999). Additionally, the element of victim types was added to provide a more complete picture of the quality of the interaction.

Victim as Person

Canter and Heritage (1990) suggested that the Victim as Person crime scene theme centred on pseudo-intimacy. Fritzon and Ridgway (2001) found that the event was likely to occur in the *victim's residence* within the Victim as Person theme, which may be due to the fact that such a location is a more intimate space. *Live victims* may exist within this crime scene theme as the offender may parody empathy for the victim (Canter, 2000) and/or may enact a pseudo-intimate scenario (Canter & Heritage, 1990). The offender may attempt some form of intimacy with the victim, although distorted, and this pseudo-intimacy may manifest in behaviours such as kissing the victim (evident in rape cases) and/or *vaginal rape* (a more standard sexual behaviour) (Canter, 2000). In addition, the offender may *steal a personal item from the victim*, which may illustrate the offender's interest in the victim as a person (Salfati & Canter, 1999). Some post-mortem behaviours may centre on shame (Salfati, 2003) as the victim may be personalised, such as *covering the victim's face* or *body*, and the latter was found in the Victim as Person theme in a study on serial homicide, which was illustrated in the paper of Canter and Youngs (2009, 2012).

Victim as Object

The Victim as Object crime scene behaviours may reflect little emotion (Canter, 2000) and may not involve much interaction between the victim and the offender. Therefore, the offender may approach the victim suddenly with a *blitz* or *surprise attack*, which involves little-or-no pre-crime interaction. This variable was found within the Victim as Object theme in the study on rape in the paper of Canter and Youngs (2009, 2012). When the victim has little meaning to the offender, the event may occur in a less secluded space where there is no intention of spending time with the victim such as on the street, which is in *public view*. The offender may be more murder-focused with a quick attack involving minimal interaction such as using a *firearm* and/or inflicting a *single wound*. The use of a firearm was found within this theme in the study on serial homicide discussed in the paper of Canter and Youngs (2009, 2012). *Items of value* may be *stolen* from the victim such as money or a cell phone, which does not involve a focus on the victim but rather on secondary gain (Salfati & Canter, 1999). Stealing items of value was found within this theme in the study on rape in a model adapted from the paper of Canter and Heritage (1990) and published in the paper of Canter and Youngs (2009, 2012). Offenders may depersonalise their victims and therefore may engage in *dismemberment* and *post-mortem* wounding. These behaviours were found within the Victim as Object theme in the serial homicide study shown in the study of Canter and Youngs (2009, 2012).

Victim as Vehicle

According to Canter (2000), the Victim as Vehicle crime scene theme may involve the victim being required to play a more active role, which would entail more time spent with the victim. Similarly, the offender may also engage in more interaction with the victim pre-crime with a *con* or *lure approach* method, which involves an interpersonal exchange between the victim and the offender. The offender may take the victim to an *isolated location* to spend an uninterrupted period alone with the victim, and the victim may be *bound*, *gagged*, and/or *blindfolded* as a means to keep the victim alive and under control for a long period. Gagging and restraining the victim was found in the Victim as Person theme in the serial homicide study reported in the paper of Canter and Youngs (2009, 2012); however, this may be more apt in the Victim as Vehicle theme that centres on interactions with live victims without pseudo-intimacy. The victim may be *strangled* or *asphyxiated* as these methods of killing involve more interaction with the victim, and also, key elements of this theme centre on power and control with a live victim. Manual strangulation was found within this theme in the serial murder study discussed in the paper of Canter and Youngs (2009, 2012). Further, as symbolic meaning may be placed upon the victim, the offender may target specific victim types such as *women looking for work*, *prostitutes*, *children*, and/or the *unidentified*. These types of victim may also be easier to control and manipulate. As it is hypothesised that this offender type may seek control over the victim, there may also be an attempt to control the outcome of the crime by *hiding* or *transporting* the victim's body to avoid early detection, which also involves more time with the victim post-mortem. Further, the offender may spend additional time with the victim's body post-mortem and may engage in behaviours such as *necrophilic acts* and *positioning the victim's body*.

RESULTS

Frequency trends: crime scene behaviours and victim characteristics

The first stage was to determine the frequencies of the variables in the data by conducting a frequency analysis. The frequency distribution of crime scene behaviours and offender/victim characteristics is summarised in Table 1 in two frequency columns. The first column (Total %) represents the frequency not including the cases where the information regarding the presence or absence was unknown. The second column in Table 1 (Valid %) represents the frequency of variable presence out of the total sample where the unknown cases were calculated as 0's. Both frequencies are presented to show the distinction of including/excluding unknowns when calculating the frequencies.

High-frequency variables

High-frequency behaviours, that is, those found in more than 50% of the incidents,² reveal the typical characteristics of the sample (Salfati, 2003). High-frequency variables are therefore not useful for differentiating between cases and should not be included in any analysis testing differences between crime scene themes (Canter, 2000; Salfati, 2003). The higher-frequency variables found in the sample that are characteristic of the incidents were therefore excluded from the analysis.

Planning

In South Africa, 93.7% of the victims were found in the same location as the murder site. In terms of location, 78.1% of the victims were killed outdoors. An interpretation of these crime scene behaviours from a Western perspective would probably involve a discussion about the lack of offenders' forensic awareness or his spontaneity. However, in this particular environment, the reality may more aptly centre on a lack of need to conceal evidence. In South Africa, isolated space is more accessible, and there is animal predation and high temperatures, which makes these types of precautions less important. A weapon was brought to the crime scene in 76.1% of the incidents and may indicate pre-planning or that South Africans are inclined to carry weapons such as a firearm or a knife because of the high crime rate. The level of planning in this socio-cultural and physical landscape may be more accurately obtained through offender interviews.

What is of note is that planning in the US context differs significantly from planning in the South African context. In South Africa, serial murderers tend not to own or have access to vehicles; therefore, they must lure victims to accompany them to the predetermined comfort-zone where it is isolated and safe enough to commit their crime and subsequently leave their victim's body. Whereas a US serial murderer might divide this into three phases or locations (meeting the victim in one place, murdering them in another, and transporting their body to another location), the South African offender collapses it into two phases or locations: one place where they meet the victim and one place where they murder and leave the body. Hence, transportation of the victim's body does take place, whilst the victim is alive, as the offender lacks a means to transport the deceased victim to a third body disposal

²For purposes of this analysis, the terms incidents and victims indicate a unique victim-offender pairing. Although some crime scenes involved multiple victims, each offender-victim exchange was analysed. Therefore, the sample size throughout the analysis is 302.

Table 1. Frequency of crime scene behaviours and victim characteristics.

Variable	Total (N)	Per cent total (%)	Per cent valid (%)
Body found same as murder site	237	78.5	93.7
Occurred outside	236	78.1	
Weapon brought to the scene	137	45.4	76.1
Victim was female	195	64.9	
Stranger relationship	134	43.9	73.6
Body found in an isolated location	127	42.1	
Approached victim using a lure	89	29.5	47.0
Stole item of value from victim	66	21.9	41.7
Vaginal rape of victim	86	28.5	40.7
Victim was male	106	35.1	
Victim had a single wound	67	22.2	31.9
Shot victim	81	26.8	30.2
Approached victim with surprise	52	17.2	27.5
Approached victim with blitz	49	16.2	25.9
Strangled victim	69	22.8	25.7
Stole a personal item from victim	36	11.9	22.8
Body hidden/covered	53	17.5	20.3
Victim was unidentified	55	18.2	18.2
Acquaintance relationship	30	9.9	16.5
The victim was a part of couple	40	13.2	15.5
Victim was a child	43	14.2	15.5
Occurred in victim's residence	45	14.9	.1
Victim was looking for work	31	10.3	15.0
Victim was a live female	43	14.2	14.4
Victim bound	28	9.3	9.8
Occurred in public view	17	5.6	9.1
Anal rape of victim	13	4.3	7.6
Family relationship	13	4.3	7.1
Body transported	14	4.6	5.8
Victim was a prostitute	8	2.6	.2
Face covered post-mortem	11	3.6	4.5
Victim gagged	12	4.0	4.3
Body posed	9	3.0	4.0
Victim wounded post-mortem	7	2.3	3.3
Present relationship	5	1.7	2.7
Victim wounded post-mortem	7	2.3	3.3
Present relationship	5	1.7	2.7
Victim's face covered	6	2.0	2.5
Asphyxiated victim	5	1.7	2.1
Watched couple have sex	5	1.7	1.8
Necrophilic behaviour	3	1.0	1.5
Dismembered victim	3	1.0	1.3
Victim raped with foreign object	2	.7	1.0
Victim blindfolded	1	.3	0.4

location. Furthermore, a body left in the open decomposes faster than a buried one, and in South Africa, predators (such as animals and insects) quickly scavenge a body. Murdering someone in their home (often associated with planning in the US), although not unheard of in South African series, is often not practical because, in informal settlements, many people live in one shack, and these shacks are usually built one on top of another; and in suburbs, people are very security conscious because of the high crime rate, which makes it difficult

to get into someone's home. If a South African serial murderer had to do what US serial murderers do, it would prove foolish and most probably lead to an even speedier arrest.

Offender–victim relationship

Most serial homicides in South Africa involved a stranger relationship. In 73% of the incidents, the victim was a stranger to the offender. This pattern is consistent with US samples (Hickey, 2006; Pakhomou, 2004). Stranger homicides usually involve less of a risk in terms of offenders being identified, whereas other interpretations may centre on the offence being opportunistic.

Race

Seventy-seven per cent of the victims were Black, and 66.7% of the offenders were Black (Table 1). In Western countries, the majority of offenders and victims were White (Kraemer, Wayne, & Heilbrun, 2004; Hickey, 2006; Pakhomou, 2004; Salfati & Bateman, 2005). On the basis of the racial distribution in the South African population, the percentage of Black victims is representative of the general population.³ However, the per cent of Black offenders was slightly underrepresented in terms of the racial distribution of the population. Generally, racial composition of serial homicide offenders reflects that of the population where the homicide takes place (Salfati *et al.*, 2015b)

Variables with the 20–50% range

Many of the behaviours that were within the 20–50% frequency range were related to the offender's approach method, location of the crime, choice of weapon, and theft behaviour (Table 1).

Approach method

All of the approach method variables were within this frequency range. In 47% of the incidents, offenders used the con or lure approach method, 27.1% used the surprise attack, and 25.9% used the blitz attack.

Location

The most common location where the body was found (and often where the victim was killed) was in an isolated location (49.3%). This may indicate either that offenders wanted time alone with the victim or that offenders were cognitively aware and selected these locations in order not to be noticed.

Weapon choice

During the attack, in 30.2% of the incidents, offenders used a firearm, and in 26%, they strangled their victims. In 31.9% of the incidents, the victim had only a single wound, which may be related to both the use of a firearm and strangulation.

Theft and sex

In 41.7% of the incidents, offenders stole an item of value such as money or a cell phone from their victims, and in 22.8%, they stole a personal item such as clothing. Vaginal rape occurred in 40.8% of the incidents.

³Mid-year population estimate 2009. Official Statistics South Africa.

Post-homicide behaviours

In terms of post-mortem behaviours, in 20% of the incidents, offenders hid or covered the victim's body. These precautions may be less important as bodies may go undiscovered for a long period.

Victim types

In terms of victim characteristics, 35.1% of the victims were men. Many earlier studies found that victims of serial homicide were predominantly women (Hickey, 2006; Pakhomou, 2004).

Variables in the 6–19% range

This range of frequencies included variables that occurred in between 6% and 19% of the incidents.

Location

Two of the three location variables were within this frequency range. In 15% of the incidents, the crime occurred in the victim's residence, and in 9%, the crime occurred in public view such as a populated street.

Crime scene behaviours

In terms of crime scene behaviours, in 10% of the incidents, offenders bound their victims. Eight per cent of the victims were anally raped, and this is the only sexual behaviour in this frequency range.

Post-homicide behaviours

In 6% of the incidents, the offender transported the victim's body post-mortem. Of these, 4.1% of victims were dragged or carried from the location of the crime to a nearby body recovery site. It may be that efforts were not required to delay victim identification or that offenders were not able to easily transport of the victim's body. Without regard for the environment, these behaviours could be misinterpreted as a lack of offender awareness about the advantages of using body recovery site different to the murder site. Such an analysis would be lacking as it does not take into account South Africa's natural environment.

Victim types

Most of the vulnerable victim groups were in this range. Eighteen per cent were unidentified victims, 15.5% were children, and 15% were women looking for work. In terms of other victim types, 15.5% of the victims were a part of a couple.⁴ Fourteen per cent were live female victims who were often with a male companion at the time of the offence. In terms of victim-offender relationships, 16.5% were acquaintances, and 7% were family.

⁴In 13% of crime scenes, there were multiple victims; however, victims who ran away or were unharmed were not included in that calculation. The calculation of victims who were a part of a couple is higher because these incidents were included in the calculation.

Variables in the 5–1% range

According to Canter (2000), low-frequency behaviours may include more specialised behaviours or signature behaviours. Salfati (2003) also surmised that low-frequency variables may be related to individual offenders' internal agendas. In serial crime, it may be that with such low frequencies, a behaviour may be occurring in just one or two series, therefore not indicative of a broad type but of specific offenders' actions. The behaviours that occurred in less than 6% of the cases are in Table 1.

Crime scene behaviours

There were some less frequent behaviours that occurred during the crime. In 2% of the incidents, offenders asphyxiated victims. Four per cent of victims were gagged, and less than 1% of victims were blindfolded. A few sexual behaviours occurred within this frequency range. In 2% of the incidents, offenders sexually penetrated their victims with a foreign object, and in 2% of the incidents, the offender watched couples have sex before the attack. Generally, the couples were already in a lover's lane location, and the offender watched them before their initial approach.

Post-homicide behaviour

This range of frequencies included most of the post-mortem behaviours. In 5% of the incidents, the offenders covered the victim's face; in 4%, the victim's body was posed; in 3%, the victim was wounded post-mortem; in 2%, the offender performed necrophilic acts; and in 1%, the victim's body was dismembered.

Victim types

Five per cent of victims were sex workers; this was the only vulnerable victim group in this range of frequencies. In terms of offender–victim relationships, 3% of victims were the offender's significant other.

Summary of the crime scene behaviour frequencies

Many of the high-frequency behaviours when taken together (targeting strangers, the crime occurring outside, and the offender leaving the body where the crime took place) could be interpreted by many Westerners as indicators of opportunistic offending or even a lack of planning. Salfati (2003) interpreted these behaviours as an indication of opportunistic offending, which was relevant to the Western sample that she analysed. However, the high-frequency behaviour of bringing a weapon to the crime scene and in terms of the South African geography, which provides a natural disposal of the body via the environment, makes it difficult to assert that these offenders are typically impulsive, instead a more culturally appropriate interpretation may be that these offenders are using their particular landscape to their advantage.

Aim 1: Can the interpersonal model be used to differentiate South African serial homicide offences?

In order to test if crime scene behaviours could be allocated into separate interpersonal themes of Victim as Person, Vehicle, or Object, 32 variables were assessed. The criteria

were carefully evaluated, and representative variables were selected based upon prior studies (Canter & Heritage, 1990; Canter & Youngs, 2009, 2012; Fritzon & Ridgway, 2001; Salfati & Canter, 1999).

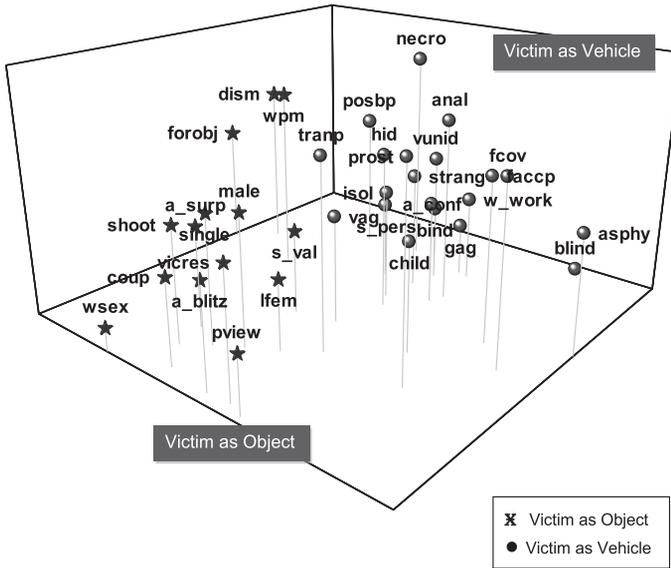
To test the Interpersonal Model, smallest space analysis (SSA) was used. SSA is a non-metric multidimensional scaling procedure based upon the assumption that the underlying structure of a complex behavioural system is most readily appreciated if the relationship between each and every other variable is examined simultaneously (Canter & Heritage, 1990). The procedure involves computing the association coefficients between all variables. These coefficients are used to form a spatial representation of items with points in a geometric space representing variables. The more often the variables co-occur, the closer the points will be located in the SSA space (Salfati & Canter, 1999). Those points that are furthest away are the least likely to co-occur.

There were two primary reasons for using SSA. First, many previous studies examining the role of the victim and the offender–victim interaction have used this procedure (Canter & Heritage, 1990; Fritzon & Ridgway, 2001; Salfati & Canter, 1999). Second, these prior studies determined that SSA is effective at reliably analysing such ‘noisy’ data and revealing themes of behaviour that exist in the data.

Analysing crime scene actions using SSA is built on the assumption that actions with similar underlying themes will be more likely to co-occur in the same region of the plot as opposed to those that indicate different themes (Salfati & Canter, 1999). The variables used consisted of pre-crime interaction variables, behaviours that occurred during crime, post-crime scene actions, and the types of victims selected. If the Interpersonal Model’s thematic structure exists, then there will be identifiable patterns of points on the SSA plot. Further, if there are identifiable themes, then this model may be useful to differentiate South African serial homicide offences.

The closer the rank orders of the original matrix and the SSA solutions, the better the fit of the solution (Santtila *et al.*, 2003). This was assessed using Guttman’s coefficient of alienation, which ranges from 0 (a perfect fit) to 1 with an adequate coefficient of 0.2 (Salfati & Canter, 1999). The SSA shown in Figure 1 has a coefficient of alienation of 0.14 in 51 iterations, indicating an excellent fit for the data.

Based upon an examination of the associations amongst variables represented in the SSA shown in Figure 1, there were two clearly defined regions with different styles of offender behavioural action towards the victim; Victim as Object and Victim as Vehicle. The Victim as Person theme did not emerge. This may be due to a lack of crime scene information available in homicides as compared with rapes, or it may be that serial homicide offenders in this sample did not engage in pseudo-intimate encounters with their victims. Instead, the behaviours originally included in the analysis to help differentiate this type from the other two were seen to co-occur with behaviours from either the Victim as Object or Victim as Vehicle themes (Table 2). Stealing a personal item, vaginally raping the victim, and concealing the victim’s body were behaviours that occurred within the Victim as Vehicle theme. When looked at in this context, the behaviours were re-interpreted as focused on the victim, but in light of the overall theme that involved conning the victim and power and control over them victim, these variables appear to be part of intensive interaction that does not involve a pseudo-intimate encounter. The crime scene including live victim and the attack occurring at home occurred in the Victim as Object theme. The live victims were often women and many times were a part of a couple where the male victim was killed. These behaviours, within this context, may be re-interpreted as taking status from the male victim furthering his



Jaccard's coefficient of Alienation=.14 in 51 iterations
 Note: Full variable names for crime scene behavior abbreviations can be found in Table 2

Figure 1. Smallest space analysis of serial homicide crime scene.

Table 2. Crime scene behaviours and victim characteristics by theme

Victim as Object		Victim as Vehicle	
Approached surprise	(a_surp)	Approached con/lure	(a_con)
Approached blitz	(a_blitz)	Body in isolated location	(isol)
Victim in his/her residence	(vicres)	Bound	(bind)
Occurred in public view	(pview)	Gagged	(gag)
Firearm	(shoot)	Blindfolded	(blind)
Single wound	(single)	Strangulated	(strang)
Foreign object	(forobj)	Asphyxiated	(asphy)
Stole (item of value)	(s_val)	Vaginal sex	(vag)
Watched couple have sex	(wsex)	Anal sex	(anal)
Wounded post-mortem	(wpm)	Stole (personal item)	(s_pers)
Dismembered	(dism)	Covered victim's face	(fcov)
Victim male	(male)	Hid/covered victim's body	(hid)
Victim apart of a couple	(coup)	Posed victim's body	(posbp)
Victim live female	(lfem)	Transported victim's body	(tramp)
		Necrophilic acts	(necro)
		Face covered post-mortem	(faccp)
		Victim woman seek work	(w_work)
		Victim prostitute	(prost)
		Victim unidentified	(vunid)
		Victim child (16 or less)	(child)

dehumanisation. The attacks occurring indoors may have different meaning in this non-Western context and may be akin to an outdoor attack as these incidents often occurred in makeshift houses.

The function of the Victim as Object

Pre-crime interaction

This section outlines the behaviours carried out before the attack began. When the role of the victim is an object, the offender generally did not spend time with the victim pre-crime, but rather, the victim was murdered suddenly or unexpectedly, that is, a *surprise* or *blitz attack*. The attack often occurred in *public view* or in, some cases, the *victim's home* (which was sometimes a shack or hut and in these cases more akin to an attack in public). These variables may indicate that the offender did not plan to spend a long period with the victim.

During crime

The offenders' actions during the attack were often characterised by a *single wound*, and the weapon of choice was sometimes a *firearm*, which requires little interaction between the offender and the victim and may be the more 'impersonal' method of killing. Further, much like the instrumental opportunistic crime scene outlined by Salfati and Canter (1999), the victim was typically viewed as secondary to other purposes such as theft as seen in the variable *taking an item of monetary value*. A less frequent sexual behaviour within this theme was *penetration with a foreign object*, which has been described as the offender psychologically distancing himself from the victim (Salfati, 2000).

Victims targeted

At times, the types of victims targeted within this theme were live female and male victims, and they were sometimes a couple. In some cases, the offender would rapidly kill the male victim, and partake in no further actions with him, and then spend substantially more lengthy time with the female victim, rape her, and in some cases, leave her alive. In addition, there were cases in a series of murder, where the woman was alone and raped but not killed. As previously discussed, the attack of *couples* may be interpreted as a distorted form of male offenders seeking to take the status of male victims by stealing both items of monetary value and the victim's 'woman'. In addition, there were instances where the offender went to a lover's lane location and *watched the couple have sex* prior to initiating the attack. Subsequently, the offender would often kill the male victim and rape the female victim. Generally, from the examination of the case materials, it appeared that the *male* victim had no personal or representational significance to the offender other than his removal, signifying different types of gain, that is, theft of items or persons.

Post-mortem

After the victim was killed, the victim was in some incidents depersonalised post-mortem through *dismemberment* and *post-mortem wounding*.

Summary: Victim as Object

Overall, this theme was characterised by little interaction between the victim and the offender pre-crime or during crime, which may indicate depersonalisation. Crime scene behaviours were often centred on more tangible instrumental gain such as money or possibly status.

The function of the Victim as Vehicle

Pre-crime interaction

The interaction before the crime often involved the offender *luring* their victims using a *con* or ruse. This offending style not only involved extensive grooming of the victim pre-crime that requires a level of social adeptness but also generally entailed taking the victim to an *isolated location*, perhaps to spend a period alone with the victim.

During crime

The crime itself often took place at an isolated space, and sometimes, the offender *gagged*, *bound*, and/or *blindfolded* the victim possibly as a means of control (Canter & Heritage, 1990), and also, this may have indicated an intention of keeping the victim alive for awhile. The typical methods of attack in this theme were *strangulation* and more rarely *asphyxiation*, which may further indicate elements of control and domination and may be deemed more 'personal' methods of killing the victim. In terms of overt sexual behaviour, *vaginal* and/or sometimes *anal penetration* was present, and these behaviours involve more extensive interaction with the victim. These offenders were also likely to *take personal items* from the victim such as clothing as opposed to items of monetary value such as money or a cell phone. This may indicate that these offenders were focused on what the victim represented and/or they may take these items as a souvenir or trophy in order to recall the crime and/or the victim.

Victims targeted

All of these types of victims within this theme were vulnerable, and they may be more easily targeted and controlled. These victims may have been targeted because of their being identified as a part of a particular victim group. The types of victims targeted within the Victim as Vehicle theme were *women looking for work*, *unidentified victims*, and also *children* and *prostitutes*. Most of these victims were lured with some types of *con* approach. *Women looking for work* and *prostitutes* can more easily be lured away with a promise of employment, and children may be more easily lured away because of their naiveté. Further, *unidentified victims* and *prostitutes* may not be noticed as missing because of their marginalised status. This theme involved the selection of victim types who were vulnerable and/or marginalised.

Post-mortem

The post-mortem behaviours included *covering the face* or *body* of the victim, which could be to conceal the crime or have been thought to represent guilt or undoing (Salfati, 2000). Although in a low-frequency behaviour, *transporting* the victim's body to another location was within this theme. Further, this theme included other low-frequency post-mortem behaviours related to *necrophilic acts* and *positioning the victim's body* that may centre on controlling the victim's body even after death.

Summary of Victim as Vehicle

In summary, this theme was characterised by contact with victims pre-crime and whilst the victim was alive. The focus was on power and control with instrumental gains obtained through extensive interaction with easy-to-control victims.

Summary: the Victim as Object/Vehicle dichotomy

The Interpersonal Model, with the Victim as Person, Object, and Vehicle crime scene themes, did not appear to be applicable to South African serial homicide offending. Without the Victim as Person theme, one third of the model was not present, which alters the Interpersonal Model to a degree that the resultant model is an altogether distinct typology. South African offenders did not seem to try to humanise their victims or attempt pseudo-intimacy (Victim as Person). Instead, the function of the victim for both types of crime scenes was instrumental in nature, but there were different interaction pathways, and the actors or victims had very different roles.

Aim 2: classifying offences

To test this framework of homicide crime scene behaviours, each of the 302 crime scenes were individually examined to determine if they could be assigned to a dominant crime scene theme based upon variables that occurred during the incident. Every homicide offence was given a score indicating the number of Victim as Object and Victim as Vehicle crime scene variables that occurred during the incident. A stringent criterion was used for assigning a crime to one of the respective themes, which was that the per cent in one theme had to be twice the amount in the other theme (Salfati, 2000; Salfati & Bateman, 2005; Trojan & Salfati, 2009).

Using this criterion, a total of 85.7% (259/302) could be classified as predominantly belonging to either Victim as Object or Victim as Vehicle crime scene themes. As compared with previous tests of both single and serial homicide classification systems (Salfati, 2000; Salfati & Bateman, 2005), this overall percentage showed a greater ability to classify offences. This indicates that the themes shown in Figures 1 are an excellent representation of behavioural themes of serial homicide in South Africa.

Of the total sample, 44% (133/302) of the incidents were classified as Victim as Object and 41.7% (126/302) of the incidents were within the Victim as Vehicle theme (Figure 1). Only 13.9% (42/302) were mixed, and 3.3% (1/302) were not in either theme. The classified serial homicide offences show a similar percentage of Victim as Object/Victim as Vehicle themes, indicating that one theme is not much more prevalent in South African serial homicide incidents. The Victim as Object/Vehicle dichotomy can be a useful classification system to identify types of serial homicide offending in South Africa.

Summary of classification

The Victim as Object/Vehicle dichotomy can be seen as a useful classification to assess types of serial homicide offending in South Africa. The specific victim types were differentially associated with crime scene themes. In the Victim as Vehicle theme, the vulnerable victims described by Egger (2002) and Karmen (1983) were targeted. These victims may have been easier to procure and control and therefore were the likely targets in a theme centred on extensive interaction and power and control. When couples were attacked in South Africa, the male victims did not appear to have much symbolic significance other than their removal, providing ulterior gains such as the taking of items or persons. Live victims within the Victim as Object theme were unexpected and must be explored more thoroughly. How the offender chose to interact with his victim and the type of victim selected appeared to be an effective means of differentiating offence themes. It may be inferred that the

type of victim selected influenced the offender–victim interaction. These two interaction pathways centred on different types of instrumental gains with victims having distinct roles. These findings indicate a need to more thoroughly explore the relationship between victim types targeted and crime scene themes in South Africa.

DISCUSSION AND FUTURE RESEARCH

South African serial homicide offenders did not appear to have pseudo-intimate encounters with their victims, which is counter to the other study testing the Interpersonal Model on serial homicide offenders (discussed in the paper of Canter & Youngs, 2009, 2012). The utility of this study is unknown as the authors did not show per cent classification. However, this distinction may be due to cross-national differences in offending patterns or nuances in interpretation (without per cent classifications, it is difficult to compare). Further, the study of Salfati and Bateman (2005) on serial homicide offenders found that the Instrumental/Expressive dichotomy aligns with the Interpersonal Model as Victim as Object/Victim as Person, respectively. This same pattern has been found in single homicides (Salfati & Canter, 1999). These studies using different Western samples did show support for the Victim as Person theme, which may indicate cross-national distinctions in offending styles, with South African offenders using victims for different kinds of gains.

The Victim as Object/Vehicle dichotomy showed clear distinctions in thematic patterns focused on the function of the victim to the offender illustrating different instrumental gains. The idea that serial homicide offenders are primarily instrumental and generally do not view their victims as persons is further supported in the study of Trojan and Salfati (2011) on single versus serial homicide.

Victim types were integral to the Victim as Object/Vehicle dichotomy. Victim types appeared to be related to the function of the victim to the offender showing separate types of instrumental gains. These distinctions influenced the quality of the interaction and the amount of time spent with victims. Including victim types in classification systems along with crime scene behaviours may allow for a more layered interpretation as the other party in the interaction is accounted for within the theme. This supports the idea that violent crime may be thought of as a social exchange (Luckenbill, 1977; Salfati & Canter, 1999; Silverman & Mukherjee, 1987) and that an important feature of encoding interpersonal situations, even in more violent exchanges, is the type of person involved in the interaction (Mischel & Shoda, 1995).

The model included both live victims, that is, rapes and attempted homicides within the serial homicide series. Studies on serial crime have primarily been offence specific, that is, other violent crimes within the series have been excluded. Although attempted homicide, rape, and homicide are distinguished by legal definitions and crime seriousness, there has been little research exploring whether they have psychological similarities and hence can be classified using the same typology (Salfati, 2008), with the exceptions of the paper of Canter and Youngs (2012) and Salfati and Taylor (2006). The inclusion of live victims was not directly tested in this study;⁵ however, this all inclusive model indicates that it may

⁵This is however dealt with in another paper in the current special issue that specifically looks at the consistency of victim targeting and actions engaged in at the crime scene, across an offender's series (Salfati, Horning, Sorochinski, & Labuschagne, 2015a).

be possible to include violent offences with victims within the serial homicide series. This is supported theoretically with the idea that essential features of series may be lost by eliminating these types of crimes within the series (Salfati, 2008).

The element of multiple victims, for example, couples being attacked should be explored more in depth. It should be determined if multiple victims during one incident within the series events should be included in the analysis with single victim incidents in the series. The question remains as to whether attacking multiple victims and single victims within the serial homicide series are fundamentally similar incidents (Horning & Salfati, 2008).

The Victim as Object/Vehicle dichotomy should be tested within other cultural contexts in other countries in order to determine its flexibility in classifying serial homicide offences in general. Socio-cultural factors should be accounted for if this model is tested in other contexts. Future replication studies may determine if this model is stable across nations or whether it is specifically relevant to serial homicide offenders in South Africa. In order for this model to be of utility in narrowing down the more likely suspect, the type of offender associated within the respective themes should be explored.

Linkage analysis or linking multiple crimes to one offender is important and requires the identification of repeated behaviour(s) across the series (Labuschagne, 2010). The next step in testing the Victim Object/Vehicle dichotomy within the South African context is to examine whether offenders behave thematically consistent across the series.⁶ This type of analysis provides essential information about the utility of this model in linking a series of crimes to one offender, without establishing adequate levels of behavioural consistency, serial classification systems have little practical use.

Lastly, many answered questions, such as understanding the complexity of victim types and interaction patterns, and how incidents with live victims and multiple victims emerge and are situated in the serial homicide series, and whether offenders perceive victim types including live and multiple victim within their series, should be explored in future studies, and it may be highly beneficial to include offender interviews in these analyses.

ACKNOWLEDGEMENTS

The authors would like to thank members of the Investigative Psychology Section of the Forensic Services Division of the South African Police Service. The authors would also like to thank the following funding agencies for their support for this project: awards were received from the Forensic Psychology Research Institute (FPRI) at John Jay College of Criminal Justice, City University of New York (CUNY); the Office for the Advancement of Research and the Department of Psychology at John Jay College of Criminal Justice City University of New York (CUNY); and the PSC-CUNY, jointly funded by The Professional Staff Congress and The City University of New York (CUNY).

REFERENCES

- Barth, F. (2002). Toward a richer description and analysis of cultural description. In R. G. Fox, & B. J. King (Eds.), *Anthropology beyond culture* (pp. 23–36). Oxford: Berg.
- Canter, D. (2000). *Criminal shadows*. Irving, TX: Authorlink Press.

⁶This analysis was carried out in a paper within this special issue (Salfati *et al.*, 2015a).

- Canter, D., & Ioannou, M. (2004). A multivariate model of stalking behaviours. *Behaviormetrika*, 31(2), 113–130.
- Canter, D., & Youngs, D. (2009). *Investigative psychology: Offender profiling and the analysis of criminal action*. Chichester: Wiley.
- Canter, D., & Youngs, D. (2012). Sexual and violent offenders' victim role assignments: A general model of offending style. *The Journal of Forensic Psychiatry & Psychology*, 23(3), 297–326.
- Canter, D. V., Alison, L. J., Alison, E., & Wentink, N. (2004). The organized/disorganized typology of serial murder: Myth or model? *Psychology, Public Policy, & Law*, 10, 293–320.
- Canter, D. V., & Heritage, R. (1990). A multivariate model of sexual offence behavior: Developments in offender profiling. *Journal of Forensic Psychiatry*, 1, 185–212.
- Canter, D. V., & Wentink, N. (2004). An empirical test of Holmes and Holmes' serial murder typology. *Criminal Justice & Behavior*, 31, 489–515.
- Egger, S. (2002). *The killers among us: An examination of serial murder and its investigation* (2nd ed.). Englewood Cliffs, NJ: Prentice-Hall.
- Feshbach, S. (1964). The function of aggression and the regulation of aggressive drive. *Psychological Review*, 71, 257–272.
- Fourie, R. (2004). South Africa. In K. Malley-Morrison (Ed.), *International perspectives on family violence and abuse* (pp. 245–261). London: Lawrence Erlbaum Associates.
- Fritzon, K., & Ridgway, J. (2001). Near-death experience: The role of victim reaction in attempted homicide. *Journal of Interpersonal Violence*, 16(7), 679–696.
- Goffman, E. (1959). *The presentation of self in everyday life*. New York: Random House.
- Goffman, E. (1967). *Interaction ritual: Essays on face-to-face behavior*. New York: Pantheon Books.
- Harbort, S., & Mokros, A. (2001). Serial murderers in Germany from 1945–1995. *Homicide Studies*, 5(4), 311–334.
- Heft, H. (2007). The social constitution of perceiver-environment reciprocity. *Ecological Psychology*, 19(2), 85–105.
- Hickey, E. (2006). *Serial murderers and their victims*. Toronto: Wadsworth Group.
- Hodgskiss, B. (2004). Lessons from serial murder in South Africa. *Journal of Investigative Psychology and Offender Profiling*, 1, 67–94.
- Horning, A., & Salfati, C. G. (2008). Theoretical issues in serial homicide: Multiple and live victims. In K. Vogt, K. Gruenberg, & M. Sorochinski (Eds.), *Homicide: A focus on the offender*. Proceedings of the 2008 Meeting of the Homicide Research Working Group. Chicago, IL: Homicide Research Working Group.
- Huesmann, L. R., & Eron, L. D. (1989). Individual differences and the trait of aggression. *European Journal of Personality*, 3, 95–106.
- Karmen, A. (1983). Deviants as victims. In D. E. MacNamara, & A. Karmen (Eds.), *Deviants: Victims or victimized?* (pp. 237–254). Beverly Hills, CA: Sage.
- Kraemer, G. W., Wayne, D. L., & Heilbrun, K. (2004). Comparing single and serial homicide offenses. *Behavioral Sciences & the Law*, 22, 325–343.
- Labuschagne, G. N. (2010). The use of linkage analysis as an investigative tool and evidential material in serial offences. In K. Borgeson, & K. Kuehnle (Eds.), *Serial offenders in theory and practice*. Sudbury, MA: Jones & Bartlett Press.
- Luckenbill, D. (1977). Criminal homicide as a situated transaction. *Social Problems*, 25(2), 176–186.
- Megargee, E. I. (1966). Undercontrolled and overcontrolled personality types in extreme antisocial aggression. *Psychological Monographs: General and Applied*, 80(3), 1–29.
- Messerschmidt, J. W. (1993). *Masculinities and crime*. Maryland: Rowman & Lillianfield Publishers.
- Mischel, W., & Shoda, Y. (1995). A cognitive-affective system theory of personality: Reconceptualizing situations, dispositions, dynamics and invariance in personality structure. *Psychological Review*, 102, 246–268.
- Morton, R. J., & Hilts, M. A. (2005). Serial murder: Multi-disciplinary perspectives for investigators. Symposium presented by the National Center for the Analysis of Violent Crime (NCAVC), San Antonio, TX.
- Outwater, A., Abrahams, N., & Campbell, J. C. (2005). Women in South Africa: Intentional violence and HIV/AIDS: Intersections and prevention. *Journal of Black Studies*, 35(4), 135–154.
- Pakhomou, S. (2004). Serial killers: Offender's relationship to the victim and selected demographics. *International Journal of Police Science and Management*, 6(4), 219–233.

- Pistorius, M. (2002). *Strangers on the street: Serial homicide in South Africa*. Johannesburg: Penguin.
- Russell, D. E. H. (2001). AIDS as mass femicide focus on South Africa. In D. E. H. Russell, & R. A. Harnes (Eds.), *Femicide in global perspective* (pp. 100–111). New York: Teachers College, Columbia University.
- Salfati, C. G. (2000). The nature of expressiveness and instrumentality in homicide: Implications for offender profiling. *Homicide Studies*, 4(3), 265–293.
- Salfati, C. G. (2003). Offender interaction with victims in homicide: A multidimensional analysis of frequencies in crime scene behaviors. *Journal of Interpersonal Violence*, 18, 490–512.
- Salfati, C. G. (2008). Linking serial crimes. In Julia Fossi, & Louise Falshaw (Eds.), *Issues in forensic psychology*, Volume 8. Leicester, UK: British Psychological Society, Division of Forensic Psychology Publications.
- Salfati, C. G. (2009). Prostitute homicide: An overview of the literature and comparison to sexual and non-sexual female victim homicide. In D. Canter, M. Ioannou, & D. Youngs (Eds.), *Street prostitution*. Aldershot: Ashgate.
- Salfati, C. G., & Bateman, A. (2005). Serial homicide: An investigation of behavioral consistency. *Journal of Investigative Psychology and Offender Profiling*, 2(2), 121–144.
- Salfati, C. G., & Canter, D. V. (1999). Differentiating stranger murders: Profiling offender characteristics from behavioral styles. *Behavioral Sciences and the Law*, 17, 391–406.
- Salfati, C. G., & Dupont, F. (2006). Canadian homicide: An investigation of crime scene actions. *Homicide Studies*, 10, 118–139.
- Salfati, C. G., & Haratsis, E. (2001). A behavioral examination of offender crime-scene actions. *Homicide Studies*, 5, 335–362.
- Salfati, C. G., Horning, A. M., Sorochinski, M., & Labuschagne, G. N. (2015a). South African serial homicide: Consistency in victim types and crime scene actions across series. *Journal of Investigative Psychology and Offender Profiling*. DOI: 10.1002/jip.1428
- Salfati, C. G., Labuschagne, G. N., Horning, A. M., Sorochinski, M., & De Wet, J. (2015b). South African serial homicide: Offender and victim demographics and crime scene actions. *Journal of Investigative Psychology and Offender Profiling*. DOI: 10.1002/jip.1425
- Salfati, C. G., & Park, J. (2007). An analysis of Korean homicide crime scene-actions. *Journal of Interpersonal Violence*, 22(11), 1448–1470.
- Salfati, C. G., & Taylor, P. (2006). Differentiating sexual violence: A comparison of sexual homicide and rape. *Psychology Crime and Law*, 12(2), 107–126.
- Santtila, P., Häkkinen, H., Canter, D., & Elfgrén, T. (2003). Classifying homicide offenders and predicting their characteristics from crime scene behaviour. *Scandinavian Journal of Psychology*, 44, 107–118.
- Santilla, P., Pakkanen, T., Zappala, A., Bosco, D., Valkama, M., & Mokros, A. (2008). Behavioral crime linking in serial homicide. *Psychology Crime and Law*, 14(3), 245–265.
- SAPS: Crime Information Analysis Centre website. (2002). Retrieved June 25, 2010, from <http://www.saps.gov.za/statistics/reports/crimestats/2009/categories.htm>
- Silverman, R., & Mukherjee, S. (1987). Intimate homicide: An analysis of violent social relationships. *Behavioural Science and the Law*, 5, 37–47.
- Sorochinski, M., & Salfati, C. G. (2010). The consistency of inconsistency in serial homicide: Patterns of behavioral change across series. *Journal of Investigative Psychology and Offender Profiling*, 7, 109–136.
- Toch, H. (1969). *Violent men: An inquiry into the psychology of violence*. Chicago: Aldine.
- Trojan, C., & Salfati, C. G. (2009). Methodological considerations of determining dominance in multi-dimensional analyses of crime scene behaviors and offender characteristics. Special issue: Debates and critiques within investigative psychology (D. V. Canter, Ed.). *Journal of Investigative Psychology and Offender Profiling*, 5(3), 125–146.
- Trojan, C., & Salfati, C. G. (2011). Linking criminal history to crime scene behavior in single-victim and serial homicide: Implications for offender profiling. *Homicide Studies*, 15(3), 3–31.
- United Nations, Office on Drugs and Crime. (2003). In G. Newman (Ed.), *Global report on crime and justice*. New York: Oxford University Press.
- Zillman, D. (1979). *Hostility and aggression*. Hillsdale, N.J.: Erlbaum.