Instrumental and Expressive Violence in Belgian Homicide Perpetrators

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Abstract

The present study aimed to examine offender types in a sample of Belgian single-perpetrator/single-victim homicide cases. First, it was investigated if the distinction between instrumental and expressive aggression could be documented in crime scene and offender background characteristics. Second, the instrumental and expressive themes from the first analysis were examined in relation to the motives the perpetrators themselves provided for their offence. A sample of 97 solved homicide cases was analysed using the non-metric multidimensional scaling procedure Proxscal. The results revealed that 62% of the homicide crime scenes and 67% of the offender backgrounds could be classified as either expressive or instrumental. The self-reported motives did not correspond with the themes according to the Proxscal analysis. Copyright © 2010 John Wiley & Sons, Ltd.

Key words: offender profiling; instrumental and expressive violence; homicide

INTRODUCTION

Investigative inferencing involves the process of predicting offender characteristics based on crime scene evidence (Alison, Bennell, Mokros, & Ormerod, 2002; Goodwill & Alison, 2007). This process may help investigators to narrow down the pool of suspects (Crabbé, Decoene, & Vertommen, 2008; Salfati & Canter, 1999; Woodhams & Toye, 2007). Investigative inferencing is based on two basic assumptions: the homology assumption and the consistency assumption. The homology assumption states that there is a relationship between characteristics of the offender and his or her crime scene behaviour. This implies that offenders with similar background characteristics will demonstrate similar crime

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scene actions (Goodwill & Alison, 2007; Mokros & Alison, 2002; Petee & Jarvis, 2000; Woodhams & Toye, 2007). The consistency assumption suggests that offenders are consistent in their criminal behaviour across crimes (Goodwill & Alison, 2007; Woodhams & Toye, 2007).

The homology assumption has been criticised. Several studies failed to find support for this assumption (Mokros & Alison, 2002; Woodhams & Toye, 2007). Alison and colleagues (2002), for example, consider the homology assumption too simplistic. They argue that person × situation interactions influence actual offence behaviour. This implies that no offender could be distinguished from another offender on the basis of his or her behaviour. However, Fritzon and Ridgway (2001) examined the effect of victim resistance, a situational component, in attempted homicide and found that offenders did not change their behaviour (e.g. increase or decrease level of violence) in response to a resisting victim. The consistency assumption has received more support (Salfati & Bateman, 2005; Woodhams & Toye, 2007). This assumption is especially relevant when linking potentially related crimes. However, according to Canter and Youngs (2009), the homology and consistency principles are not essential for deriving inferences from crime scene behaviours. Of course, if the offender has a distinct style of offending, which is consistent over offences, it can make matters easier. On the other hand, if an offender is completely consistent, but the actions are very common among offenders, it will not help in selecting an offender from a pool of possible suspects (Canter & Youngs, 2009).

Several studies have related offender characteristics to particular types of offence behaviour using inductive research strategies in the context of arson, homicide, burglary, and rape (Bijleveld & Smit, 2006; Canter, Alison, Alison, & Wentink, 2004; Canter & Heritage, 1990; Davies, Wittebrood, & Jackson, 1997; Goodwill & Alison, 2006, 2007; Kocsis, Cooksey, & Irwin, 2002a, 2002b; Salfati, 2003). Many of these studies used the instrumental and reactive–expressive dichotomy to distinguish between types of aggressive behaviours/offenders (Canter & Fritzon, 1998; Last & Fritzon, 2005; Salfati, 2000; Salfati & Bateman, 2005; Salfati & Canter, 1999; Salfati & Dupont, 2006; Salfati & Haratsis, 2001; Santtila, Canter, Elfgren, & Häkkänen, 2001; Santtila, Häkkänen, Canter, & Elfgren, 2003). This distinction was first proposed by Feshbach (1964). Reactive–expressive aggression occurs in the context of an emotional response to frustration or ego threats, such as insult or personal failure. The goal of the aggression is to injure or harm the victim. Instrumental aggression occurs when the offender aims to achieve a goal (e.g. money, personal belongings, sex, territory), and uses aggression as a means to this end. Generally, there is no intention to harm anyone, although the victim is used to obtain the desired object and may be harmed in the course of this. Actual crimes may be a combination of expressive and instrumental aggression: for instance, when a bank robber, who is obviously after the cashier's money, may become angry at the cashier when he/she refuses to give the money (quickly).

Previous studies found the expressive–instrumental dichotomy useful in classifying British, Finnish, Greek, and Canadian homicides (Salfati & Canter, 1999; Salfati & Dupont, 2006; Salfati & Haratsis, 2001; Santtila *et al.*, 2001). The aim of the present study is twofold. First, we aim to investigate if a distinction can be made between instrumental and expressive aggression in the crime scene characteristics and the offender background of Belgian homicide cases in order to replicate the findings of these previous studies. The second aim is to examine if the themes found for the offenders from the first analysis are similar to the motives the offenders themselves provided.

METHOD

Sample

The offenders in this sample ($N = 97$) were predominantly male (99%). The offender age range was between 18 and 57, with a mean age of 30 years. Most of the victims were female (76%) and their age range was between 0 and 86 years with a mean age of 39.7, while the male victims (24%) had an age range between 1.5 and 78 years, with a mean age of 36.6. The ages of four male and three female victims were unknown. A quarter (25%) of the offenders had the same sex as their victim. All offenders were convicted: 42% for murder, 39% for manslaughter, 13% for robbery with murder, and 6% had other convictions.

Procedure

The data of the present study were collected by Mr. J. Mulkers, a Belgian criminologist, for his study on offender profiling. A part of the files used in the present study were described in the books '*Daders van dodingen deel I en II*' ['*Perpetrators of homicides part I and II*'] (1990), written by Professor De Waele. De Waele (1990) did an elaborate study within the Belgian Penitentiary Observation Center on 'criminogenesis'. He examined the personality of the offender and his socio-cultural background. Mulkers went to the archives of De Waele in the prison of Saint-Gilles to obtain additional information on the homicide cases. He arrived at a sample of 145 homicides that occurred between 1935 and 1983, of which 98% was male. For the present study, only the single-offender, single-victim cases were selected, leaving a final sample of 97 homicides.

Crime scene demographics

Most of the victims were found at the scene of death (91%). In 47% of the cases, death occurred when it was dark, 46% of the cases occurred during daylight, and 7% during dusk. Sixty-two per cent of the victims were found in their own residence and 30% in the residence of the offender. In 25 (26%) cases, residence of the victim was also residence of the offender.

Offender demographics

The majority of the offenders (86%) knew the victim to some extent. In 29% of the cases, the offender was the partner of the victim, and in 6% of the cases, they were ex-partners. Half of the offenders (50%) were married at the time of the crime. Thirty-one (32%) of the offenders were unemployed at the time of the crime. Almost all of the offenders had the Belgian nationality (97%), except for one person of Dutch and one of Ukrainian nationality.

Statistical analyses

To examine if a distinction can be made between instrumental and expressive aggression, a non-metric multidimensional scaling analysis, named Proxscal, was performed. Proxscal is available in SPSS version 15.0 (SPSS Inc., Chicago. IL, USA). This analysis is similar

to the Smallest Space Analysis used by Salfati and Canter (1999), Salfati and Dupont (2006), Salfati and Haratsis (2001), and Santilla *et al*. (2001). These studies were used as comparisons because they also used single-offender, single-victim homicide samples. The analyses were performed using Jaccard's similarity parameter (Borg & Groenen, 2005). It computes the proportion of variables that co-occur. It represents the correlations between variables as distances in a statistically derived geometric space. The closer two variables are in the Proxscal plot, the more highly correlated these variables are (Canter & Heritage, 1990). The fit of the plot will be indicated by the Tucker's Coefficient of Congruence. According to Lorenzo-Seva and ten Berge (2006), a value in the range of 0.85–0.94 indicates a fair similarity and a value higher than 0.95 indicates that the factors have a good similarity and can be considered equal.

The variables used for the present analysis were based on the variables used in the study by Salfati (2000). The exact same variables could not be included, since not all variables could be derived from the available file information. Therefore, as many equivalent variables as possible were selected. To ensure the comparability of our findings with previous studies (i.e. Salfati, 2000; Salfati & Canter, 1999; Salfati & Dupont, 2006; Salfati & Haratsis, 2001; Santtila *et al.*, 2001), many of the variables in the original database were recoded to correspond more closely to the variables used in these studies.

To compare the themes derived from the Proxscal analysis and the self-reported motives, the latter were categorised as either 'expressive' or 'instrumental' based on what was reported in the original database. Offenders were classified as expressive when according to the file information, they committed the crime out of revenge, jealousy, fear, anger, or when the victim was blackmailing the offender. Offenders were classified as instrumental when they committed the crime out of lust (sadism), to prevent recognition, to avoid detection of another crime, to obtain sexual contact or financial benefit, or to simplify robbery. All self-reported motives were collected before conviction. The Kappa coefficient was used to estimate the agreement between the motives according to the offenders and the themes obtained from the Proxscal analyses.

RESULTS

Comparing samples of homicide typology studies

For purpose of comparison, the sample characteristics of the present study are summarised in Table 1, together with the characteristics of the samples in four previous studies of homicide perpetrator typologies. This comparison will assist in the interpretation of the results of the subsequent Proxscal analyses, when we compare these with previous homicide typology studies.

From the table, it is apparent that in the present study, 99% of the offenders are male, while only 70% were male in the study of Salfati and Canter (1999). The studies of Salfati and Dupont (2006), Salfati and Haratsis (2001), and Santilla *et al*. (2001), are in between, with 87% and 90% male offenders. The age ranges of the offenders are approximately the same in the studies, with the study of Salfati and Haratsis (2001) having some elderly offenders. The present study together with Salfati and Dupont (2006) have the highest percentage of offenders who knew their victim to some extent (86% and 87%, respectively). However, in the other studies, this percentage is also high. There is quite a difference in percentages of previous convictions; 76% in the present study and 67% in the study of Salfati and Dupont (2006) compared to 40% and 51% in the studies of Salfati

Table 1.   Sample characteristics of present study and four previous studies of homicide perpetrators

	Present study	Salfati & Canter (1999)	Santilla *et al.* (2001)	Salfati & Haratsis (2001)	Salfati & Dupont (2006)
Offender demographics					
Offender is male	99%	72%	90%	90%	87%
Offender is female	1%	28%	10%	10%	13%
Age range male	18–57				18–63
Mean age male	30		37		34
Age range female	18–18				21–65
Mean age female	18		33		39
Age range whole sample	18–57	15–49		15–80	
Mean age whole sample	30	27		33	
Offender knows victim to some extent	86%	74%		67%	87%
Previous convictions	76%	40%		51%	67%
Unemployed	34%	41%		71%	68%
Has a partner	50%			29%	20%
Victim demographics					
Victim is male	34%	45%	71%	72%	73%
Victim is female	76%	55%	29%	28%	27%
Age range male	1.5–78				5–90
Mean age male	37		42		44
Age range female	0–86				0–95
Mean age female	40		40		30
Age range together	0–86	1–70		0–87	
Mean age together	39	45		42	
Crime scene characteristics					
Offence during night	47%			80%	69%
Offence during daylight	46%			20%	
Offence during evening	7%	66%			
Offence took place inside				80%	
Offence took place outside	22%	44%			16%
Victim found in own home	62%	44%			59%
No forensic awareness				64%	84%
Victim removed from original crime scene				35%	
Victim found at scene of death	91%	76%	91%		93%
Sexually motivated			3%	30%	7%
Country of cases	Belgium	Great Britain	Finland	Greece	Canada

and Canter (1999) and Salfati and Haratsis (2001), respectively. The most striking difference is seen in the gender of the victims. Seventy-four per cent of the victims in the present study are female. This is much higher in comparison to the other studies in Table 1, especially the studies of Salfati and Dupont (2006), Salfati and Haratsis (2001), and Santilla *et al*. (2001). The age ranges of the victims are approximately the same across the studies. It also seems that there is a difference in which part of the day the offence took place. In the present study, there is no difference if the offence occurred during night or during daylight. The percentages are equally divided (47% and 46%), whereas 80% and 69% of the offences in the study of Salfati and Dupont (2006) and Salfati and Haratsis (2001), respectively, occurred during the night. Furthermore, most of the victims in the present study were found in their own home (62%) and almost all victims were found at the scene of death (91%). These percentages are comparable to those found in the study of Salfati and Dupont (2006), but higher than the percentages of Salfati and Canter (1999).

Crime scene behaviours

A total of 29 crime scene behaviours were selected for analysis. The results show that Tucker's Coefficient of Congruence for the crime scene behaviours is 0.97, which suggests a high goodness of fit. Figure 1 shows the distribution of the crime scene behaviours for the 97 homicide cases. Visual examination of the plot confirmed that the sample of homicide crime scenes could be differentiated in terms of expressive and instrumental aggression. Behaviours that co-occur at the bottom of the plot reflect an expressive theme, and behaviours at the top of the plot reflect an instrumental theme. Based on this examination, a linear division was drawn onto the plot to reflect this thematic difference (see Figure 1). All variables together with their definitions are presented in the Appendix.

A number of behaviours occurred in the majority (50% and above) of the cases. These behaviours included the victim being found at the same crime scene where she had been killed (91%), the offender inflicting injury to the neck of the victim (59%), the offender inflicting injury to the torso of the victim (63%), and the offender inflicting multiple wounds to the victim (61%). These behaviours could not be used to discriminate between cases.

Expressive crime scene behaviours

The behaviours at the scene of expressive crimes are shown in Table 2.

Using a weapon from the scene and leaving it behind at the crime scene suggests an unplanned act. Furthermore, the victim sustained injuries (through stabbing or shooting) to the limbs, face, and/or head, suggesting an extreme physical attack. In many cases also, property was stolen. This included money, valuables, personal possessions, etc. The more
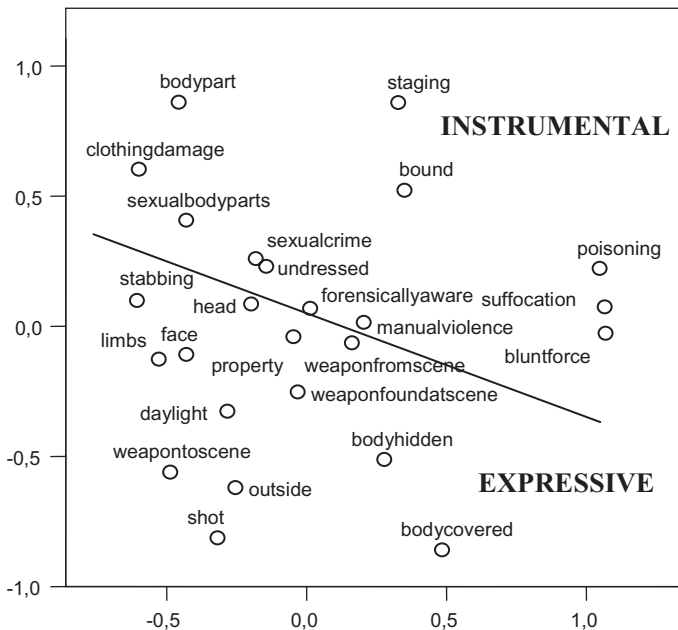

Figure 1.   Distribution of crime scene behaviours in the two-dimensional Proxscal.

Table 2.   Expressive crime scene behaviours

Occurrence percentage	Crime scene behaviour
30 to 50	Weapon found at scene
	Weapon used from scene
	Daylight
	Property stolen
	Wounds to limbs
	Wounds to face
10 to 30	Outside
	Wounds to head
	Weapon brought to scene
	Shot
	Wounds from stabbing
	Body hidden
Less than 10	Body covered

Table 3.   Instrumental crime scene behaviours

Occurrence percentage	Crime scene behaviour
30 to 50	Manual violence
	Offender forensically aware
10 to 30	Sexual crime
	Victim undressed
	Staging
	Blunt force
	Injury to sexual body parts
Less than 10	Clothing damage
	Bound
	Body part removed
	Poisoning
	Suffocation

infrequent behaviours, 'body hidden' and 'body covered', are both ways of dealing with the body after the victim has been killed. These behaviours are suggestive of preventing discovery.

Instrumental crime scene behaviours

Behaviours of the instrumental theme, as shown in Table 3, suggest that these behaviours at the crime scene were not directed at the victim as a person.

A large proportion (21%) of offences of the instrumental type involved sexual crimes. The victim was found completely or partially undressed, and the victim had injuries to sexual body parts, such as breasts and/ or genitals. The clothes of the victim were also damaged in some cases. Moreover, the offender used manual violence and blunt force during these crimes. In most of these instrumental cases, the offender was forensically aware, which means the offender tried to prevent identification. In some cases, the offender

used staging: the offender left the crime scene in such a way that it would seem like a robbery, a suicide, or an accident. Low-frequency behaviours within the instrumental crime scene type included victim being bound, body part(s) being removed, and victim being poisoned or suffocated.

Offender background characteristics

A total of 16 offender background characteristics were selected for the analysis. The results show that Tucker's Coefficient of Congruence for the offender background characteristics is 0.99, which suggests a high goodness of fit. Figure 2 shows the distribution of the offender background characteristics for the 97 homicide cases. Visual examination of the plot revealed that the background characteristics could be differentiated by the same expressive–instrumental distinction. Behaviours that co-occurred on the left side of the plot reflect an instrumental theme, and behaviours on the right side of the plot reflect an expressive theme. Based on this examination, a linear division was drawn on the plot to reflect this thematic difference.

The expressive theme consisted largely of behaviours reflecting how the offender dealt with (dysfunctional) relationships expressed in family violence, blood relationships, and psychological or psychiatric problems of the offender. The behaviours of the instrumental theme (previous violence and abuse to past or present partner) reflect how the offender has been involved in previous criminal activity.

A number of these characteristics occurred in the majority (50% and above) of the cases. These variables included victim being female (76%), offender being familiar with the area (54%), offender being male (98%), offender having a relationship at the time of the crime (58%), offender being married (51%), and offender was acquainted with the victim (86%). These were too frequent so they could not be used to discriminate between cases.
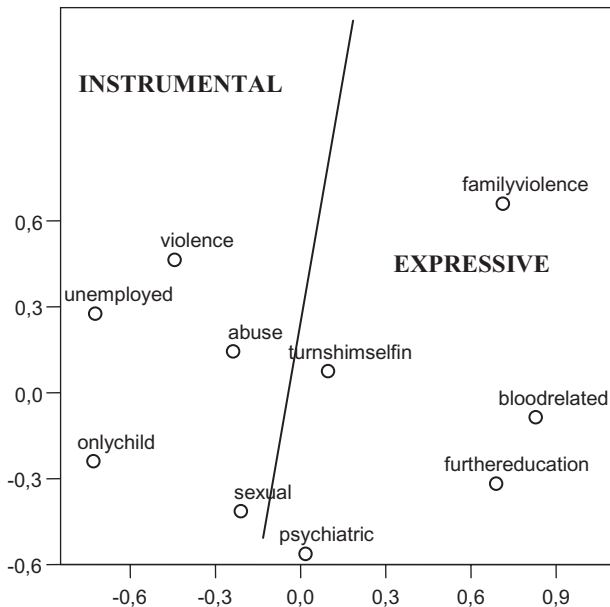

Figure 2.   Distribution of offender background characteristics in the two-dimensional Proxscal.

Table 4.   Expressive offender background characteristics

Occurrence percentage	Offender background characteristics
30 to 50	
10 to 30	Turns himself in
	Psychological-psychiatric problems
	Further education
	Violence in family background
	Blood-related
Less than 10	

Table 5.   Instrumental offender background characteristics

Occurrence percentage	Offender background characteristics
30 to 50	Unemployed
	Previous violence
10 to 30	Abuse to present/past partner(s)
	Only child
	Sexual
Less than 10	

Expressive offender background characteristics

Table 4 shows the expressive offender background characteristics that co-occurred in this theme. It is likely that the victim is a significant person to the offender. The killing seems to occur in the context of a violent family background. Moreover, violence in the family background co-occurs with psychiatric problems. Many of the offenders in this theme had received higher education, i.e. further education than primary and middle school.

Instrumental offender background characteristics

Offender characteristics that co-occurred in the instrumental theme are shown in Table 5. Many of these variables deal with the offender's previous criminal record. The offenders had been involved in prior violent crimes, sexual crimes, and abuse to present or past partner(s). The instrumental type of offender seems to fit the profile of a career criminal.

Defining crime scene themes

As a last step in the analysis, the procedure reported by Salfati (2000) is used. All 97 offences were individually examined to decide whether each could be assigned to a certain predominant theme. For every offence, the proportion of expressive and instrumental crime scene variables was tallied. When a case had twice the percentage of the expressive theme in comparison to the instrumental theme, it was assigned to the expressive theme. This procedure was also performed for the offender background characteristics. For example, when an offence has 38% of the expressive variables and 17% of the instrumental

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Table 6. Distribution of cases across crime scene and offender background themes

Crime scene theme	Offender background theme	Percentage distribution
Expressive	Expressive	11
Expressive	Instrumental	23
Expressive	Mixed	9
Expressive	Non-classifiable	7
Instrumental	Expressive	5
Instrumental	Instrumental	1
Instrumental	Non-classifiable	2
Mixed	Expressive	2
Mixed	Instrumental	7
Mixed	Mixed	1
Mixed	Non-classifiable	2
Non-classifiable	Expressive	5
Non-classifiable	Instrumental	13
Non-classifiable	Mixed	1
Non-classifiable	Non-classifiable	9

variables, the offence was classified as expressive. A case was categorised as being mixed if it had an equal number of behaviours of both themes (Salfati, 2000). The high-frequency behaviours previously mentioned were not included in this analysis, since they occurred in almost all of the cases (irrespective of type).

Across the crime scene themes, 49 of the 97 cases (51%) could be classified as expressive. Eight offenders (8%) could be classified as instrumental and 12 offenders (12%) could be classified as mixed. However, a relatively large percentage of cases (29%) could not be classified as expressive, instrumental, or mixed. This means that at total of 59% of the cases exhibited a majority of crime scene characteristics in a single theme.

For the offender background characteristics, 22 offenders (23%) could be classified as expressive and 44 offenders (45%) could be classified as instrumental. Eleven cases (11%) could be classified as mixed, and 20 cases (21%) were not classifiable as expressive, instrumental, or mixed. This indicates that 68% of the offenders could be classified as either expressive or instrumental.

When no distinction was made between the crime scene behaviours and offender background characteristics and all the characteristics were taken together, 41% of the offences could be classified as either expressive or instrumental. Table 6 shows that most (23%) offenders, who had an expressive crime scene theme, had an instrumental background theme. This pattern was also found in the study of Salfati (2000), where 36% of the cases had an expressive crime scene theme which were committed by offenders with an instrumental background. Only 11% ($n = 11$) of the cases in the present study had an expressive crime scene theme and an expressive offender background theme.

Self-reported motives versus Proxscal analysis themes

The motives the offenders had reported themselves were classified as either 'expressive' (62%) or 'instrumental' (36%). The crime scene themes and offender background themes from the analysis of the first hypothesis were used as comparison. The offenders who were classified as mixed or non-identifiable were labelled as missing value. In this way, there were 49 offenders (86%) left with an expressive crime scene theme and eight offenders

Table 7.   Kappa calculation between the self-reported motives across the crime scene themes according to the Proxscal analysis (expected frequencies in brackets)

| | | Crime scene theme | | |
		Expressive	Instrumental	κ
Self-reported motive	Expressive	37 (34.4)	3 (5.6)	0.26, $p < 0.05$
	Instrumental	12 (14.6)	5 (2.4)	

Table 8.   Kappa calculation between the self-reported motives across the offender background themes according to the Proxscal analysis (expected frequencies in brackets)

| | | Offender background theme | | |
		Expressive	Instrumental	κ
Self-reported motive	Expressive	14 (11.4)	22 (24.6)	0.16, $p = 0.16$
	Instrumental	6 (8.6)	21 (18.4)	

(14%) with an instrumental crime scene theme. Twenty-two offenders (33%) belonged to the expressive background theme and 44 offenders (67%) belonged to the instrumental background theme. Cohens's Kappa was calculated to measure the agreement between the motives according to the offenders and the motives according to the analysis.

First, the analysis was performed for the crime scene themes (Table 7). There was a significant association between the expressive crime scene theme and the self-reported expressive motive (κ (1) = 0.26, $p < 0.05$). However, the absolute value of Kappa is rather low. Second, the same analysis was performed for the offender background themes (Table 8). There was no agreement between the offender background theme and the motives the offenders had according to themselves (κ (1) = 0.16, $p = 0.16$).

DISCUSSION

The findings of the Proxscal analysis provided mixed support for the expressive–instrumental distinction in both the crime scene characteristics and the offender background characteristics. The pattern of the crime scene themes in the present study is similar to findings of previous studies (Salfati & Canter, 1999; Salfati & Dupont, 2006; Salfati & Haratsis, 2001; Santtila *et al.*, 2001). In the present study, 59% of the cases could be classified as having a predominantly expressive or predominantly instrumental crime scene theme. Most of these (51%) had the expressive crime scene theme. In the studies of Salfati and Canter (1999), Santilla and colleagues (2001), Salfati and Haratsis (2001), and Salfati (2000), 65%, 68%, 63%, and 62%, respectively, could be classified as either exhibiting a dominantly expressive or instrumental crime scene theme. These results are similar, despite the differences in the sample characteristics (see Table 1) and sample sizes (varying from 82 to 502).

Only 41% of the cases in the present study could be classified as having either a predominantly expressive or predominantly instrumental theme when crime scene and offender background characteristics were combined. This is a lower percentage than when

the cases were classified solely on crime scene behaviours or solely on offender back-ground characteristics. The reason for this is that most offenders, who had an expressive crime scene theme, had an instrumental background theme. This was also reported in the study of Salfati (2000). Furthermore, as can be seen in the analysis, many of the homicides were committed by offenders who already had a criminal history. This explains why most homicides, and also expressive homicides, are committed by offenders with instrumental background themes, since the latter are characterised by a more extensive criminal record (Salfati, 2000).

Although the findings of the present study are similar to the findings of previous studies, a substantial percentage of our homicide cases could not be classified in one of the two crime scene themes or offender background themes, especially if the latter two were combined. This was also the case in previous studies of homicide cases (Salfati & Canter, 1999; Salfati & Haratsis, 2001; Santtila *et al.*, 2001). As Cornell, Warren, Hawk, Stafford, Oram, and Pine (1996) argue, there is not an absolute distinction between instrumental and reactive violence. Instrumental offenders do not only commit instrumental offences. According to these authors, '*instrumental offenders can be identified by the presence of instrumental acts of aggression but not necessarily the absence of reactive aggression*' (Cornell *et al.*, 1996, p. 788). Bushman and Anderson (2001) also argue that violent crimes often contain both elements. We have noticed in our clinical interviews with violent offenders that a crime that may start with an instrumental motive, for instance a robbery, may acquire an emotional motive during the course of the action as a result of the nature of the victim's response, e.g. the perpetrator's anger might be evoked when a victim shows resistance. This could explain why many expressive crimes were committed by instrumental background offenders.

Furthermore, the instrumental and expressive distinction in violence is probably an oversimplification. Canter and Youngs (2009) describe more complex models of offences and offender variation, for instance, the radex model of criminal differentiation. A radex consists of a quantitative (thematic) and a qualitative (specificity) facet, creating a 'dart board'-like structure. The radex model demonstrates how combinations of crime scene behaviours can be recognised as themes (e.g. instrumental or expressive), but also what the focus was of the crime (e.g. person or property). Another more dynamic model for offender variation is the narrative action system (NAS) model. According to this model, there are four modes of offending action. Each mode of the NAS model has a different mechanism for making inferences about offenders from their crime scene behaviours. For example, the NAS modes allow the analysis of the role of the victim in homicide cases. For more detailed information about these models, see Canter and Youngs (2009).

The agreement between the self-reported motives and the crime scene themes derived from the Proxscal analysis was significant. However, the agreement between the self-reported motives and the offender background characteristics was no better than chance. According to the analysis of the offender background themes, most offenders are instrumental, but according to the offenders themselves, most of their offences were expressive. We could retrieve only one study that compared self-reported and official descriptions of violent crimes. Porter and Woodworth (2007) coded the instrumentality/reactivity of the violence from official files and the offenders' own accounts in convicted psychopathic and non-psychopathic murderers. They found that psychopaths were more likely to have committed primarily instrumental homicides, compared to non-psychopaths. However, this difference disappeared when the self-report descriptions

were examined. Both psychopaths and non-psychopaths emphasised the reactivity (i.e. expressiveness) of their homicides, although the psychopaths to a greater extent. This finding that self-reported motives are mostly expressive is similar to the results of the present study.

However, there are problems with deducing motives from crime scene actions. For instance, most actions are not caused by a single motive (Canter & Youngs, 2009). Also, how do we know what the motive is? In the case of robbery, for example, the motive is often assumed to be monetary gain. However, you would need clear evidence on that those performing the robbery indeed were after financial gain and not revenge, for instance. Without this evidence, the interpretation of the motive remains rather speculation (Canter & Youngs, 2009). Another problem is that the self-reported motives do not necessarily reflect the actual motives. Perhaps the offenders were not being honest (to receive a lighter sentence) or maybe they did not have insight into their motives. This information however, could not be gathered from the data files.

Limitations

The findings of the present study could be influenced by several limitations. Only 10 offender background variables could be used for the Proxscal analysis, since the other six occurred too frequently to be useful to discriminate between cases. Because of this, an offender with one expressive background and two instrumental background variables, for example, would be classified as instrumental, while he only had one instrumental variable more. Moreover, the five instrumental offender background variables were more prevalent than the five expressive offender background variables. Due to this, offenders had more instrumental variables than expressive, resulting in more instrumental offender background-type classifications.

Another limitation concerns the Proxscal analysis itself, which was also addressed by Hicks and Sales (2006). Although the inductive approach to investigative inferencing research improves on non-scientific models of profiling used in the past, there are still major limitations to it. The first limitation concerns the data sources. First, the research data stem from police records that have not been collected for research purposes. Therefore, there is a chance of random variation and error in each case. Second, the collected information is likely to vary across reports. Several factors (e.g. police experience, witness availability) could influence the completeness of the reports. Third, there is no examination of the information's validity. The information in the police reports could be untrue or inaccurate. Fourth, the use of solved cases is problematic. These offenders may not share the same characteristics as those who have not been captured. The conclusions are therefore difficult to generalise to the at-large criminal population (Hicks & Sales, 2006). Furthermore, the themes in the present study, but also in most other studies in this field, were distinguished by using visual examination. This means that there is some level of subjectivity in interpreting the results.

Conclusion

The present study found mixed support for the expressive–instrumental dichotomy in homicide offenders and offences. The results were in line with previous studies of homicide cases. This indicates that the behavioural structure of homicide goes beyond cultural

differences in homicide. Notwithstanding, this still leaves many questions on investigative inferencing in homicide cases unanswered. The motives according to the offenders themselves did not correspond with the themes according to the Proxscal analysis. This implies that there is not a straightforward relationship between self-reported motives and crime scene behaviours and offender background. Future research should examine the reasons why offenders of instrumental crimes report expressive motives. It would be useful to test the insight of the offenders into their motives. Moreover, it would be relevant to examine differences in exaggerating the expressiveness of the crimes prior to and after conviction.

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APPENDIX

Definition of Proxscal variables

Variables	Definition
Crime scene behaviours	
Weapon from scene	Murder weapon used was obtained at the scene.
Weapon to scene	The murder weapon used was brought to the murder scene.
Weapon found at scene	Murder weapon was found attached to the victim or was recovered from the crime scene.
Head	Wounds were inflicted to face, neck, or other areas of the head.
Stabbing	Records indicated at least one stab wound at the body or that a sharp instrument was used.
Blunt force	Evidence was found that a blunt instrument was used by the offender.
Limbs	Injuries were inflicted on either the victim's feet or hands.
Manual violence	Offender used own body to inflict injury to victim, e.g. strangulation, blunt force, choking, and drowning.
Undressed	Victim was found completely or partially undressed.
Forensically aware	Evidence at the crime scene was destroyed by the offender, so the offender was forensically aware.
Sexual crime	A sexual crime was indicated by any of the following: penetration of vagina, mouth, or anus; semen found in the body or at the crime scene.
Clothing damage	Offender had cut or torn away the victim's clothing or parts of it.
Sexual body parts	Injuries were sustained to nipples, anus, vagina, or penis.
Property	Homicide was associated with a property offence.
Shot	A firearm was used as the murder weapon.
Body part	Parts of the body were detached from it.
Body hidden	Body of the victim was hidden.
Body covered	Victim's body was found covered.
Suffocation	Victim was suffocated.
Bound	Victim was bound when found or there was evidence of prior binding.
Daylight	The murder occurred during daylight.
Outside	The murder occurred outside (either in a public or private place).
Staging	The offender tried to stage the crime.
Poisoning	Victim was poisoned.
Face	Injuries were inflicted on the victim's face.
Offender background characteristics	
Unemployed	The offender was unemployed at the time of the homicide.
Further education	The offender did have further education than primary and middle school.
Abuse	The offender is/was abusive to past/present partner(s).
Only child	Offender was only child.
Violence	Offender has previously been in contact with justice for one or more violence offences.
Sexual	Offender has previously been in contact with justice for one or more sexual offences.
Psychiatric	The offender has psychological-psychiatric problems.
Turns himself in	The offender turns himself in after the crime.
Blood-related	The offender and victim are blood-related.
Family violence	The offender has witnessed violence in his family.