Structure and Offender Behavior in Swedish Rape Cases - A Multidimensional Scaling Approach

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Abstract

A sample of Swedish rape cases (n = 28) that occurred during the years of 1998 and 2002 were selected with the primary objective of discovering differences in the behavioral structure of the offender depending on the nature of any prior relationship with the victim. Three offender categories were established Intimate, Familiar and Friend. These were then used as boundaries for behavior elicited by the offenders and focal points of Modus Operandi (MO). The cases were coded by using binary variables designed during the present study based on variables discovered in previous studies on offender behavior in sexual crimes. Furthermore the variables' inter-correlation was analyzed with the use of Multidimensional Scaling (MDS). The authors found that the MDS divided the variables into four different categories instead of the original three that was expected, possibly indicating the existence of a novel MO that is not bound to any of our three categories. Research within the field of offender behavior in sexual assault crimes in Sweden is limited; hence this study aims to explore possible avenues of future scientific enquiries.

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Profiling is a method designed to draw conclusions about the psychological characteristics of an offender based on their past behavior often in conjunction with a crime. The value of profiling as a tool for law enforcement in ongoing investigations is not always clear, the lack of empirical foundations in many areas of the field, together with the sometimes abstract conclusions based on non-dichotomous data, act as an invitation for ambiguous interpretation. At the present time the lack of standardized guidelines has only added to the difficulty of the field's struggle to establish itself as an official strategy for crime fighting agencies around the globe, and have led many professional law enforcement personnel, as well as academics, to hold a distrustful view of what it can bring to the table in real assets. Research within the field of offender profiling has seen an increase in recent years and the present study aims to further add to that by observing the behavioral patterns of Swedish rapists in cases where the offender and the victim have had previous contact. In order to examine the behavioral pattern of both the victim and the offender in different relational contexts, offender motivation will be explored. The introduction will give a concise description of the historical background of profiling and be followed by a review of the major theoretical paradigms of the motivations of sexual offenders.

Introduction

In the late 1400's the hunt and persecution of women for witchcraft reached its pinnacle with the creation of the *Malleus Maleficarum*, a text written on behalf of the Catholic Church in order to identify and essentially destroy witches. The *Malleus Maleficarum* was not based on scientific research but rather on knowledge that had been generated beneath the umbrella of the religious paradigm of its time and its author's zealous speculations. The text represents one of the first systematical attempts at trying to use a method for drawing inferences about people's behavior (Woodworth & Porter, 2000).

Franz Gall, in the late 1700's, used a "science" known as phrenology in order to determine what kind of physiological features, such as the morphology of the human skull, could be used to draw conclusions about psychological characteristics. Gall's studies also led him to

explore the field of human criminology and he stated that the existence of a "murder organ" was indicated by structural features of the skull.

In the following century the Italian criminologist Césare Lombroso, released his work "*The Criminal Man*" in 1876 (Woodworth & Porter, 2000). Lombroso like Gall believed that observable features of the individual could lead to correct inferences about internal processes. He categorized criminal behavior as the product of either a heritage of birth, a consequence of insanity or of the person being *criminaloid* (meaning that the individual was weak natured and predisposed towards criminal behavior given the right circumstances). Additionally, a criminal could be seen to be a habitual criminal or a criminal of passion. The five categories that Lombroso identified were subsequently tested and falsified but the fact that they could be tested scientifically must be seen as progress for the field of criminology (Douglas, Burgess, Ressl, & Burgess, 2006).

Roughly a decade after Lombroso's work had been released, a woman in one of London's more deprived areas called Whitechapel, was found murdered. She was the first of a series of female homicide victims between the years of 1888 and 1891 that would be attributed to one of the most notorious serial killers in history, known as Jack the Ripper. George Phillips, a medical doctor assigned to the case, tried to reconstruct the behavior of the assailant by analyzing the crime scenes and drawing conclusions about his psychological makeup. Phillips also made observations about the wound patterns found on the victims (Woodworth & Porter, 2000). Kind, a forensics scientist, used geographical models of profiling on the offences committed by the offender making the case of Jack the Ripper one of the first known cases where modern geographical profiling was used (Canter, Coffey, & Huntley, 2000).

Charles Goring's work "*The English Convict*" that was published in 1913 (Douglas, Burgess, Ressl, & Burgess, 2006) was a direct attack on Lombroso's theories. It was based on extensive research of British inmates and shifted the view on the origins of criminal behavior towards the belief in deficient intelligence amongst criminals. The view that Goring had presented was embraced by the criminologists of his time and further studies were reinforcing his findings that an inherent deficiency should be the main focus for any etiology of criminal behavior. Although his studies and those of his peers dismissed any possible social factors this view established itself as mainstream criminology for several decades.

As technology caught up with the theories in the mid 30s and early 40s more in-depth studies rejected the inborn deficiency approach and the view shifted once again, now focusing on aspects of disordered personality organization in the individual as being a more probable source for criminal tendencies (Douglas, Burgess, Ressl, & Burgess, 2006). Profiling as a technique did not gain interest from the public or professional law enforcement until the New York "Mad Bomber" case in 1956. Psychiatrist James A. Brussels was called in to aid the ongoing police investigation and used psychoanalytic theory to analyze both crime scenes and communications in form of letters from the assailant. His profile of the offender was eerily accurate (Woodworth & Porter, 2000).

The late 1960s and 1970s forced the Federal Bureau of Investigation (FBI) to explore nontraditional techniques in order to deal with the increase in serial crimes that law enforcement officials in the United States were facing (Woodworth & Porter, 2000). Profiling as a technique was conceptualized as a method of identifying the major personality traits and behavioral characteristics of an offender based on a crime they had committed, and it has today been adopted by investigators in Australia and several European countries such as the United Kingdom and the Netherlands.

Profiling is defined as scientific and psychological techniques and theories which can be used to find links between the offender, victim and crime characteristics. Profiling have been divided into three disciplines: behavioral analysis, statistical analysis and geographical analysis (Daeid, 1997). Behavioral analysis refers to the study of offender behavior in conjunction with a crime, and are primarily observed by victim testimonies (when possible), witness reports and crime scene indicators. Statistical analysis focuses on identifying correlation between different crime scene indicators of behavior and geographical analysis tries to monitor the crime scene locations in order to discern the offender's movement pattern and possible base or home location. The main objective behind profiling was to help reduce the amount of suspects to expedite the investigation and focus resources or open up new lines of investigation. The main focus of most attempts of profiling is an in-depth study of the offenders *Signature,* and *Modus operandi* (MO). MO is the behavior elicited by the offender while committing a crime, for example breaking the cellar window and entering a house, is an example of a MO. While using a counterfeit key to gain entrance would be a different MO; basically it is what the offender must do to commit the crime. *Signature* relates to a specific act of offender behavior (almost like a

calling card) and is different from MO because it has little to do with what is necessary to perpetrate the crime and will never change at its core, but might be refined, an example of a *Signature* could be a specific rope knot left behind at several homicide crime scenes.

There are several different terms for the method of drawing conclusions about an offenders psychological characteristics and thereby attempting to reconstruct the type of social environment they inhabit (e.g. tendencies towards being a sociopath could lead to the conclusion that its likely that the offender lives by themselves) based on the offenders behavior prior, during or after committing a crime (Woodworth & Porter, 2000) and also different approaches. The two major approaches that the authors of this study will differentiate between by naming, is C*riminal profiling* and *Offender profiling* that will be discussed in the next section

Profiling: at the present date

Science and practical need does not always travel at the same pace nor see eye to eye in all matters. Profiling is one area where this at times becomes painfully obvious. The vast amount of media attention that violent crimes attract exacerbates the public's demand for swift resolution, and it is here that offender profiling has come into focus as a special weapon that is able to draw new conclusions when traditional resources have been exhausted. This elevated belief from the public in the power of a method without a widely accepted guideline, a substantial scientific foundation or a clear perspective of what educational background criminal analysts should possess has lead academic and pragmatic alike to tone down the enthusiasm that accompanies the fields medial attention.

Major influences within the field of offender profiling today come from the United States of America (USA) and the United Kingdom (UK), together with Australia and the Netherlands. The USA relies strongly on the research and traditional use of the method by the FBI while the research within the field in the UK in recent years has been led mainly by Professor David Canter, the Director of the Centre for Investigative Psychology in Liverpool. These two sources represent two different approaches to the investigation of crimes. Criminal profiling which represents the technique primarily employed by the FBI, seeks to objectively identify the major personality and behavioral characteristics of the offender by systematically analyzing the crime. Offender profiling which stems from investigative psychology seeks to integrate investigative

techniques with psychological concepts and is based on psychological theory and empirical research in order to assist law enforcement (Woodworth & Porter, 2000). The FBI approach leaves the final interpretations of the profile in the hands of the individual profiler; investigative experience (meaning that the investigator must be familiar with police procedure during authentic criminal investigations) is seen as an essential merit in order to create accurate profiles. Giving the profiler such a great focus in the production of a profile could lead to very dissimilar profiles being created on the same offender and crime by two different profilers. Also the limited research conducted by the FBI on its own success rates (accuracy of the profiles produced) both for positive or negative outcomes in cases where profiles were created gives little insight as to exactly how useful the method has been.

The field has gained a wide interest from both laymen and professionals in recent years. It still remains a controversial area of forensic science and its true value as an asset is constantly under debate pending further research. Offender profiling could be seen as an alternative to the FBI approach. Although the profile is often based on the several different types of data (crime scene indicators, witness reports, autopsy and other hard evidence) similar to the FBI method, the conclusions drawn fall within a psychological context and the frames of empirical knowledge. Here solid empirical research is regarded as the source from where inferences within a profile should be drawn in contrary to investigative experience. This is according to (Woodworth & Porter, 2000) a major distinction between the two approaches.

Theories of rape

In order to try and understand behavior as complicated as rape we will here present a few theories about the motivation behind the act. This will provide a background for the interpretation of our empirical results. The more traditional research on rape has focused on the motivation of the offender rather than the behavior of the offender. There are, for example, several proposed theories that try and explain the motivation of the perpetrator ranging from feministic approaches, where the theory is that men objectify, marginalize and treat women as property and have as little control over their sexual drive as they have over their hunger (Baker, 1997). Socio-cultural theory explains that certain sorts of cultural organization help to increase or decrease the risk of being raped (Hall & Barongan, 1997). Evolutionary theories explain the motive behind rapists being the transferal of genetic material and hence securing its continued

existence (Ellis, 1989). Perhaps the most widely used and known theory is the one created by Groth that classify the offenders' motives into categories of anger, power and sadistic needs (Groth & Birnbaum, 1979).

It is difficult to see how these all-inclusive, descriptive and motivationally based theories can help the police in their investigation of the crime or the classification of the offender; especially when the theory of motivation precedes the motivation of the offender and often overlooks the individuality of the offender. It also overlooks the crime behavior of the offender at the scene and the interaction between the perpetrator and the victim. To give an example; assuming that men rape because they have no control over their sexual drive will provide very little useful information to the police; this because it does not eliminate any person of the male gender. The theory also excludes male to male rapes as well as women who rape men or women. If we disregard the many relevant variables at the crime scene and judge that all the offenders use exactly the same theme and motivation according to the category they are placed in we will never move forward in the understanding to as why rapes occur, how we can stop the behavior from occurring and, as this paper focus on, how to successfully investigate the behavior of the offender for clues on who the person is; also how to treat the person so that the person does not commit the crime again. According to Canter, Bennell and Alison (2003), whatever the motivation of the offender, the offender might not behave according to the theme of the category. (Santtila, Junkkila, & Sandnabba, 2005) put forward that it is the hard evidence like DNA extraction from semen sample, eye-witness reports and the victim's observation that are the biggest help for the police. If the hard evidence is missing from for example condom use, no witness and if the offender used surprise approach with blitz attack; meaning that the offender surprised the victim and used overwhelming force. , then psychological forensics might prove helpful.

Canter et al. (2003) suggested using a thematic approach and classification of the offender behavior in stranger rape cases; where the motivation is themed according to the offender behavior on the scene of the crime. This has at least two uses, firstly in the investigation and linking of serial rapists (Santtila, Junkkila, & Sandnabba, 2005). Secondly, it can be used in treating the offender (Canter, Bennell, & Alison, 2003).

Canter et al. (2003) proposed that there are three levels of violation in a rape situation. These are personal, physical and sexual where the sexual is the most frequently occurring and is

the worst kind of violation of the victim of the three. Examples of what the different types of violation might contain are: Personal violation that could contain that the offender implies knowing the victim, steals from the victim and compliments the victim. Physical violation can be if the offender demeans the victim, tears clothing, use violence (verbal and physical) or gagging the victim and finally the sexual violation that may include anal and or vaginal penetration, cunnilingus and kisses. And since vaginal penetration is the essences of a male's rape of a female this makes that variable lack in information about the offender. Canter et al. suggest that it is the least ordinary behavior that gives the most information about the psyche of the offender that raped.

In addition to these types of violations there are also four different themes. These themes describe the motivation behind the rape based on the behavior of the offender. The first is hostility, in which Canter at al. (2003) suggests that the offender uses an overtly aggressive style of offence behavior, for example demeans the victim or uses verbal violence. The second is control, where the offender tries to immobilize the victim by blinding, threatens the victim to not report the rape, might wear disguise and might use weapons. Thirdly, there is the theft theme where the offender steals or demands goods from the victim. And finally there is the involvement theme where the offender compliments the victim, implies knowing the victim, identifies the victim and kisses the victim. Figure 1 below, borrowed from Canter et al. (2003) shows the dividend of categories and themes.
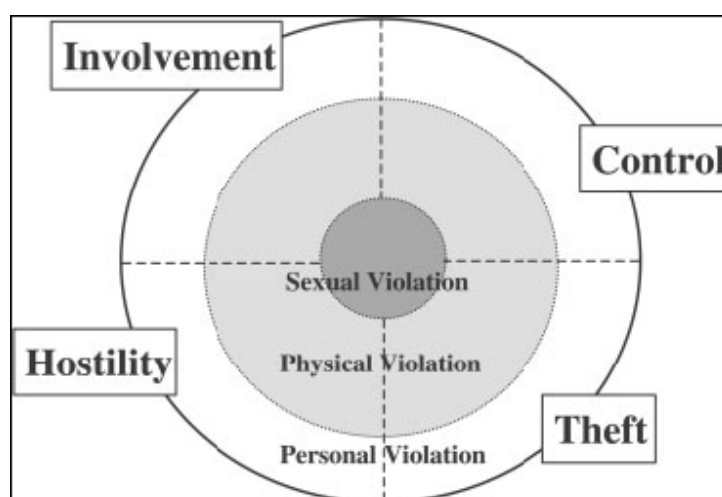

Figure 1. Illustrates the dividend of categories and themes (borrowed from Canter et al., 2003).

Variables included in our study

The authors of this paper believe that the combination of the categories and themes, described above, includes most of the important information (below called variables) to be able to classify the offender. However, we propose that the interaction between the offender and the victim are missing from the study by Canter et al. (2003), and thus adds new possibly relevant variables to be included in studies on offender behavior in this context. Consequently, in order to get a better grip on the offender, we suggest that items should be added to any list of investigative variables only based on Figure 1. For example, Canter et al. (2003) used the variables *Single violence* and *Multiple violence*. In our study we add Major violence to these two variables which then results in *Single violence*, *Single violence Major, Multiple violence* and *Multiple violence Major*. This gives us more depth into the variables describing violence used by the offender. By doing this there will be more than one variable showing for example *Multiple violence*. This makes it possible that the two different *Multiple violence* might correlate with two totally different variables and giving us a Multi Dimensional Scaling (MDS) spatial area that is more dynamic and flexible. Appendix 2 gives the full list of variables included in this study and also a description of the variables that was developed during the pre-study.

Canter et al. (2003) put forward 27 variables to be used in analyzing cases of stranger rape. Canter et al. suggested that these variables in further analysis should be categorized and divided into themes, as explained above. This may help to get at the motivation of the rapist and at the same time get a view of the perpetrator's psyche. It might also help the police narrow down the list of suspects based on the underlying motivational factors. However, the authors of this paper suggest that many of Cantor et al's variables might be more common in stranger rapes, for which they were developed, than in cases where the offender and victim have some kind of previous social interaction. We believe that some of the Canter et al. variables are not common or might even be non-existent in the cases that we focus on. These variables are *Disguise, Identify victim, Implies knowing victim and Steals identifiable*. The obvious reason for these to be removed from this study is that they imply that the offender and victim do not know each other, something they, as mentioned above, do in this study.

Hypothesis

The authors of this paper predicted that the behavior of the offender changes depending on the nature of the offender's and the victim's prior relationship. This will be shown by the fact that the occurrence of the variables *Intimate, Friends* and *Familiar* will each be placed close to the four different corners in the MDS spatial area (please see appendix 2 for the definition of these variables).

Method

Pre-study

The variables we used in the main study were selected by means of a pre-study. In this context the Swedish police in the region of Skåne were contacted and with their help 34 cases were selected. The crimes selected had to have been coded as rape by the police. One further criterion was that the case had to have a conviction in court. The reason for this was two-fold, firstly these crimes were more easily available and secondly they were investigated and proved in a court of law to follow the legal definition of rape that is used in Sweden. We did not have the records from the court and this lead to that we ourselves had to classify the cases according to the current Swedish law BrB 6 kap §1 (Gregow, 2006)[1] as rape or not.[

The cases (N=34) were randomly distributed between the two authors of this paper. Then the authors coded the papers of each case according to the 27 variables proposed by Canter et al. (2003) (for the variable list see Appendix 1). We also investigated the MO in order to discover new variables. As predicted, the 4 variables mentioned above (*Disguise, Identify victim, Implies knowing victim, Steals identifiable*) did not occur even once in the 34 cases. Hence, these 4 variables were eliminated. Also, we compared notes on what new variables were noticed that occurred in multiple instances, more than once, of the 34 crimes and might prove helpful in the classification of the offender. There were 36 new variables identified, some of which were an extension of the Canter et al. existing variables. As mentioned above, the variables ending with "Major" was added to give a depth to the form and volume of violence used. In order to find a possible correlation between violence from the offender with resistance from the victim, 4 variables describing the resistance were added. These are: *Verbal resistance, Verbal resistance Major, Physical resistance* and *Physical resistance Major*. Three variables that show how the

offender and victim know each other were also added. These are Familiar, Friends and Intimate. These new variables are presented and explained in Appendix 2.

Thirteen of the cases, even though the crimes were an awful violation of the victim, were according to the current Swedish law Brb 6 kap §1 (Gregow, 2006) not rapes; these were, after discussion between the authors, removed from the study.

Cases involving persons under legal age, mentally retarded and unconscious victims were also removed. This because that the modus operandi (MO) was not described in enough detail required for this study. In all the cases that were left, the offender was male and victim female.

In cases where the offender and the victim's testimonies regarding the crime differ, the authors chose to use the latter as base for their coding. This because it is this statement that the court believed credible and hence used to sentence the offender (sometimes with other hard evidence such as DNA and/or witness testimony).

All of the remaining 20 cases were coded according to the 17 remaining variables from Canters original 27 and the new variables added by the authors making the number of variables a total of 57. The pages of the cases ranged from 50 to 400 per case and averaged approximately 150 pages per rape case. There were 20 cases and 28 rapes. This means that 5 of the cases had multiple rapes reported. 1 case had 2 rapes, 4 cases had 3 rapes and the remaining 14 cases were reported as single rapes. We coded the multiple rapes as separate instances of rape. Even though the rape was done by the offender to the victim multiple times, these were separated by different report codes in the cases from the police, then also in our coding.

Coding

To check for inter-rater reliability 10 cases were randomly chosen and coded independently by both authors. The variable codings that were not agreed upon were discussed amongst the authors and if they were still in disagreement that variable was marked as absent (0). The coding was binary, meaning that either the variable existed (1) or was absent (0). There were no discrepancies in the coding of between the variables amongst the authors, thus no variables were changed from the initial coding for this reason.

Variable selection

The data was transferred into SPSS. Variables that occurred 4% or less of the cases were removed from the study since they were considered all too unique of a behavior for this study, this lead to the removal of 17 variables. The variables removed were: *Weapon use, Single violence, Violence during, Binds victim, Blindfolds victim, Gags victim, Fondles buttocks, Fondles other, Vaginal object, Anal finger/hand, Anal object, Cunnilingus, Compliments victim, Ejaculation upon victim, Ejaculation next to victim* and *Threatens no report.*

The authors also removed the collected variables of *Justification, Blames victim, Denial, Confess* and *Admit sexual act*. Although these variables present information about the offender, they say little about the behavior at the crime scene in close temporal connection to the rape.

Statistics

Multi-Dimensional scaling (MDS) is a tool that calculates the correlation/association between variables by placing the variables that correlate/associate close together and variables that have less correlation further away on a spatial area. The variables that correlate most with all variables and are central, that correlates with most other variables, are placed in the center of this spatial area while the other variables that correlate with these variables and other will be placed on the spatial area according to how and how much they correlate with each of the other variables (Giguère, 2006).

Results

A reliability analysis on the remaining 35 variables of all 28 cases was performed. Cronbach's α rendered the result α=0,616 (N=35). This showed that our data is over the cut-off value of .60. The value should reach .70 to be considered to be adequate and .80 to be considered as good. The authors still consider this good enough for a MDS but recognize that the reliability is on the very low side. A reason for this low number might be the low number of cases.

The variables *Friend* (N=5), *Intimate* (N=16) and *Familiar* (N=7) showed an uneven distribution of the number of cases.

A MDS analysis was performed on the data. See Figure 2 for the results. The ALSCAL was used in the statistical program SPSS version 13. Euclidean distance model and Young's S-stress formula 1 was used. Young's S-stress formula can be said to show the stress or the badness

of fit of the scale to the data. The S-stress formula used 5 iterations and the fit Stress and squared correlation was RSQ=0.69 indicating a bad linear fit to the Euclidean model. Again it is noted that more data might lower this stress number further.
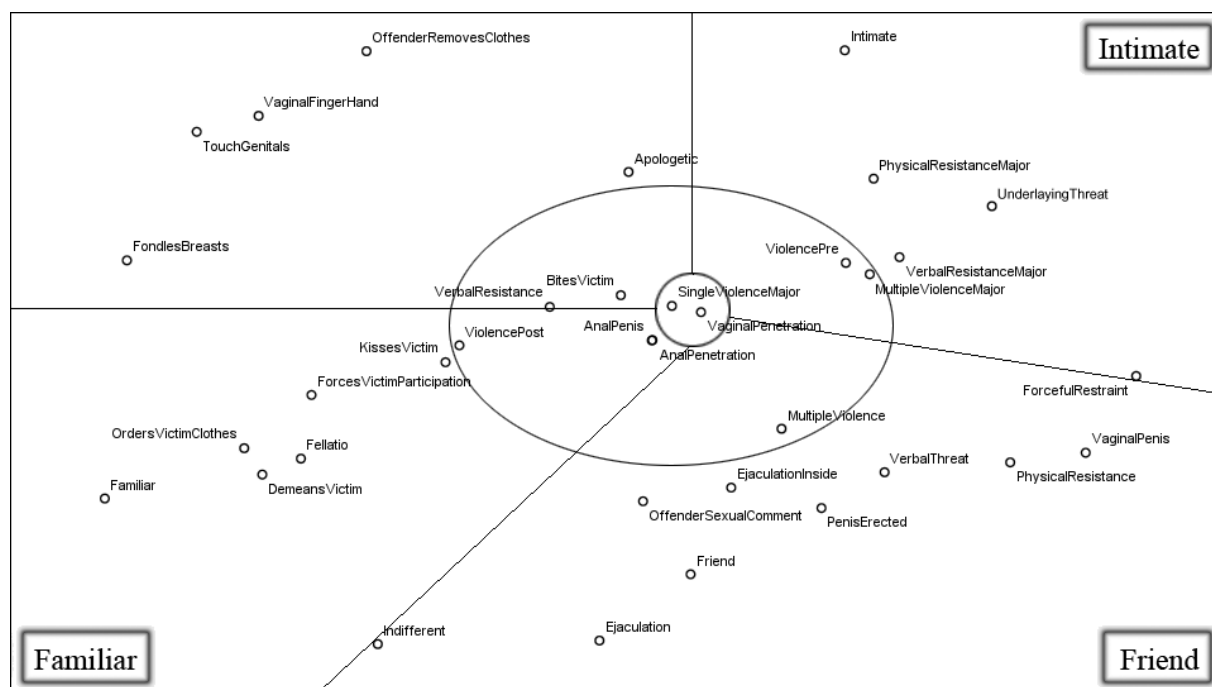

Figure 2. GIF image that illustrates the spatial area map derived from the MDS analysis with the 35 variables. Lines, circles and labels were entered by the authors to ease the interpretation of data.

The MDS (Figure 2) was divided into four different areas showing where the variables *Familiar, Friend and Intimate* had been placed by the MDS. The drawing of the lines was done manually and the lines were placed between the above mentioned variables. The aim was to place these lines in the middle, in between, the category variables of Familiar, Friend and Intimate. These lines were also drawn according to the correlation between the variables that were shared amongst the categories. For example the line running from the middle between Familiar and Friend was drawn just on the outside of the variable *Indifferent*. This because Indifferent were .014 in correlation closer to Friend than to Familiar.

Also two rings were drawn. One marks the central point that Canter et al. (2003) proposed to be the central variables in a rape, the other ring was drawn for clarity to show where most (>90% of the violence variables) of the violence was placed.

Discussion

The hypothesis suggests that the way the offender and victim know each other has an impact on the MO. This would be shown by the placement of the variables *Intimate, Friend* and *Familiar* into different corners of the MDS. The MDS shows that this hypothesis is true. This is also in line with the subjective view of the authors from having read the cases. The removal of these variables had a huge impact on the placement of all the other variables. This suggests that these variables do correlate with the behavior of the offender. This also indicates that the behavior is altered depending on how the victim and offender know each other. Possible critique here could be the fact that all the other variables are indications of the behavior of the offender while the *Intimate, Friend* and *Familiar* indicate a previous knowledge between the offender and victim. However, this is exactly the point of this study, namely to find out if previous social interaction affects the MO of the rape.

The MDS shows two central themes. The first theme and most central is vaginal penetration. The second theme, we suggest, is the theme of violence. The variables that are inside the second ring and represented by *Violence Pre, Multiple violence, Multiple violence Major, Single violence, Bites victim, Violence Post, Anal penetration* and *Anal penetration by penis*. Although there might be a discussion about whether or not anal sex in general could be considered as violent, the authors speculate that a violent violation of the anus is most likely to cause physical pain that might be equal, or worse, to major violence. However, if the penetration of the anus is achieved because vaginal penetration is, in one way or another, prevented or impossible, then anal penetration should be viewed as the goal of the rape (i.e. the victim is a man).

The relation between the victim and the offender seems to affect the victim's resistance to the offenders attack in the different categories. From *Intimate* (where the offender and victim know each other on a, sometimes, deep level) to *Familiar* (where the victim has very little prior knowledge of the offender). The authors propose that it is this prior knowledge between the offender and victim that determines the victim's level of resistance. This is, of course, very

individual and depends on the situation. However, overall there seems to be a tendency for this. In the *Intimate* relationship zone there is *Verbal resistance Major, Physical resistance Major*. In the Friends zone we find *Physical resistance*. In the *Familiar* zone and top left we have *Verbal resistance*. It could also be argued that the resistance is correlated with the violence received or violence received correlates with the resistance or both.

According to the standard MDS there is a central line drawn from top to bottom and left to right this indicate the central point and divides the MDS map into four "boxes" as mentioned above, we moved the central point thereby making it necessary to draw new lines indicating the new central point. This lead to the creation of a box that did not contain *Intimate*, *Familiar* and *Friend* categories, seven of our variables fell within this box and can be seen in the top left area of our MDS, these variables were *Fondles breast*, *Touches genitals*, *Vagina finger/hand*, *Offender removes clothes (these four variables indicates a form of sexual behavior)*, *Verbal resistance (Victim and Offender interaction)*, *Apologetic (the offender's attitude towards the offence)* and *Bites Victim (level of exaltation of the offender)*. The overall behavior that the first four variables *Fondles breast, Touches genitals, Vagina finger/hand, Offender removes clothes* fall within, could be deemed as relatively normal foreplay behavior between two people who share an intimate relationship. This forced us to look into other possible explanations for the top left themes existence. The most deviant variable is *Bites victim* which will be explored further in a later stage, but first we will look at the variable *Verbal resistance* which means that the victim does not engage in more severe defensive behavior than telling the offender to stop. There are several possibilities as to why the amount of resistance of the victim is so low in this theme, for example different levels of intoxication could very well render the victim unable to defend herself or to recall if or how they resisted. Another possibility is that the victim believes the offender to be their partner (due to for example non visual contact and the nature of the behavior being deemed as compatible with intimacy), once again most likely meaning that the victim is intoxicated and identifies the offender as a person whom they would normally engage in consensual sexual relations with. The situation could also be deemed as very traumatic or stressful for the victim if the offender is someone whom they have a previous had a close but non-sexual relationship with, for example the parent of a partner or their own parent. This could lead the victim to either turn passive and unable to respond due to shock or unwilling to cause a scene that could have social consequences of a painful nature for the victim self or the offender,

or due to a fear of not being believed. The *Bites victim* variable indicates that the offender loses control at some point during the assault. This could be the result of a high level of exaltation or frustration. It is also highly likely that the variable belongs elsewhere on the MDS; its close proximity to the centre indicates a relatively high relationship to the other three categories. Also the variable *Kisses victim* found in the Familiar category could be a part of this theme its level of romanticized intimacy would fit well with the overall essence of the theme. The migration of some variables over the MDS is to be expected with more cases, this could very well alter, remove or clarify this category further.

The Intimate category has several variables describing violence and resistance; the variable of *Underlying threat* indicates that there could be a history of violent behavior between the offender and the victim (Several cases coded as intimate contained descriptions of relationships where prolonged periods of domestic violence between the offender and the victim was not uncommon). The reason why the acts of resistance are higher within this category then the other three could possibly be because the victims previous interactions with the offender gives her a sense of understanding for what the offender is capable of in form of violent behavior. This could explain why the violence escalates collectively with the victim's resistance as evidenced in for example the variables *Multiple violence major* and *Physical resistance major*, *Violence Pre* and *Verbal resistance major*. Some variables were not reported in the victim testimonies possibly due to interrogator inquire focus or a previous understanding between the interrogator and the victim. The variables we expect to be influenced by this interrogator and victim interaction are *Vagina penis*, *Ejaculation*, *Ejaculation inside* and *Penis erected*. These variables could very well belong within this category and in that case should be found relatively close to the centre of the MDS. In the Intimate category the offender sees the refusal of sexual relations from their partner as a first breach in their foundation of control; this drives the offender to act in order to avoid feelings of helplessness, usually in a violent manner. The rejection is blown up in proportion by the offender and leaks over to feelings of insufficiency in other areas of his life. This could explain why the violence is so high in this category; the offender's frustration of being denied something that he sees to be within his right as the victim's intimate partner transforms into violent behavior, an act of desperation where the offender tries to reassert control. Groth et al (1979) discuss this offender behavior as situations where *"Sex may be equated with power"*.

The Friend category seems to be a middle ground between familiar and intimate. We can not find a specific pattern that would make Friend stand out from the categories Familiar and Intimate. Several of the variables are actually shared between this category and one or the other of the other two categories, for example *Indifferent* and *Forceful restraint***.**

The Familiar category seems to contain variables that may in some cases indicate that the perpetrator has a misconception that the victim wants to have sex. The variables *Fellatio, Kisses victim,* and *Forces victim participation* may be an indication that the offender has the illusion that the victim wants to participate in the act. In the light of this the *Order victim's clothes* is then a part of this illusion. But there is also a strong correlation towards demeaning the victim and using anal as a primary penetration point. It could be argued that this category follows the MO in which pornography has created a standard model that the offender follows. The authors doubt that pornography containing anal sex as part of normal intercourse was as popular in pornographic movies in the 1970's for example as it is today. It could be of interest to see whether anal penetration occurred as much in rapes in the 1970s as today.

The variable Order victim's clothes could contain at least two motives. One of these was mentioned above, that it is as a part of an illusion, a fantasy of the offender that the victim is forced to play out; the other could be that the offender wants to distance himself from the victim by not removing the clothes himself. The variables Violence post, Demeans victim and Anal penetration could then indicate that the offender has a low self view and knows that what he is doing is wrong, and that the disgust with himself is subjected upon the victim. Not only does the offender demean the victim with words, during/under/after the rape, he also uses violence after the rape in as to further demean the victim and show his strength. The observation that rapists often are depressed and disgusted by their acts, and has a low self view, is something that also Groth et al. (1979) noted. This behavior is very close to what Groth et al. (1979) calls Power Rape in that it is not the desire of the offender to harm his victim but to posses her sexually. The motivation here seems is sexual conquest and an attempt to prove their masculinity. The violence used in this type of rape is suggested to be the amount necessary to reach the objective of sexual conquest. Groth et al. (1979) also suggests that this type of offender often masturbates and fantasies about how he conquers the victim sexually, first by force, he fantasises that the victim participates in the act. However, this is almost never the case; the victim continues to struggle which leads the offender unsatisfied that the reality is not as good as the fantasy and will then

probably rape again. Groth et al. (1979) also noted that these men often have a problem of getting sexually aroused and often forces the victim to perform fellatio or masturbate to achieve an erection, and as noted on the MDS, fellatio is correlating with Familiar. This information and the placement of the Familiar variable suggest that power rapists seek victims they hardly know or are familiar with.

When behavior manifests itself in acts of such a hurtful and demeaning nature as the sexual assault of another human being the value of a statistical approach might seem unfulfilling or far fetched. Can human behavior really be reduced to a value within a few decimals? The short answer is no, it can not but statistics can add a new dimension to the offender's person and thereby further separate the culprit from the other suspects.

Just as every individual in some aspects are unique so is every crime. The behavior elicited by an offender at one crime scene will not be identical to another but there will be similarities. The MDS approach could be a possible avenue for criminal investigators to further differentiate between offenders and eventually hone in on a suspect and thereby fulfill some of the expectations of profiling, namely a more effective use of law enforcement resources.

Limitations

During the study there were a few limitations, reservations and problems. These will be presented here. The categories that were used for coding *Intimate*, *Friend* and *Familiar* are important to highlight because they hold a significant role in our hypothesis, we gave Intimate a relatively clear definition namely that the offender at one point at least had had some form of consensual sexual relations. When going through the cases and the testimonies of the concerned individuals the detail whether or not consensual sexual relations with a previous spouse had actually occurred or not were taken for granted by us, unless there were factors enough to warrant doubt. Friend and familiar were at times harder to distinguish from one another, because here the exact nature of the relationship was not always clear by only examining the actual duration of the start of the relationship and the time of the offence.

During the coding phase a large amount of the cases lacked adequate descriptions of the offender behavior. This made it hard to distinguish whether or not a specific variable existed or not. Possible reasons for this could be that at the point when the testimonies were given by the concerned individuals these variables were not deemed as significant for the ongoing

investigation. Also sometimes the time that had elapsed between the testimony and the actual felony made it hard for some persons to recollect accurately whether or not a behavior actually did occur. The stress of the situations that the victims had to endure is another important factor that could affect the recollection of specific behavior elicited by their attacker. The cases also showed that there were discrepancies between different interrogators and where they focused their enquiries during victim testimonies primarily; this could be a consequence of the interaction of the interrogator and the victim. This suggests that the interrogator may not (either because they do not deem it important or it is already understood due to prior, not recorded, communication between themselves and the victim) pursue lines of enquiry into specific behaviors due to that their main objective was to compile a good understanding of the central aspects of the crime. This could very often be the case when testimonies where given and interrogations were performed with the aid of an interpreter.

The interrogator and victim interaction mentioned above could possibly explain the placing of some variables on our MDS. The following variables *Vagina penis*, *Ejaculation*, *Ejaculation inside* and *Penis erected* are all found within the Friend category, this could possibly be the consequence of a mutual understanding (taken for granted by the interrogator) between the interrogator and the victim that the act had occurred when the offender were deemed as having an intimate relationship prior to the offence. But when the offender was a person with whom the victim had never engaged in similar behavior with at any point of time, all behavior that differed from the normal interaction pattern between the victim and the offender was deemed to be important and possibly easier to recollect on behalf of the victim.

The impression may have been created that we believe that the Swedish criminal system works without flaw because the fact that we use only the victim's story. However, we recognize that no perfect system exists and there might have been offenders that have been sentenced guilty but are innocent. As well as guilty that is acquitted of all charges. But the majority of the sentenced offenders have to be assumed guilty because of other evidence like DNA, details in the victim's statement and other hard evidence. If there are invalid cases that still have been judged as rape, this might affect the results of the MDS.

The placement of the variables Friend, Intimate and Familiar might depend on the number of cases that was coded that way. As mentioned above, there was an uneven distribution of these variables. It would have been better if they had been evenly distributed.

Another weakness of the study is that there might be confounding variables. For example, we might propose that it is the interaction between the offender and the victim that decides the degree of violence in the rape situation. The confounding variable might be that it is the situation or perhaps a mental illness with the offender that limits his ability to control himself and no matter how much or little resistance the victim gives, the violence might still be the same. As we noted in the context of the pre study, the variables were named after the existing behavior and not the other way around. Future research might show how important these variables are for the MDS.

Even though variables are close or far apart, some of the correlation data is not significant. This can have an affect on the placing of the variables in the MDS area.

Even though a variable is far from another in the MDS space this does not mean that it does not correlate with that variable. It only means that it correlate less than with other variables that are very close to the variable that it correlates with. For example, the variable *Indifferent* correlates with *Familiar, Friend* and *Intimate*. It is placed on the line between the category Familiar and Friend because of the negative correlation to *Apologetic* that exists in the top left category. This might be confusing and not give a true picture of the variables places in the spatial area. This, naturally, might also be the case for other variables. However, the authors have crosschecked the placement on the MDS with the correlation matrix. And we argue that this MDS, in general, agrees very well with the correlation matrix.

By interpreting transcripts from interrogations we recognize that we forfeit some variables like the body language and tone of voice. However, we do not believe that the data would have been coded differently if audio or videotapes had been used. The reason for this is the use of binary coding.

During this study roughly 3500 pages of information were read by the authors in search of indicators of offender behaviour, it is possible that some variables that are important for analysis were not found, recorded, or observed/indicated by the victim/witnesses or at the crime scene. The variables that where found and deemed as important by us have all been thoroughly defined in appendix 2, and future research might very well find further variables depicting offender behavior.

Suggested research

We suggest further research into this topic, with a larger number of cases involved and an equal number of cases in the different categories. We also suggest that in such research cases where the offender is unknown to the victim should not be included. The purpose is to create a spatial area that could be used as a template when analyzing future rapes. Then, when a victim describes the unknown offender's MO to the police, the interrogator can fill out a variable list. In cases where the offender has taken measures to hide his identity, for example by using a mask during the attack, the hits and misses of this list compared with this spatial area, might be useful in identifying whether or not this masked offender is a person that the victim might know intimately, as a friend or might be familiar with.

As mentioned previously more cases would move the variables over the MDS, clarifying and altering the categories to some extent. The unnamed category in the top left corner of our MDS would benefit from more research. One could then either merge it with another category or properly assign it its own name, as a separate category.

References

Baker, K. K. (1997). Once a rapist? Motivational evidence and relevancy in rape law. *Harvard Law Review, 110*(3), 563-625.

Canter, D., Bennell, C., & Alison, J. (2003). Differentiating sex offences: a behaviorally based thematic classification of stranger rapes. *Behavioral Sciences & the Law, 21*(2), 157-175.

Canter, D., Coffey, T., & Huntley, M. (2000). Predicting serial killers' home base using a decision support system *Journal of Quantitative Criminology, 16*(4), 457-479.

Daeid, N. (1997). Differences in offender profiling in the United States of America and the United Kingdom. *Forensic Science International, 90*(1-2), 25-31.

Douglas, J. E., Burgess, A. W., Ressl, & Burgess, A. G. (2006). *Crime Classification Manual: A Standard System for Investigating and Classifying Violent Crimes* (2. uppl. ed.). San Francisco: Wiley.

Ellis, L. (1989). *Theories of rape: inquiries into the causes of sexual aggression*. New York: Hemisphere.

Giguère, G. (2006). Collecting and analyzing data in multidimensional scaling experiments: A guide for psychologists using SPSS. *Tutorial in Quantitative Methods for Psychology, 2*(1), 27-38.

Gregow, T. (2006). *Sveriges rikes lag : gillad och antagen på riksdagen år 1734, stadfäst av Konungen den 23 januari 1736 : med tillägg innehållande författningar som utkommit från trycket fram till början av januari 2006 127. uppl.* Stockholm: Norstedts juridik.

Groth, A. N., & Birnbaum, H. J. (1979). *Men who rape: the psychology of the offender* (3. pr. ed.). New York: Plenum.

Hall, G. C. N., & Barongan, C. (1997). Prevention of sexual aggression: Sociocultural risk and protective factors. *American Psychologist, 52*(1), 5-14.

Santtila, P., Junkkila, J., & Sandnabba, N. K. (2005). Behavioural linking of stranger rapes. *Journal of Investigative Psychology & Offender Profiling, 2*(2), 87-104.

Woodworth, M., & Porter, S. (2000). Historical Foundations and Current Applications of Criminal Profiling in Violent Crime Investigations. *Expert Evidence, 7*(4), 241-264.

Appendices

CANTER et als' 27 VARIABLES

A description of the categorization scheme in alphabetical order is given below. An asterisk (*) shows the variables used and in some cases changed in the new list of variables. The new list can be found in Appendix 2.

1. *Anal penetration.* This variable refers to the offender penetrating or attempting to penetrate the victim's anus.
2. *Binds victim.* This variable refers to the use, at any time during the attack, of any article to bind the victim (excluding restraint by the offender's hands).
3. *Blindfolds victim.* This variable refers to the use, at any time during the attack, of any physical interference with the victim's ability to see (excluding verbal threats to the victim to close her eyes or the use of the offender's hands).
4. *Compliments victim.* This variable refers to the offender complimenting the victim (e.g. on her appearance).
5. *Cunnilingus.* This variable refers to the offender performing a sexual act on the victim's genitalia or attempting to perform such a sex act using his mouth.
6. *Demands goods.* This variable refers to the offender approaching the victim with a demand for goods or money. This variable specifically relates to initial demands.
7. *Demeans victim.* This variable refers the offender demeaning or insulting the victim (e.g. using profanities directed against the victim or women in general).
8. *Disguise.* This variable refers to the offender wearing any form of disguise.
9. *Fellatio.* This variable refers to the offender forcing the victim to perform oral sex.
10. *Forces victim participation.* This variable refers to the offender forcing the victim to physically participate in the sexual aspects of the offence.
11. *Forces victim sexual comment.* This variable refers to the offender forcing the victim to make sexual comments.
12. *Gags victim.* This variable refers to the use, at any time during the attack, of any article to prevent the victim from making noise (excluding the temporary use of the offender's hand).

13. *Identifies victim.* This variable refers to the offender takings steps to obtain from the victim details that would identify her (e.g. examining the victim's belongings).

14. *Implies knowing victim.* This variable refers to the offender implying that he knows the victim.

15. *Kisses victim.* This variable refers to the offender kissing or attempting to kiss the victim.

16. *Multiple violence.* This variable refers to the offender perpetrating multiple acts of violence against the victim (e.g. multiple punches).

17. *Offender sexual comment.* This variable refers to the offender making sexual comments during the attack.

18. *Single violence.* This variable refers to the offender perpetrating a single act of violence against the victim (e.g. a single slap).

19. *Steals identifiable.* This variable refers to the offender stealing items from the victim that are recognizable as belonging to the victim.

20. *Steals personal.* This variable refers to the offender stealing items from the victim that are personal to the victim but not necessarily of any great value in terms of re-saleable goods (e.g. photographs or letters).

21. *Steals unidentifiable.* This variable refers to the offender stealing items from the victim that are not recognizable as belonging to the victim (e.g. cash).

22. *Surprise attack.* This variable refers to the offender using a method of approach consisting of an immediate attack on the victim.

23. *Tears clothing.* This variable refers to the offender forcibly removing the victim's clothing in a violent manner.

24. *Threatens no report.* This variable refers to the offender threatening the victim that she should not report the incident to the police or to any other person.

25. *Vaginal penetration.* This variable refers to the offender penetrating or attempting the victim's vagina.

26. *Verbal violence.* This variable refers to the offender threatening the victim at some time during the attack (excluding threats not to report the incident).

27. *Weapon use.* This variable refers to the offender displaying a weapon in order to control the victim.

Appendix 2

VARIABLES AND DEFINITIONS USED IN THE PRESENT STUDY

1. *Admit sexual act*. Admits that he has engaged in consensual sexual relations.
2. *Anal penetration*. Anal penetration was attempted or achieved.
3. *Penis*. Anal penetration was attempted or achieved with penis.
4. *Finger/Hand*. Anal penetration was attempted or achieved with fingers/hands.
5. *Other*. Anal penetration was attempted or achieved with a foreign object.
6. *Apologetic*. Offender asks for forgiveness or acts in an apologetic manner.
7. *Blames victim*. Offender blames the victim for the crime.
8. *Bites victim*. Offender bites the victim.
9. *Binds victim*. Offender uses rope or other to restrain the victim.
10. *Blindfolds victim*. Offender uses tape or other to blindfold the victim.
11. *Compliments victim*. Offender compliments the victim at some point during the act.
12. *Confess*. Offender confesses to a crime.
13. *Cunnilingus*. Sexually attempts/assaults the victim's genitals with his mouth.
14. *Demeans victim*. Offender makes an insulting/demeaning act/comment at some point.
15. *Denial*. Offender denies responsibility for the crime.
16. *Ejaculation*. Offender ejaculation was achieved at some point.
17. *Inside*. Offender ejaculates inside the victim's vagina/anal cavity or other.
18. *Upon victim*. Offender ejaculates on the victim.
19. *Condom*. Offender ejaculates inside a condom.
20. *Next to*. Offender ejaculates next to the victim.
21. *Familiar*. Known by name and limited contact during short timeframe.
22. *Fellatio*. Offender orally penetrates or attempts to penetrate the victim.
23. *Fondles breast*. Offender touches the victims' breasts in a sexual manner.
24. *Fondles buttocks*. Offender touches the victims' buttocks in a sexual manner.
25. *Fondles other*. Offender touches other parts of the victim in a sexual manner.
26. *Forceful restraint*. Offender tries to restrain the victim's movement with his body.
27. *Forces victim participation*. Offender forces victim to participate in the act.
28. *Friend*. Known for a longer period of time on a friendly basis.

29. *Gags victim.* Offender attempts or achieves in gagging the victim.

30. *Indifferent.* Offender acts indifferent towards the crime.

31. *Intimate.* Offender and victim has had previous sexual relations

32. *Justification.* Justifies the crime by implying that the victim deserves it.

33. *Kisses victim.* Kisses or attempts to kiss the victim.

34. *Multiple violence.* Several acts of violence towards the victim. e.g. Offender strikes the victim with an open hand.

35. *Multiple violence Major.* Several acts of violence towards the victim. e.g. Offender strikes with closed fist or kicks the victim.

36. *Off removes clothes.* Offender removes the victim's clothes.

37. *Off sexual comment.* Offender makes a sexual comment during the act.

38. *Orders victim clothes.* Offender order victim to remove their clothes.

39. *Penis erected.* Offenders penis is erected.

40. *Physical resistance.* victim attempts to resist physically e.g. Pushing the offender.

41. *Physical resistance Major.* victim attempts to resist physically e.g. Striking the offender.

42. *Single violence.* Offender strikes the victim e.g. Open hand.

43. *Single violence Major.* Offender strikes the victim e.g. Closed fist/kicks.

44. *Threatens no report.* Offender threatens the victim not to report the crime.

45. *Touch victim genitals.* Offender touches the victim's genitals.

46. *Under laying threat.* Due to a history of violent behavior there is an underlying threat.

47. *Vaginal penetration.* Vaginal penetration was attempted or achieved.

48. *Penis.* Vaginal penetration was attempted or achieved with penis.

49. *Finger/Hand.* Vaginal penetration was attempted or achieved with fingers/hands.

50. *Object.* Vaginal penetration was attempted or achieved with a foreign object.

51. *Verbal resistance.* victim attempts to verbally resist e.g. by saying NO!

52. *Verbal resistance Major.* victim attempts to verbally resist e.g. by screaming NO!

53. *Verbal threat.* Offender verbally threatens the victim.

54. *Violence Pre.* Offender acts violently prior to the sexual act.

55. *Violence During.* Offender acts violently during the sexual act.

56. *Violence Post.* Offender acts violently after the sexual act.

57. *Weapon use.* Offender uses a weapon at some point.

Authors' Note

Systems as the former Violent Crime Linkage Analysis System VICLAS could contain data that would be a good resource for future research on offender behavior and with proper analysis pending future research possibly a great aid for law enforcement personal. We also suggest that more empirical research on crime analysis used by the Swedish police at the present time should be employed possibly by personal with academic background as well as personal with some investigative experience.

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Footnotes

[1] BrB 6 kap §1 means Criminal (Penal) Code, chapter 6 paragraph 1.