

**Testing the Assumption of Behavioural Consistency in a
New Zealand Sample of Serial Rapists**

by

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ABSTRACT

One of the assumptions that underlies the profiling process is that criminals are behaviourally consistent from one offence to another. To date, however, this is an assumption that has not been scientifically validated. The present study therefore tested the assumption of behavioural consistency in serial rape offences.

The author collected dichotomous data on 30 behavioural variables for a total of 439 offences committed by 121 serial rapists in New Zealand. There were two main research aims of the study. The first aim was to test the behavioural consistency of a range of individual behaviours. It was hypothesised that higher consistency would be found for behaviours that reflected a degree of planning or that prioritised control of the victim and the offence environment, because these behaviours might be less affected by environmental factors. In contrast, many sexual behaviours arise directly out of offender-victim interactions and therefore are most affected by environmental factors such as victim resistance. It was therefore also hypothesised that sexual behaviours would display lower consistency.

A consistency measure was used that compared behaviour in consecutive offences. Consistency for each behaviour was defined as present-present or absent-absent matches of that behaviour in consecutive offences. The degree of consistency for any behaviour will be reflected in the consistency score received by that variable based on the number of matches for that behaviour across the offence series. The consistency analysis found moderate to high levels of consistency for the majority of individual

behaviours. As predicted, higher consistency was exhibited for behaviours that prioritised control of the victim and the offence environment, and lower consistency was exhibited for the sexual behaviours.

The second research aim was that if behavioural consistency was found in the results of the consistency analysis, to explore whether there were any underlying patterns to the consistency of offending behaviour. A factor analysis of the consistency scores established that there are clear patterns to the behavioural consistency of offenders consistent with previous analysis of offence characteristics. The factor analysis resulted in three themes or domains to behaviour: hostility, involvement and control.

These findings have theoretical implications for the assumption of behavioural consistency in serial rapists, for the concepts of *modus operandi* and signature in offence behaviour, and for the theoretical understanding of the profiling process. The findings also have practical implications for the practice of profiling and case linkage in New Zealand, and raise possibilities for future directions in research.

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CHAPTER ONE

Introduction: The Consistency Assumption

Alison, Bennell, Ormerod and Mokros (2002) presented a theoretical review of the profiling process in which they criticised the majority of profilers for failing to understand the psychological concepts that underlie the profiling methodology. The authors set out the two key assumptions that that lie beneath the profiling process: first, that criminals exhibit behavioural consistency in their offence behaviours “the consistency assumption”, and second, that similar patterns in offence behaviour will be associated with similar offender characteristics “the homology assumption” (Alison et al., p.122).

The existence of behavioural consistency is essential to the profiling process; Canter (1995, p. 347) described what he labelled the “offender consistency hypothesis”, as “the way an offender carries out a crime on one occasion will have some characteristic similarities to the way that he or she carries out crimes on other occasions”. However, the foundation of this assumption of behavioural consistency is arguably tenuous, and relies on a rather simplistic theory of personality traits and their control over behaviour, that fails to consider the influence of environmental factors (Alison et al., 2002). Trait theory assumes personality traits to be stable and general, and therefore able to consistently influence and predict behaviours over both time and situations. However, this theory has not received much empirical support from the literature

(Shoda, 1999). Alison et al. went on to argue that profilers continue to assume that behaviour can be inferred from global personality traits.

Alison et al. (2002) have proceeded to claim that this first assumption of behavioural consistency has received a degree of empirical support in the forensic psychology literature. However, the research to date on the behavioural consistency of criminals has used two different methodologies: the first has examined behavioural consistency but focussed on the consistency of themes or domains of behaviour; the second has examined linkage analysis, the extent that offences can be linked together through the similarity of behaviour. While the former has found empirical evidence for the existence of consistent behavioural themes (e.g. hostility), there is very little evidence yet for the consistency of the individual behaviours that may make up such a domain (Grubin, Kelly & Brunsdon, 2001; Knight, Warren, Reboussin & Soley, 1998). The second approach has had some limited success with linkage analysis in areas including serial homicide, serial rape, and burglary (Bennell & Jones, 2005; Salfati & Bateman, 2005; Santtila, Junkkila & Sandnabba, 2005). However, while individual behaviours were used in the linkage analysis in Santtila et al. the other two studies only assessed whether domains of behaviour could be used to link the offences.

The purpose of this study is to test the assumption of behavioural consistency in serial sexual assault behaviour. The intention is to examine both the extent of the consistency of individual behaviours as well as that of any domains or themes of behaviour. The thesis will begin with a literature review on all aspects of previous research relevant to this study. The first half of the review

will focus on profiling and will include a description of the profiling process and a discussion of the organised/disorganised typology, the modus operandi and signature concepts, the development of VICAP and VICLAS, rapist typologies and recent research on sexual offending, and finally a discussion of the studies that have reviewed the efficacy of profiling. The second half will consider the research on behavioural consistency including a discussion of relevant studies from both social psychology and forensic psychology.

Based on the literature review the aims of this research and specific hypotheses will be presented. This is followed by a chapter detailing the methodology of the study and a brief description of the sample. After this chapter is a report on the exploratory factor analyses that were conducted on the first and second offences to analyse the underlying structure of the data, and to determine if any variables could be cut from the analysis. Two chapters follow that recount the procedure for and results of the main consistency analysis of the individual behaviours, and then the results of the factor analysis of the consistency scores. This factor analysis was conducted to ascertain if there were any underlying themes or domains to consistent behaviour. The final empirical chapter presents a report of a case study that was conducted on one serial rapist. This case study involved a consistency analysis on all variables, followed by two further analyses on the contrasting offences committed as home invasions and the offences committed as outdoors offences, respectively. These analyses were conducted to determine the impact on behavioural consistency by controlling for the possible differential effect of the environment. The final

chapter is the main discussion chapter, where the results of this study are discussed with reference to previous research and the overall aims of the study.

CHAPTER TWO

Literature Review

This chapter will present a literature review that reports on all aspects of the literature that relate to profiling and behavioural consistency.

The Profiling Process

The following sections will discuss the development of the profiling process by the Federal Bureau of Investigation ('FBI') including concepts utilised by profilers such as the organised/disorganised typology, the MO and signature concepts, the development of VICAP and VICLAS, rape typologies and recent work by David Canter and his colleagues assessing the empirical validity of profiling. As profiling was originally developed by the FBI on serial murderers, the discussion will include references to homicide research, as well as studies on sexual offending. Behavioural consistency lies at the heart of the profiling process, and an understanding of profiling and its associated concepts is essential for a discussion of the implications of a finding that either confirms or denies the assumption of behavioural consistency.

Definitions and Descriptions

There is no single accepted definition for the term offender profiling. It is a reference to a variety of differing procedures used in criminal investigation to provide details or insights into a previously unidentified offender (Copson, 1995).

Geberth (1981, p.46) defines a psychological profile as “an educated attempt to provide investigative agencies with specific information as to the type of individual who committed a certain crime”. In any investigation into a crime, police officers must evolve their enquiries through a series of inferences drawn from the information known about the crime and the offender (Canter, 2000). Many of these inferences will be made directly from forensic evidence such as DNA or fingerprints (Canter, 1994). When such direct evidence is not available, investigators may be limited to the information that victims can provide about the offender and the offence behaviour (Canter, 2000). Profiling has been given many different labels over the years: psychological profiling, investigative profiling, criminal profiling, criminal personality profiling, criminal investigative analysis, criminal behaviour profiling, to name but a few (Annon, 1995). Profiling is a process that allows investigators to infer an offender’s characteristics from an in depth analysis of the characteristics of the offence (Annon; Canter, 1994; Douglas & Munn, 1992; Egger, 1999; Homant & Kennedy, 1998; Warren, Reboussin, Hazelwood & Wright, 1991).

When the offender is unknown to the victim, and there are no obvious suspects, the challenge for police investigators is to establish the offender’s identity with only the victim’s description of the offender and the offence behaviour as information from which to make valid inferences (Canter & Heritage, 1990). In these cases where the police have no clear direction to focus their investigation, the inference or deductive process may become more speculative and intuitive, relying on detectives’ professional experience in similar past cases (Blau, 1994; Boon & Davies, 1993; Canter, 2000; Egger, 1999).

French scientist Edmond Locard originated the Principle of Exchange that stipulates that any person entering a crime scene must both take something from it as well as leaving something of themselves behind (Canter, 1994). Locard's Principle has been influential in many aspects of criminal investigation, most notably perhaps the development of forensic science. Locard's Principle postulates that offenders must always leave behind some physical aspect of themselves and this realisation has led directly to the advancement of processes such as DNA testing. But an offender must also leave behind psychological aspects of themselves, and it is these that are the focus of profiling (Canter). The basis of profiling is that the offender's behaviour is held to reflect his or her personality (Blau, 1994; Egger, 1999). Thus, the way an offender thinks or his patterns of thought ultimately direct his behaviour (Douglas, Ressler, Burgess & Hartman, 1986). As the more antisocial personality traits are considered to be stable ones (Caspi & Moffitt, 1995), it is therefore possible to argue that by thoroughly analysing a crime scene and all aspects of an offender's behaviour, inferences can then be drawn about the offender's personality, helping to generate new directions for a criminal investigation (Cook & Hinman, 1999; Egger; Homant & Kennedy, 1998). Certain consistent behavioural patterns can be hypothesised to exist for each offender that will affect not only all their offending behaviour, but aspects of their non-offending behaviour (Egger, 1999).

Criminal Investigative Analysis

The centre of profiling in the United States lies within the FBI's Behavioural Science Unit at Quantico, which has become known as the National Centre for

the Analysis of Violent Crime ('NCAVC') (Daeid, 1997). The FBI's overall approach to profiling has become known as Criminal Investigative Analysis ('CIA') by NCAVC (Towl & Crighton, 1996).

The FBI were among the first to develop an offender profiling approach specifically to assist investigators of serial homicide or serial rape cases, usually where there is no known link between victims and offender. Criminal profiling was officially introduced into the Bureau in 1972 with the Behavioural Science Unit following the prominence of several serial and mass homicide offenders during the 1960s (Egger, 1999; Woodworth & Porter, 1999). Early profiles were based mainly on psychoanalytic techniques and clinical intuition (Grubin, 1995). Then, during the late 1970s the FBI attempted to formalise a more developed technique by collecting as much information as possible about known offenders, particularly serial sexual offenders and murderers (Egger; Douglas, Burgess, Burgess & Ressler, 1992).

Homicide

In 1982 the FBI was given a grant from the National Institute of Justice, Department of Justice that enabled them to allocate the time and manpower to interview in depth 36 convicted sexual murderers held in United States' institutions. The murderers had killed an average of 5 or 6 victims, for a total of 118 victims (Cook & Hinman, 1999; Egger, 1999). The FBI also studied official records such as psychiatric reports, criminal records, prison records and court transcripts (Ressler, Burgess & Douglas, 1988). In their interpretation of this information, the FBI was guided by existing offender classifications and

typologies, and psychological theories that had been developed to explain offending behaviour (Cook & Hinman; Douglas et al., 1992; Woodworth & Porter, 1999).

The following section will consider one of the most common typologies used by the FBI in their profiling: the organised/disorganised typology.

Organised versus Disorganised Offenders

The following section will review the typology of organised/disorganised offenders. This typology is relevant to a discussion on behavioural consistency as its basis is an assumption that offenders will consistently demonstrate either organised or disorganised behaviours at crime scenes, depending on their personality. However, research has shown that offenders often exhibit both organised and disorganised behaviours (Canter, Alison, Alison & Wentnik, 2004).

One of the first typologies to emerge from the FBI's interviews with the incarcerated murderers was the classification of these offenders into two categories: organised and disorganised offenders (Egger, 1999; Douglas et al., 1986; Homant & Kennedy, 1998; Woodworth & Porter, 1999). During the following discussion of this typology, it is important to remember that the FBI have not produced empirical evidence in support of this typology; it appears to have been driven by the FBI's interviews with serial murderers in custody and originally focussed only on lust and sexual sadistic murder (Canter et al., 2004; Hazelwood & Douglas, 1980; Ressler, Burgess, Douglas, Hartman, & D'Agostino, 1986; Woodworth & Porter, 1999). The typology was then presented

in the FBI's Crime Classification Manual as relevant to all sexual homicides (Canter et al; Douglas et al., 1992). Due to its lack of empirical validation, the typology has been criticised in the psychological literature (Canter et al).

The typology is based on an analysis of the crime scene left behind by each offender (Annon, 1995; Douglas et al., 1986; Towl & Crighton, 1996). An organised crime scene shows signs that the offence was planned; the victim was targeted specifically by the offender, there are indications that the offender tried to control many different aspects of the offence and the victim's behaviour and even speech, some form of bindings are employed, the body is hidden from sight, there is less likely to be a weapon found or physical evidence left behind, and the victim or her body is often transported to a different location from where she was first taken (Annon; Holmes & Holmes, 2002). Based on the observations made of the 36 serial murderers interviewed, an FBI profiler can then infer that an organised offender has more than average intelligence, is more likely to be sexually and socially adept and may have a partner, has a skilled job, was subjected to inconsistent physical abuse in childhood, is able to control his emotions during his offences, has access to transportation, will pay attention to any media reports about his offences, and may well have experienced a precipitating stressor prior to his first offence (Annon; Holmes & Holmes).

In contrast, a disorganised crime scene shows little indication of planning; instead there is evidence of a spontaneous crime. These crime scenes are more likely to be chaotic with the victims just carelessly left at the scene, unlikely use of bindings, unpredictable use of violence, sexual assault after the victim's

death, there is a greater likelihood of forensic evidence, and a weapon of opportunity is more likely to be used (Annon, 1995; Holmes & Holmes, 2002; Towl & Crighton, 1996). From these types of disorganised crime scenes, the FBI profiler is likely to conclude that the offender is also a disorganised offender. Such an offender is more often less intelligent than an organised offender, is unlikely to be socially or sexually adept or have a partner, will have an unskilled occupation, will be anxious and less emotionally controlled during the offence, pays no attention to media reports, may live near the crime scene, and is less likely to have experienced a precipitating stressor (Annon; Holmes & Holmes).

In total, Ressler and Burgess (1985) have listed around 25 different variables that differentiate the personality, socioeconomic details and crime scene behaviours of the organised and disorganised offenders. Because of various factors such as the planning, lower likelihood of forensic evidence left at the crime scene, and generally higher levels of intelligence, the FBI has speculated that organised offenders are more difficult to identify and apprehend than disorganised ones (Homant & Kennedy, 1998).

This classification has evolved into more of a mixed typology than originally conceived by the FBI (Homant & Kennedy, 1998). Although there appear to be distinct differences between the organised and disorganised categories, there is a mixed type that has turned out to be prevalent, probably because most crime scenes will have aspects of both types present (Homant & Kennedy). It is not clearly set out in the FBI's literature how many indicators are required before a crime scene can be classified as organised, disorganised or mixed. Indeed, the

process is likely to be more organic and intuitive for FBI profilers than can be clearly set down in any concrete form (Homant & Kennedy).

Canter et al. (2004) have strongly criticised the organised/disorganised model, arguing that very little clarification has been provided by the FBI as to the theory and data that supports this typology. They have identified that the typology's reliability has never been tested on a subsequent sample of offenders (Canter et al). Indeed, Canter and his colleagues go so far as to argue that the typology is merely derived from common sense rather than science, and ultimately amounts to little more than conjecture. The consequences of the lack of scientific validation is that it has not yet been established if the typology can be generalised to a wider group of offenders than the 36 serial murderers the typology was originally developed on.

Despite these valid criticisms, there can be no doubt about the widespread recognition and influence of this typology, both in the popular press and academic literature. This model is often at the very centre of discussions about profiling, yet its essential validity has not really been questioned to date (Canter et al., 2004). The almost universal acceptance of such a potentially unreliable doctrine led Canter and his colleagues to scientifically test the model.

Thirty nine variables taken from 100 sexual murders in the United States were subjected to multidimensional scaling, to determine if distinct subsets of organised and disorganised features could be found in the analysis. The results showed no strong differentiation between the disorganised and organised variables across the serial murder offences. The data indicated that the organised behaviours were more frequent in occurrence and appeared to be

actually characteristic of the offence of serial murder. These behaviours occurred across most serial offences, and what appeared to distinguish the offenders was the degree and form that their disorganisation took (Canter et al., 2004). Canter and his colleagues concluded that when the nature of a serial murder offence is considered, these results are not that surprising. Accomplishing the number of violent and often sexual assaults that result in the disposal of a body requires at least a degree of planning or control. So to summarise, the data showed no support for the existence of two distinct types of offending in serial murder. Instead, the offending appeared to be characterised by a set of high frequency core variables that would be classified as organised. The disorganised variables were more intermittent and did not make up a discrete type (Canter et al).

It must be noted that this piece of research can be criticised itself for its methodology. The data was sourced from the Mullen Corpus of Serial Killer data. This is a collection of secondary archival sources including national and international United States newspapers, journals, true crime magazines, periodicals, trial transcripts and biographies. The authors claim that the different sources in the collection of materials are used to corroborate each other and that collectively their reliability is high (Canter et al., 2004; Canter & Wentnik, 2004). However, it is not comparable to data taken directly from police or FBI files which are comprised of actual crime scene reports, autopsy reports and witness statements. Canter et al.'s study can also be criticised for a lack of statistical independence: for some of the offenders in the sample, more than one murder from their offence series was included in the analysis.

The following section will discuss the concepts of modus operandi (method of operating, 'MO') and signature.

Modus Operandi and Signature

The concepts of modus operandi (method of operating, 'MO') and signature are frequently used by the FBI in their profiling. These concepts are relevant to the issue of behavioural consistency as signature is held by the FBI to reflect the most consistent aspects of offending, whereas MO behaviours are believed to be more subject to change (Douglas & Munn, 1992; Hazelwood & Warren, 2003; Turvey, 2000).

The MO refers to the practical aspects of the offence; the methods employed by the offender to successfully carry out his crime. As these behaviours are considered learned behaviours and more affected by context, they are seen as changeable depending on the offender's past experiences and the specific situation that he finds himself in (Homant & Kennedy, 1998). A criminal's MO can evolve and become more perfected as the criminal grows in confidence and experience. Over time the criminal may recognise aspects of his MO that are flawed and need to be changed, or perfect other aspects that work and are used over a series of offences (Turvey, 2000; 2002). The MO can also devolve should the offender be the victim of a deteriorating mental state or a long term user of drugs or alcohol (Turvey, 2002). The MO generally (but not always) is aimed at one of three purposes: to protect identity, to escape safely post-offence, and to achieve the successful completion of the offence (Turvey,

2000). Examples of behaviours that can be included in an offender's MO include the degree of planning that goes into the offence, pre-surveillance of a potential crime location, bringing a weapon to a crime scene, the use of a disguise, gag or bindings during the offence, using a condom or making the victim shower after a rape attack, the use of transportation and the abduction of the victim to a pre-determined location (Turvey, 2002).

The signature in contrast, is related to their personality and is psychologically motivated behaviour. These behaviours are related to the offender's fantasies of his perfect crime, and while they can evolve over time, the central theme will remain the same. The FBI argues that it is these distinctive signature aspects that are most important for profiling and for linking offences to one offender (Homant & Kennedy, 1998).

Keppel (1995) and Daeid (1997) argue that a signature evolves from the offender's fantasies about his offending. Daeid proposes that a rapist may often begin by fantasising about certain behaviours that then escalates into the commission of the offender's first rape. The offender's victim then becomes a part of his further fantasising, leading to a never-ending cycle in which the fantasy reinforces the behaviour which in turn reinforces the fantasy (Daeid). Signature behaviours can then be seen as those behaviours that meet the offender's needs. As the behaviours are unique to the particular offender, this is an area that can be used to distinguish between crime scenes and even between offenders. However, it would be misleading to see signature as an inflexible or static concept; the evidence of one particular offender's signature at different crime scenes may not come from identical behaviours. Rather, the

profiler looks for a manifestation of the offender's overall signature aspect or theme. Recognizing the signature features of an offence is a very subjective process that may take two different profilers in differing directions. This is because a profiler does not actually know the motivation of the offender that lies behind certain behaviours; he can only infer from the evidence left behind (Turvey, 2002).

The distinction between the two concepts of MO and signature is not as clear cut as the FBI presents, particularly when the disorganised/organised categories are factored in (Homant & Kennedy, 1998). Whether an individual is organised or disorganised is believed to relate to their personality, (Douglas et al., 1992; Ressler et al., 1986) and should therefore be associated with the signature aspect of their crime though the nature and strength of this association might vary. However, the more dynamic MO refers to the practical methods used to successfully accomplish offending. This learning from past mistakes and accomplishments in their offending also relates to the disorganised/organised dichotomy as some offenders are likely to become more careful and organised over time (Homant & Kennedy). This in turn indicates that the disorganised/organised categories may not be as fixed as the FBI claim, with some offenders moving from one category to another during their offending career (Homant & Kennedy).

Further complicating the picture is the reality that the same behaviours may service signature and MO in different offences; there are no behaviours that are unique to one or the other. The same behaviour may even service both signature and MO for an offender in one particular offence (Hazelwood &

Warren, 2003; Turvey, 2002). Take, for example, a sex offender who regularly places a pillow over his victim's face as part of his signature aspect as an essential element of his fantasy is that the victim is actually someone else. If the offender also has an evolved MO that he has developed to prevent capture by the police, he may also cover his victim's face to prevent recognition or description to the police (Turvey).

Aims and Processes of CIA

The following section will discuss the process that FBI profilers use in creating a profile. The aims of profiling for FBI investigators include narrowing down the list of possible suspects and indicating new directions for the investigation. In the United States, the use of profiling has been extended to provide advice on investigative strategies such as the interrogation of suspects, or to predict dangerousness in offenders at the time of sentencing or parole. Profilers have also suggested trial strategies, and been used as experts in trials to expound on the profiling process and the linking of more than one offence to one suspect in the absence of corroborating forensic evidence (Cook & Hinman, 1999; Homant & Kennedy, 1998).

Douglas and Burgess (1986) described several steps in the FBI's profiling process. For a sexual assault this would include a thorough evaluation of all aspects of the offence and the offender's behaviour including details of verbal, physical and sexual behaviour, careful analysis of the crime scene, victim characteristics including demographic characteristics and lifestyle details, and any physical evidence, crime scene photographs and police reports available

(Annon, 1995; Douglas & Burgess; Homant & Kennedy, 1998). Any information about the offender's pre and post offence behaviour is also considered important (Douglas & Burgess; Homant & Kennedy). Questions that the profiler might ask themselves to formulate the profile include whether the offences was planned, whether a weapon was used and why it was used, was there a surprise or deceptive approach to the victim, did the offender attack out in the open, how did the offender respond to any victim resistance, was anything stolen, what was the method of operation, and whether fantasy appeared to play any role (Annon). Once this information has been thoroughly analysed a profile of the offender is developed along with suggestions for the direction of the investigation. The description of the offender included in the profile may refer to gender, age, intelligence level, education, employment status, relationships, military history and whether a vehicle was used. These details are only ever speculations and are not anticipated to all prove to be accurate (Douglas & Burgess; Homant & Kennedy). Many authors have held that profiling is mainly effective when the offender suffers from a degree of psychopathology that manifests itself in extreme and aberrant behaviour involving forms of ritual, sadism, torture (Egger, 1999; Geberth, 1996; Cook & Hinman, 1999; Holmes & Holmes, 2002; Woodworth & Porter, 1999).

These details are arrived at through a deductive process that relates and compares the information about the offence to the profiler's experiences of other similar offences and offenders. Profilers may also attempt to place themselves in the position of the offender and reenact the crime, trying to estimate the kind of person who would have performed those criminal acts. The focus of the profile is

practical in that its chief aim is to provide details that will assist in the identification, arrest and successful prosecution of the offender (Douglas et al., 1986; Douglas & Burgess, 1986; Homant & Kennedy, 1998).

The FBI's approach to profiling can be seen as a top-down data-processing approach, using a profiler's investigative experience and knowledge of offenders (Boon & Davies, 1993; Woodworth & Porter, 1999). One of the FBI's most well known profilers, Robert Ressler, even maintained that once all the relevant data had been absorbed, his best profiles arrived uninterrupted and almost as a "stream of consciousness" (Boon & Davies, p. 224). It is therefore understandable why the FBI's work has received so much criticism from authors whose focus is more grounded in science and empirical behavioural research (Canter, 1994, 1995, 2000; Canter & Heritage, 1990; Egger, 1999; Turvey, 1998, 2002).

Although the FBI claims their work is grounded in their research and classification of offenders, this body of work was mainly carried out in the 1970s and 1980s and is in need of updating to be representative of the current population of offenders. The original incarcerated murderer interviews were carried out on 92% Caucasian offenders, and the interviews with serial rapists involved 35 Caucasians, five African-Americans and only one Hispanic offender (Egger, 1999; Cook & Hinman, 1999). The FBI's research has also been criticised for its methodological weaknesses: for example their classification system of organised/disorganised offenders actually evolved through information about both the crime scenes and the offenders. Therefore the ability of the

classification system to distinguish between the two types of offender based on their crime scenes becomes inevitably circular (Homant & Kennedy, 1998).

VICAP and VICLAS

NCAVC has created a database of violent offenders known as the Violent Criminal Apprehension Programme ('VICAP') (Daeid, 1997; Icove, 1986). This was initially created with 25 incarcerated serial murderers. Since then VICAP has been constantly updated with details of new unsolved violent crimes (Daeid). After an offence has been entered into VICAP, it is then continually compared against the other cases in VICAP using a checklist of certain crime details. This is to identify any features of signature and MO particular to that offence which will then enable NCAVC to detect crimes that have been committed by the same offender (Daeid). For example, if a convicted murderer's offence details are in VICAP, then any future unsolved homicides can be compared to the convicted offence, to determine the likelihood of that offender having committed other crimes. The signature and MO aspects of the crime are most useful as they are the behaviours likely to be repeated across an offender's criminal lifestyle. VICAP actually produces a report that lists the 10 most likely matches in VICAP to the unsolved crime just entered in to the database (Icove).

However, VICAP suffers from being under-used by police agencies across the United States. The main problem appears to be the difficulty and time involved to submit a VICAP report. There are complaints that the VICAP form is too long and inconvenient to complete. Other complaints are that VICAP only

involves homicides and needs to be expanded to other offences such as sexual assaults to be of greater benefit to detectives. Also, VICAP has not been significantly changed since its commencement in 1985. Although VICAP 2000 was launched a few years ago, there are still criticisms that the database is too small (Turvey, 2000).

Following the development of VICAP, in the mid-1980's the Canadian Police Information Centre (CPIC) Advisory Committee, that included representatives from the various different police services across Canada, decided that Canada also needed a central database to record and compare violent crimes across Canada. In due course the Violent Crime Linkage Analysis System (VICLAS) was created (Johnson, 1994). Following an initial unsuccessful attempt, extensive research was conducted on certain American linkage systems including VICAP and other major state initiatives and VICLAS was established. Collins, Johnson, Choy, Davidson and MacKay (1998) have described VICLAS' development and testing and have reported the case linkage system as one of the most successful of its kind in the world due to the emphasis placed on the reliability and validity of the system. One of the reasons for its success is the emphasis that has been placed on the training and qualification of all VICLAS analysts before they are allowed to use the system. Also, VICLAS analysts will return submitted forms to detectives if there is insufficient information or if the form is completed incorrectly. This ensures the detail and accuracy in VICLAS remains of the highest quality possible (Turvey, 2000).

VICLAS is much more ambitious in scope than VICAP and includes all solved and unsolved homicides and attempts, solved or unsolved stranger

sexual assaults, missing person cases where homicide is most likely indicated, unidentified bodies where homicide is indicated, and all non-parental abductions and attempted abductions (Johnson, 1994).

VICLAS has become international in its scope. Not only is it compatible with the American databases so that searches can be coordinated across North America, but other countries such as Australia, Belgium, Austria, the United Kingdom and the Netherlands have implemented VICLAS with many other countries considering following suit (Collins et al., 1998; Johnson, 1994; Turvey, 2000). As of 2006, VICLAS was being introduced into New Zealand by the Criminal Profiling Unit to assist with case linkage of serial rape and homicide cases.

The following section will consider the studies that have tested the efficacy of the profiling process.

Reviews of Profiling

As the assumptions that underlie profiling have not yet been scientifically validated, it is useful to consider what success profiling has enjoyed since its inception. Considering the degree of concern exhibited in the literature on the validity and efficacy of profiling (Canter, 1994; Canter, 2000; Canter & Heritage, 1990; Copson, 1995; Egger, 1999; Jackson & Bekerian, 1997; Jackson, Van Hoppen & Hebrink, 1993; Kocsis, 1995; McCann, 1992; Pinizotto, 1984; Wilson & Soothill, 1996), there have been very few scientific reviews of profiling.

While the FBI has claimed an accuracy rate for their profiling of around 80 percent (Ressler & Shachtman, 1992), it is not clear what exactly is meant by

80% accuracy, or what the FBI's grounds are for this claim. According to Copson (1995) the reference is actually to a study carried out by FBI agent John Douglas in 1981 to assess the costs and benefits of profiling services provided since 1978. In the 192 cases considered, the profile assisted investigators in narrowing the focus in 77 percent of the cases where the offender was eventually identified, and helped directly in this identification in 15 of the investigations reviewed. The study concluded that a total of 594 investigative days were saved by the provision of the profiling services, and that all investigators agreed that the service should be continued by the FBI (Douglas, 1981 in Copson).

However, as Wilson and Soothill (1996) point out in their evaluation of profiling in 1996, an error rate of 20 percent is actually quite alarming for a process that is at least theoretically based on scientific principles. What complicates any estimate of the success or fail rate of profilers is the variety of differing operational definitions that can be assigned to profiling and its results. How do we define success for profiling? Is it an actual arrest or even the conviction of a suspect, and does the arrest have to be seen as stemming directly from the profile? Or it is sufficient to relax the criteria and allow the detectives who received the profile to rate how helpful the advice was and how it aided the investigation (Wilson & Soothill). The 80% success rate given by the FBI does not appear to equate to any scientific definition of validity or reliability. The baseline for any review of profiling should be the percentage of cases that are classified as successfully resolved, but that did not involve profiling.

The first known scientific review of profiling was by a doctoral student who examined the differences in both the profiling process and its outcomes by comparing the work of four groups of profilers: four professional profilers, six detectives, six psychologists and six students (Pinizotto, 1984). The study was mainly interested in the distinctions between the professional profilers and the other groups to assess whether there were any qualitative differences in the professional profilers' methods and whether they were more successful with the personality profile they created.

As to the success or failure of the profiles drawn up, the results showed that there were no significant differences between the profilers and non-profiler groups for a homicide case, but that the profilers did score significantly higher on a sexual offence case. In their creation of this profile, the profilers were able to recall far more aspects of the case, specified more details as essential for profiling, and provided more predictive factors than any of the other groups. In other words, not only was the profiling group more accurate than the other groups, but their profile was also richer and more detailed (Pinizotto, 1984). Pinizotto theorised that the reason the profilers performed so much better on the sexual assault rather than the homicide case was that sexual assault victims have been able to provide far more information to investigators than is available in homicide cases, and the profilers therefore benefit from the larger baseline of knowledge gleaned from previous cases (Pinizotto; Wilson & Soothill, 1996).

One attempt at a field test of profiling was conducted in the Netherlands by the Netherlands Institute for the Study of Criminality and Law Enforcement. Here, 20 different detective teams who had utilised the Netherlands' profiling

unit were asked to attend interviews to provide an assessment of the profiling advice provided. A total of 42 pieces of advice or suggestion had been made to the 20 teams, but only six actual profiles had been provided. The remaining pieces of advice included investigative suggestions, personality assessment, crime assessment and interview techniques (Jackson et al., 1993).

On the surface the results appear very positive: only two of the 42 suggestions were assessed in a negative manner. However, the six actual profiles provided did receive quite mixed evaluations from the detectives. Two of the appraisals were considered as positive, three as intermediate and one as negative (Jackson et al., 1993). Also, none of the profiles led to an arrest but as only two of the profiles were actually used in practice, this may not be that surprising. Many of the detectives who criticised the profiles said that they were “too general” and therefore gave the detectives insufficiently compelling reasons to redirect the line of investigative enquiry (Wilson & Soothill, 1996). However, spontaneous comments made by the detectives outside the official realm of the interviews indicated more overall positive results. Many of the detectives believed that they had benefited just from discussing their cases with the profilers, and that they had gained new ideas and perspectives that would assist them in future investigations. The researchers stated that these types of statements show how difficult it is to truly measure the success or failure of a complex process like profiling (Copson, 1995, Jackson et al).

In 1992 the Home Office in the United Kingdom commissioned a report by Paul Britton, a consultant clinical/forensic psychologist who worked as a profiler. The terms of reference asked Britton to evaluate currently operational British

profiling services and make suggestions for future directions (Britton, 1992).

Britton drafted a questionnaire that was sent to all Heads of the Criminal Investigative Division (CID) in the United Kingdom, asking about their use of the profiling services. Britton used two police Superintendents to carry out this part of the research, presumably to distance himself as a profiler from the review of profiling. However, the questionnaire only really asked police to identify profilers and assess how far their advice assisted in actually arresting suspects. These are quite strict criteria for a profiling review and led to very few positive evaluations of the services provided (Britton; Copson, 1995).

In 1995 Gary Copson published a study that reviewed profiling for the Home Office Police Research group (PRG) in the United Kingdom. A total of 184 questionnaires were sent out to detectives who had commissioned operational profiling advice for investigations. The returned questionnaires dealt mainly with homicide cases (61%) and involved the work of 29 profilers. The profilers involved were incredibly varied and included 4 forensic psychiatrists, 5 academic psychologists, 4 clinical psychologists, 6 forensic psychologists, 3 therapists (unspecified), 4 British police officers, 1 British police scientist, 1 British police data system analyst, and 1 American law enforcement agency (Copson). Arguably several of these individuals do not really belong to even a flexible definition of profilers, but according to Copson's study, the advice given all came under the definitional umbrella set up by the researchers, i.e. that the advice was based on the "inference of offender characteristics from behaviour exhibited in a crime or a series of crimes, and offered to investigators as the product of statistical or clinical expertise" (Copson, p. v).

Fifty-three percent of respondents believed that the profiling advice they received added something of value to the information that they had originally provided to the profiler. Specifically, only 14.1% of the advice given helped solved a case, only 16.3% of the advice was directly acted upon, and only a very low 2.7% of profiling advice actually assisted in identifying the offender. However, despite these apparently negative data, 82.6% of the detectives reported that the advice had been useful, usually by helping their own understanding of the case (as in 60.9% of cases) or by supplying corroboration of the detectives' own inclinations (51.6%). Significantly, 68.5% of all respondents said that they would request the input of a profiler again, though only 49.5% would necessarily use the same profiler again (Copson, 1995).

From this study, it appears that although a large proportion of police detectives generally find profiling advice both helpful and instructive, when the precise nature of the advice, or the manner in which it assisted the investigation is attempted to be specified and identified, the result is a much poorer set of evaluative responses. Just like profiling itself, the assessment of profiling appears to be very hard to specify. While profilers do not necessarily succeed in their own goal of accurately predicting offender characteristics, their advice is nonetheless useful in indirectly helping the direction of an investigation (Copson, 1995). One possibility is that detectives are not accurately giving credit to the profilers when they do act upon the profiling suggestions; rather the detectives are presuming that it was their own thought processes and insights that secured the successful outcome (Copson).

Jackson and Bekerian (1997) argue that in order for profiling to be of more use to investigations, there must be better understanding on the part of both profilers and investigators. In other words, police officers need to recognize what profiles can offer to an investigation including their limitations. On the other hand, profilers must try to appreciate the requirements of an investigation and tailor their profiles to meet these needs as best possible.

While the results of the research into the effectiveness of profiling are mixed, the authors all appear to conclude that there is a future for profiling in police investigations, but that caution must be exercised and the limitations of profiling recognised (Copson, 1995; Jackson et al., 1993; Jackson & Bekerian, 1997; Kocsis, 1995; McCann, 1992; Pinizotto, 1984; Pinizotto & Finkel, 1990; Wilson & Soothill, 1996). One example of such limitations is that profiling is more appropriate to reduce the number of potential suspects and help redirect an investigation in the right direction, rather than to come up with the right specific individual as the perpetrator of the crime. If a profiler is required to be too specific in their profile description, this increases the potential for negative consequences should the profile be wrong, such as the Rachel Nickell case in the United Kingdom where police and profiler alike suffered a massive media backlash when the profile led police to a sting operation that arrested the wrong man. Profiling should never take the place of a thorough investigation by trained police officers, and should only be just one part of any investigation (Wilson & Soothill).

Typologies of Rape

The next section will discuss the typologies that have been developed on sexual offenders. These typologies represent the most important attempts to classify rapists using a clinical population and are of value in the development of theory explaining sex offending. The present research was conducted on a sample of serial rapists, and therefore there is a need for an understanding of the nature and types of sexual offending. Any psychological themes to sexual offending identified in the present research will need to be considered in relation to earlier studies on sexual offending.

Groth's Typology

Groth, Burgess and Holmstrom (1977) made one of the earliest attempts at a comprehensive typology for sex offenders. Groth and his colleagues took as a sample 133 randomly selected convicted rapists from the Massachusetts Centre for the Diagnosis and Treatment of Sexually Dangerous Persons (MTC), and 92 adult rape victims from a major city hospital emergency service. The two sets of offences committed by the offenders and suffered by the victims, respectively, occurred close in time but did not overlap in any particular offence. Descriptions of the sexual assaults were taken from the entire sample and analysed for development of the typology (Groth et al).

Groth and colleagues (1977) proposed a typology from this research that focused on the two concepts of anger and power as motivations for rape. Groth et al. theorised that aggression and sexuality occur together to motivate any rape, but the sexuality merely becomes the vehicle to express the feelings of

aggression underlying the assault. While Groth and colleagues proposed that in all sexual assaults the elements of sexuality, anger and power are present to varying degrees they argued that it is anger and power that differentiate between offenders. Rape is conceptualised as a “pseudosexual act” (Groth et al., p.1240) that is more concerned with issues of control, dominance and hostility than with the sexual aspects of the offence (Groth et al).

Groth et al. (1977) did not provide any detail on the procedure by which they classified rapists into the various categories except to state that they analysed the offence descriptions provided by offenders and victims and relied on their clinical experiences in making their decisions. Groth and colleagues estimated that nearly 65 percent of the offenders in the sample were *power* rapists and 35 percent *anger* rapists. In their analysis, Groth et al. divided their power and anger rapists further to create four categories in total: the *power-assertive* rapist, the *power-reassurance* rapist, the *anger-retaliation* rapist and the *anger-excitation* rapist. The power rapists were predominantly concerned with establishing control and dominance over the victim. There was generally less violence and what violence was used was for the purpose of control (Schwartz, 1995). The *power-assertive* rapist was proposed as a type that is predominantly concerned with exerting dominance over the victim, and views rape as a means of controlling women in order to express his masculinity and mastery (Groth et al). The *power-reassurance* rapist is also motivated by power issues, but is reacting to self-doubts about his sexual adequacy by placing women in a position where he has total control and cannot be rejected sexually (Groth et al).

The *anger-retaliation* rapists by contrast tended to use much higher levels of violence and degradation to express anger or hostility towards their victims. Profanity is frequent and sexual satisfaction is not common. The motive is often revenge against women and the rapist may be using the victim to represent someone in his life (Groth et al., 1977). The *anger-excitation* rapist has also been called the *sadistic* rapist by Groth (1979). This is the least common and most dangerous assault and can result in death. This rapist finds sexual pleasure from the suffering and degradation of his victims (Groth et al).

Overall the most frequent type in Groth et al.'s (1977) combined sample was the *power-assertive* rapist (44 percent) followed by the *anger-retaliation* rapist (30 percent), the *power-reassurance* rapist (21 percent) and finally the *anger-excitation* rapist (5 percent). However, as criticised by Homant and Kennedy (1998), these percentages were complicated by the split sample: the *anger-retaliation* rapists were actually the most frequent type in the offender sample, but third in the victim sample (Groth et al). The incongruity may have been an artefact of the sample split: the offender sample came from a potentially more dangerous population than the victim sample as the MTC is for sexually dangerous offenders. Also, the inconsistency could reflect a difference in the coding of the offences and the way that the victims and offenders perceived the assaults. The difference in percentages between the samples indicates some of the overall problems in using an uneven sample. Other concerns are the irregular coding of co-offenders. In the offender sample, these co-offenders are coded as two offenders, but in the victim sample the co-offenders were coded once for the primary assailant only. The inconsistent coding may have led to

some of the more dangerous MTC offenders in the offender sample actually being counted twice relative to the offenders from the hospital sample, leading to a higher percentage of *anger-retaliation* rapists in the offender population.

Groth et al.'s (1977) typology has only received limited assessment and validation by testing the relevance of the rapist types to further samples of offenders (Knight et al., 1998). As stated above, the MTC is for the placement of the offenders who have been judged the most sexually dangerous in the United States. It is possible that typologies derived from these extreme offenders may not generalise to other populations. It is also a concern that the split sample may have threatened the validity of Groth et al.'s results by inconsistency in the two samples used.

FBI's Typology

From 1978 the FBI also began to interview serial rapists. A total of 41 serial rapists each responsible for between 10 and 59 rapes were interviewed. The total number of victims attacked by these offenders was 837 (Cook & Hinman, 1999; Hazelwood et al., 1995; Hazelwood & Burgess, 1987; Hazelwood & Warren, 1989). Later the FBI went on to interview sexual sadists and then child molesters (Cook & Hinman).

The FBI has actually adapted the rape typology of Groth et al., (1977) based on their interviews with these 41 incarcerated serial rapists. Douglas et al. (1992) suggested four categories of rapists that are closely related to Groth et al.'s typology: the *power-reassurance*, *exploitive*, *anger* and *sadistic* rapists (see below for a more detailed discussion of Groth et al.'s typology). Hazelwood

(1995) has claimed that Groth et al.'s categories have been found to be accurate when used by the FBI's profilers. However, the FBI has not undertaken any empirical assessment of Groth et al.'s typologies, and it appears that this evaluation comes merely from the work of the FBI in profiling rapists and interviewing the 41 rapists in custody (Hazelwood).

One reported study resulting from the 41 rapist interviews claimed to identify a subgroup of 10 serial rapists that the FBI labelled as 'increasers' (Hazelwood, Reboussin & Warren, 1989). These increasers differed from the rest of the sample in that they were held to escalate the level of force used in their rapes in succeeding offences. These rapists also offended on a more frequent basis, and were more inclined to perform sadistic acts on their victims (Hazelwood et al). This study has been criticised for methodological weaknesses (Homant & Kennedy, 1998). In particular it has been noted that all coding inconsistencies were solved simply "through an assessment of all available information" (Hazelwood et al., at p. 69). No further details were supplied, indicating that these coding disagreements were simply discussed and a rather ad hoc decision reached by the researchers (Homant & Kennedy).

The influence of the work of Groth and his colleagues (1977) on the FBI is also found in the explicit use of this typology in Hazelwood's (1995) writing. Hazelwood stated that Groth et al.'s categories have been found accurate when used by the FBI's NCAVC profilers. NCAVC has not undertaken any empirical evaluation of Groth et al.'s typologies, and it appears that this evaluation comes merely from the work of NCAVC in profiling rapists and interviewing those in custody (Hazelwood). Hazelwood has also introduced the concepts of 'selfish'

and 'unselfish' behaviour as offender modes of interacting with the victim during sexual offending. Generally, selfish behaviour refers to the use of the victim as an object with no concern for her welfare. Such an offender is more likely to commit behaviours that are violent and intended as hostile or demeaning to the victim. These offenders can be found in the *power-assertive* and both anger categories. Unselfish behaviour is mainly found in the *power-reassurance* rapist and reflects an offender-victim interaction where the offender exhibits concern for the victim's welfare through verbal or physical behaviours (Hazelwood)

Although these concepts really add nothing new that is not already expressed in Groth et al's typology, they do focus attention onto the interaction style between offender and victims.

Massachusetts's Treatment Centre Model: MTC:R3

Knight and Prentky (1990, 1991) have more recently developed typologies for sexual offenders using an empirically based process. They also used the offenders at the MTC as their sample base for the development of their typology. The MTC:R1 was the original version and was closely based on the work of Cohen and colleagues (1969, cited in Prentky, Cohen and Seghorn, 1985) at the MTC. It took as its four rape categories those that reflected the combination of both sexuality and aggression in the offences: the *displaced aggression* type where the rape is used to punish or hurt the victim, the *compensatory* type which is predominantly fantasy driven and sexually motivated, the *sex aggression-defusion* type which incorporates sadistic elements, and the *impulsive* type which is predatory in nature with low self-control (Prentky et al., 1985).

The MTC:R2 represented a revision of Knight and Prentky's (1990) typology through further empirical work when the initial version encountered reliability and validity problems. The main types were changed to *compensatory*, *exploitative*, *displaced anger* and *sadistic*. In addition, a second tier was added to these categories that divided each one into high and low impulsivity as exhibited in the presenting history and lifestyle of the offenders. This created a possible eight rapist types in total (Prentky et al., 1985). The typology then evolved again into the MTC:R3 when reliability problems prevented it replicating on other samples of offenders. This typology now has nine possible types: *opportunistic* (with high or low social competency), *pervasively angry*, *sexual sadistic* (overt or muted), *sexual non-sadistic* (with low or high social competency), and finally *vindictive* (with low or moderate social competency; Knight & Prentky, 1990). Knight and Prentky have also claimed that the MTC:R3 typology also reflects the importance of psychopathy. Knight et al. (1998) suggested that the first five types tend to present as psychopathic but that the last four types are usually non-psychopathic. However, one note of caution here is that Knight and colleagues (Knight et al.) use the terms psychopathic and antisocial interchangeably in this context, so it is not clear what precise construct they are referring to.

The MTC:R3 is currently being assessed for its reliability and validity. The advantage of this typology is that it is being constantly assessed, cross-validated and updated based on empirical research. However, initial studies indicate that there may still be work to do in refining the typology and making it generalisable to a wider population. Barbaree, Seto, Serin, Amos and Preston (1994) found

that out of 80 offenders, only one could be classified as a pervasively angry type, and that 20 offenders could not be classified into any category. A possible reason for this may be that the MTC typologies, like Groth et al.'s (1979) work, were developed on a sample of the most sexually dangerous offenders in the United States. These may not be generalisable to wider populations of sex offenders, or to other countries such as New Zealand or to community settings.

Polaschek's Model

In 2001, Polaschek, Hudson, Ward and Siegert published a study derived from a New Zealand sample of rapists that introduced a descriptive model of rape offending. This model was developed using relapse prevention theory and has the advantage of drawing attention to the many different functions that sexual assault may fulfil for offenders (Polaschek, 2003). As discussed above, most rape typologies use mainly anger and power as the focal point for sexual offending. As will be discussed below, this model suggests that a far greater range of motivations are involved.

The descriptive model broke down into six phases. The first is background factors, which examines the offender's lifestyle in the period leading up to the offence; the second is goal formation, which looks at the overall goals held by the offender that lead to the offence; there are two main dominant goals, "seeking sexual gratification" and "redressing harm to self" (Polaschek et al., p. 529). The third phase is the approach phase where the offender first encounters the victim, and then either directly or indirectly communicates the overall goal to the victim. During this phase the offender will re-examine his goal and the

progress he is making, which may lead to the formation of a secondary goal; for example, offenders who had been focussed on sexual gratification may now form victim harm as their primary motivation (Polaschek et al). The fourth phase is the preparation phase where the offender considers the overall potential of the situation including all relevant factors and then makes the decision to commit the sexual assault (Polaschek et al). The fifth phase is the offence itself and the degree of sexual behaviour as well as physical violence and degrading behaviour to the victim (Polaschek et al). The sixth and final phase is the post offence phase where offenders consider their post rape situation and attempt to manage the situation; for example, using control strategies such as escaping or restraining the victim, or trying to convince the victim that the encounter did not actually qualify as assault but had been consensual. During this phase the offender may also evaluate his goal and whether he had successfully achieved it (Polaschek et al).

The advantage of this descriptive approach is that it provides insight into the processes by which offenders commit their assaults and the cognitions that accompany them. Of great interest is that for many offenders the process does not begin with an express intent to commit rape; instead a wider array of goals are involved including intimacy, sex itself, a desire to physically harm the victim, and general antisocial behaviour (Polaschek et al., 2001). Another key difference with previous typologies which considered motivations to be stable throughout the offence process, in Polaschek et al.'s model the motivations change as circumstances change. This reflects the reality of offender - victim relations as a form of antisocial interaction where victim behaviour and other

circumstances will play an important part in shaping offence behaviour (Canter, 1994; Polaschek et al). Of all the typologies discussed in this section, it is Polaschek et al.'s model that offers the most possibilities for discussion of behavioural consistency and the impact of context upon behaviour.

This model is not without its limitations: most notably, it was developed using only 24 offenders and is only preliminary at this stage. It requires substantial testing of its validity and reliability using other samples. It also did not include all possible rape behaviours in its scope; it did not involve many overtly violent or sadistic assaults, classic date rape encounters or stranger intruder assaults (Polaschek et al., 2001).

The following section will consider the work of David Canter and his colleagues in the field of investigative psychology. Canter has pioneered a more scientific approach to profiling, and his research has involved an investigation of the psychological themes salient in sexual offending.

Investigative Psychology

An alternative to the very deductive, intuitive world of the FBI profiler is the work undertaken by David Canter and his associates in the United Kingdom since the mid-1980s. This body of work that has focussed on empirical behavioural research and computer modelling has become known as investigative psychology. Canter's work is relevant to the present research as it has focussed on a better understanding of the processes that underlie profiling, as well as the concepts and themes salient to sexual offending.

Canter (2000) has highlighted the often rather deductive approach to traditional profiling undertaken by the FBI. He argued that inferences should only be drawn about an offender from his actions when there is clear empirical evidence about the underlying patterns of behaviour, or the inferences drawn may be completely spurious. Canter therefore propounded a more bottom-up data processing view of profiling, a more inductive approach that uses data sourced from sound empirical research from which to generate inferred offender characteristics, rather than just personal investigative experience and insight (Egger, 1999). His approach has been followed by a number of researchers attempting to investigate and if possible, explain the art of profiling by formulating a series of hypotheses that can be directly tested (Alison & Stein, 2003; Canter, Bennell, Alison & Reddy, 2003; Canter & Fritzon, 1998; Canter & Heritage, 1990; Canter et al., 2003; Canter et al., 2004; Hakkanen, Lindlof & Santtila, 2004; Kocsis, Cooksey & Irwin, 2002; Mokros & Alison, 2002; Salfati & Canter, 1999).

Douglas et al., (1992, p. 21) stated in the FBI's Crime Classification Manual that "the crime scene is presumed to reflect the murderer's behaviour and personality in much the same way as furnishings reveal the homeowner's character". It is statements such as these and Robert Ressler's claim that his best profiles arrive almost as a "stream of consciousness" (Boon & Davies, p. 224) that are at the heart of the criticism aimed at the FBI and their arguably unscientific approach to profiling. One of the main problems with the FBI's work is the lack of any real attempt to explain or test the processes involved in profiling (Mokros & Alison, 2002). Such a simplistic and unequivocal relationship

between personality and behaviour as propounded by the FBI is inconsistent with psychological research (Mokros & Alison). For example, in social psychology's study of personality and behaviour, research indicates that context is highly important in predicting behaviour (Shoda, Mischel & Wright, 1994).

Davies (1997) has undertaken research to investigate which criminal antecedents of offenders can be reliably linked to offence behaviours. She hypothesised that rapists may use behavioural scripts that have been learned through past experience. If a rapist has learnt that certain behaviours have been of utility during previous property crimes, for example, these behaviours may also be used during an attempted rape.

Davies (1997) took 210 sexual assaults from 43 police units in Great Britain and coded offence behaviours that were concerned with theft from the victim, concealing identity, breaking into a residence, controlling the victim, degree of violence used, familiarity with the police, and method of approach to the victim. The offender characteristics coded were whether the offender had a previous custodial sentence, any prior conviction, a prior conviction for six different specific types of offence (eg., drug offences, property offences), and whether the offender was believed by police to be a 'one-off' sexual offender. Logistic regression was used to test predictions about criminal antecedents from offence behaviours (Davies).

The results were promising, with some individual behaviours having excellent predictive power. The occurrence of the behaviour 'semen destruction' indicated that an offender was four times more likely to have prior convictions for sexual offences. The variable 'fingerprint precautions' indicated that the offender

was four times more likely to have prior burglary convictions. The variable 'reference to the police' indicated that an offender was four times as likely to have been in custody, and five and a half times more likely to have a prior conviction (Davies, 1997).

Individual behaviours can only take an analysis so far and the best test of the hypothesis came from an examination of the predictive power of behaviours in combination with one another (Davies, 1997). The best predictive models were for prior burglary convictions, prior violent offences, and for a one-off sexual offender. For example, if an offender took fingerprint precautions, stole from the victim, used forced entry and had used alcohol prior to the offence, this was highly predictive; the offender was more than 90 percent likely to have a prior burglary conviction (Davies). The more of the behaviours contained in the burglary model that were associated with an offence, the higher the probability that there was a prior burglary conviction (Davies).

Recent research conducted in New Zealand has also found that crime scene behaviour can predict some aspects of a rapist's criminal history. Scott, Lambie, Henwood and Lamb (2006) found that stranger rapists who break into a victim's residence were more likely to have previous convictions for grievous assaults, theft and trespassing. However, these findings were inconsistent with international research that has found such behaviour associated with prior property crime convictions. The study also found that stealing during the rape was associated with previous robbery and theft convictions.

Canter (2000) argued that what is needed to better understand the profiling process is an explanatory framework to create hypotheses about the

relationships between offender characteristics and behaviour. Canter posed the following questions as the most relevant to the problems inherent in police investigations: 1) What are the most salient behaviours in an offence to assist in identifying offenders? 2) What are the most effective means to distinguish between offences, and between offenders? 3) What inferences can be made about offender characteristics from offence behaviour to assist in identifying the offender? 4) How can offences committed by the same offender be identified?

In a theoretical review of the processes involved in inferring characteristics from crime scene actions, Mokros and Alison (2002) explained the most commonly adopted process. They suggested that, typically, specific configurations of crime scene behaviours are related directly to a specific latent personality trait that in turn is related to specific configurations of background characteristics such as ethnicity, employment, marital status or criminal records. The authors pointed out that, despite an almost complete lack of empirical validation, this process is one of the most widely used by profiling organisations such as the FBI. Indeed, Alison et al. (2002) demonstrated the dangers of assuming such a relationship between actions and characteristics. They carried out a test of the homology assumption, which is that the more similar two offenders are in their crime scene behaviour, the more similar they will be in relation to their background characteristics. They found no evidence in support of the homology assumption in their sample of 100 British stranger rapists. While methodological idiosyncrasies and flaws in the study may have been as influential on these results as problems with the homology assumption, these

data indicate at the very least that the profiling process must be more complicated than iterated by the FBI's approach or even less valid (Alison et al).

The offender profiling process can be articulated as a series of two research questions that are directly testable. Firstly, that there are meaningful and coherent structures to the co-occurrence of behaviours across offences. In other words, that behaviours do not simply occur together in a completely random manner and that the co-occurrence of behaviours can be given a thematic interpretation; secondly, that the identified themes of offence behaviour can be related back to offender characteristics in some systematic and predictable fashion.

Therefore, the first step in establishing a validated process for offender profiling of sexual assault offences is to investigate whether there is any empirical evidence for the first of the two steps identified above: whether offence behaviours occur together in any meaningful structures, and whether any thematic interpretation is indeed indicated by these behaviours. As Canter (2000) argues, until this is ascertained, any inferences drawn about offender characteristics may be inaccurate.

Research into Sexual Offending

Canter and Heritage (1990) carried out one of the first direct investigations of the crime scene behaviour of sexual offenders. Using a sample of 66 sexual offences, the sexual, physical and verbal behaviour was analysed using a form of non-parametric multi-dimensional scaling called Smallest Space Analysis ('SSA') that calculates all possible correlations between variables, and then

portrays these relationships simultaneously as spatial representations on a plot. Canter and Heritage hypothesised that if the SSA produced no discernable patterns in the data, then the appropriate conclusion would be that the offence behaviour variables were occurring together on a random basis. On the other hand, if conceptually related behaviours (eg., different types of aggressive behaviour) occurred together across offences, this would provide evidence for the saliency of that theme (i.e., aggression) in sexual assault behaviour (Canter & Heritage). Canter and Heritage found empirical evidence for five salient themes of behaviour: sexuality, violence and aggression, impersonal sexual gratification, criminality and intimacy.

Despite using a small sample, this initial study by Canter and Heritage (1990) marked an important first step in providing a solid empirical basis to offender profiling, and opened the door for other research to build on its foundations. It also provided a useful and flexible methodology for this area of research in its use of SSA.

Canter et al. (2003) published a further study on sexual assault. Based on themes identified in their previous work (Canter, 1994; Canter & Heritage, 1990), the authors predicted that a SSA would find four main themes to offence behaviour: hostility, involvement, theft and control. The theme of hostility is found throughout the research on sexual assault, and some version of aggression or anger can be seen in all the clinical typologies of sexual offending (Canter et al., 2003). Canter et al. identify the involvement theme as an attempt by the offender to create a form of pseudo-intimacy with the victim, motivated by the need for social contact of some description with the victim. The control

theme is hypothesised as behaviours that place the victim under the offender's control. Finally, the theft theme is a predominantly instrumental theme, indicating that the offender identifies the assault as having other possible attributes besides the rape, (e.g., the theft of items belonging to the victim; Canter et al).

The results showed support for the predicted themes of behaviour (Canter et al., 2003). In particular, the themes of hostility and involvement were strongly supported and clearly reflect the violence and intimacy themes in the previous Canter and Heritage (1990) study. The theft and control themes were less distinct with variables that overlapped conceptually, raising the question of whether these themes were indeed conceptually different.

In order to ascertain whether offenders exhibited a dominant style of behaving, the authors conducted a further analysis to classify each offence into its overall dominant theme. They concluded that 73% of offences could be classified into one main theme: 32% (of all offences) were classified as involvement offences, 26% were hostile offences, 10% were control offences, and 5% theft offences (Canter et al., 2003).

Canter et al. (2003) also theorised that rape can be analysed as an offence of violation, with the degree of violation increasing from personal - physical - sexual violation. They suggested that their results provided empirical support for these proposed increasing levels of violation. The authors argued that the pattern of frequencies in their data corresponded in large part with the proposed levels of violation, (i.e. that the majority of personal violations were among the behaviours with the lowest frequency, that the sexual violations were often the

most frequent behaviours, and that the frequency of most physical violations tended to fall in between; Canter et al.).

Put together with their salient themes of behaviour, Canter and his colleagues (2003) presented their results as evidence for a composite model of sexual offending. Using their classification of offences into their dominant themes, the authors derived this overall model as follows: control offences were classified as mainly physically violating, theft offences as predominantly personally violating, involvement offences as predominantly sexually violating and hostile offences as reflecting all three levels of violation (Canter et al.).

However, this composite model is not wholly supported by their data, which indicate a more mixed pattern of results. All three levels of frequencies in the SSA include variables that relate to a combination of sexual, physical and personal violations, rather than just one form of violation (eg. physical violations). For example, the highest frequency level of behaviours (supposedly the sexual violation level) does include five sexual behaviours (eg., vaginal penetration, fellatio), but also at least six physical violations (eg., weapon, surprise attack, single violence etc.) and six personal violations (eg., extends time, inquisitive, victim participation, etc). A similar pattern can be seen in the medium and low frequency levels, with an overall random distribution of violation type across all frequency levels. While the authors are clearly attempting to take their research one step further and establish a composite model of sexual assault behaviour, here it is argued that such a step is premature at this stage.

Support for the work of Canter et al. (2003) outside Great Britain can be found in the research of Hakkanen et al. (2004). These researchers carried out

multi-dimensional scaling on a sample of 100 Finnish stranger sexual offenders between 1992 and 2001. They found clear themes of hostility, involvement and theft, although there was stronger overlap between the hostility and theft zones than in Canter et al.'s study. They did not find any evidence of a fourth control theme. It must be noted that very few control-type variables were included in the analysis, for example neither disguise nor binding were included. However, as the variables included were derived from a content analysis of the offences included in the sample, it is likely that these behaviours were simply not frequent or salient enough to be included in the analysis.

The following sections will consider the research that has been conducted on behavioural consistency and linkage analysis of serial offences.

The Consistency of Behaviour

The first section will review research from personality theorists and other social psychologists. This is because the question of whether human beings are prone to consistency in their behaviours is at the heart of personality theory which posits that people's behaviours are influenced by their personality traits which are held to be generally stable over different contexts (Mischel & Peake, 1983; Woodhams et al., 2007). Social psychological researchers have therefore examined the issue of behavioural consistency in social behaviour. The next section will critically evaluate the research that has been done in the area of consistency in criminal behaviour and most specifically, serial sexual behaviour. Next, this chapter will look at the work done in the area of linkage analysis, which examines the extent to which serial offences can be successfully linked together by investigators using behavioural evidence from individual offences to relate them to the same offender. Finally, the issues surrounding changes and developments in behaviour will be reviewed.

Behavioural consistency of criminals demonstrates that the actions of those offenders are not random. Proponents of personality theory have argued that it is the stable personality traits of individuals that affect behaviour, creating consistency even over varying situations (Mischel & Peake, 1983). However, it is unlikely that offenders will demonstrate perfect consistency; offenders will adapt some behaviour to new environments, or other factors may actually prevent offenders from performing their chosen actions (Mazur, 2005). Offenders are also likely to change their behaviour due to the effect of learning; as an offender becomes more experienced, he may adapt his behaviour to allow for this

learning. There is also likely to be a great deal of variation in offenders: some may vary their behaviour widely while others may remain remarkably consistent (Canter, 2004).

The concept of behavioural consistency is at the very heart of the profiling process. The assumption is that the offender is evidencing characteristics that are typical of that offender (and manifested through his or her behaviour) and that the behaviours are not merely artefacts of the situation (Canter, 1995). Hazelwood et al. (1989) concur, stating that rapists, for example, bring their behaviour to the crime scene with them, rather than finding it in the interactions between offender and victim at the scene. Alison et al.'s (2002) review found that most authors writing about profiling agree that the process involves identifying the idiosyncratic personality and behavioural features of the offender, (eg., (Annon, 1995; Canter, 1994, 2000; Douglas & Munn, 1992; Egger, 1999; Homant & Kennedy, 1998; Warren et al., 1991).

While a number of reviews of profiling have been conducted (Britton, 1992; Copson, 1995; Jackson et al., 1993; Pinizotto, 1984; Pinizotto & Finkel, 1990), the majority of these rely on subjective reports given by investigators and fail to adequately examine the theoretical basis of profiling (Alison et al., 2002). Alison et al. recently completed such a theoretical review of the profiling process. Most notably, the authors pointed out that inherent in the profiling process are the two key assumptions of consistency and homology: first, that offenders exhibit behavioural consistency in their offence behaviours, and second, that similar configurations of crime scene behaviours will correspond to similar configurations of offender characteristics (Alison et al.).

However, the foundation of this assumption of behavioural consistency is unsubstantiated, and relies on an unsophisticated theory of personality traits and their control over behaviour, that fails to consider the influence of environmental factors (Alison et al., 2002). In 1974, Bem and Allen described the personality paradox: a phenomenon where persons tend to infer stable personality traits from behaviour even though the majority of empirical evidence has established that these personality traits are unable to predict behavioural patterns in different situations or over time (Alison et al). An immediate problem with such an approach is that it results in a circular argument: traits are used to explain and predict behaviour, and yet as traits are unobservable constructs, their very existence is inferred from the behaviour they in turn are used to explain (Alison et al.) One of the most important distinctions used in profiling practice is the organised/disorganised typology which assumes the existence of a stable and global organised trait which both influences and explains behaviour (Alison et al). Indeed, despite advances made in social psychology into the importance of situational influences on behaviour, profiling experts continue to presume that offenders have consistent traits that influence offence behaviour (Alison et al).

Definitions of Consistency

The definition of consistency can vary, and is often dependent upon the nature of the research examining consistency. A useful statistical definition for consistency requires that the intra-individual behavioural variation *across* offences must be less than the inter-individual behavioural variation *between* individuals. That is to say in the context of serial offending, that one offender's

behaviour over time does not vary more over his or her offences than between offenders (Alison et al., 2002; Canter, 1995).

Criminological research tends to take a molar or holistic approach, with a definition of behavioural consistency as the probability that an offender will perform similar offences repeatedly (Alison et al., 2002; Farrington, 1997). Research in this area has focussed on the issue of whether offenders are generalists or specialists in their criminal careers. For example, whether offenders tend to commit mainly property offences such as burglary, or whether they are more heterogeneous in their approach to offending with a mixture of drug, sex, property or fraud offences committed over the course of their criminal career (Britt, 1994; Soothill, Francis, Sanderson & Ackerley, 2000). Even within sex offending, criminologists are more concerned with whether offenders commit indecent assault, sexual violation or rape or a combination of all types of sexual assaults over their lives (Soothill et al).

In contrast, psychological profiling research takes a more molecular approach to criminal behaviour in general (Alison et al., 2002). Canter (1995) has defined behavioural consistency as the replication of behaviours by the same offender when he or she engages in the same type of offence again. The key difference is that psychological study is not just interested in whether offenders have a tendency to just repeat the same type of offence, but whether they actually repeat individual behaviours or groups of behaviours. This more in depth research gives insight into an offender's actual behaviour rather than just the choice of offences (Alison et al; Canter, 1995; Craik & Patrick, 1995; Grubin et al., 2001).

The present research will define consistency for any specified behaviour as either the presence-presence match or absence-absence match of that behaviour in consecutive offences. The degree of behavioural consistency for any variable will depend on the number of matches for that behaviour across the offence series.

Personality Theory and Behavioural Consistency

The first research into the issue of behavioural consistency was carried out in the discipline of social psychology, specifically personality theory. The question of whether people are consistent in their behaviour across situations would intuitively be expected to be answered in the affirmative by many (Woodhams, Hollin & Bull, 2007). Bem and Allen (1974) commented on what they called the personality paradox, whereby people tend to inferring stable personality traits from behaviour even when the behaviour itself does not support such an assumption. Individuals are prone to see in social behaviour a degree of cross-situational consistency that empirical research has not found to be there (Alison et al., 2002). The results of research conducted to investigate the hypothesis of behavioural consistency were less than simple and led to decades of debate and research within social psychology (Woodhams et al).

Proponents of the field of personality theory maintained that an individual's personality traits are stable and general over both time and contexts (Mischel & Peake, 1983). Researchers therefore expected to find that people would exhibit consistency in their behaviour across various diverse situations. However, empirical support for this trait theory is limited. A number of personality theorists

have found little behavioural consistency over differing social settings, tending to find only low to mild positive correlations of no more than .30 for various forms of social behaviour across various contexts (Epstein, 1979; Mischel, 1968; Mischel & Peake, 1982; Peterson, 1968). Arguably, such low correlations actually support behavioural variability, rather than consistency. In fact, so robust is this finding that it has caused many social psychologists to eventually move away from the notion of trait theory, and for some to even question the very nature of personality as fixed (Alison et al., 2002). This led to a paradigm crisis in the field of personality theory with some psychologists continuing to uphold trait theory and behavioural consistency, while others rejected the notion of innate behavioural consistency and argued that the effect of situation or context on behaviour was too great to expect consistency (Mischel & Peake).

The Person-Situation Debate

Epstein (1979) has defended the concept of behavioural consistency and stable personality traits. Epstein's research has focussed on finding out why studies in behavioural consistency have yielded such low correlations across behaviour ratings. He reported that he has found the answer in methodological weaknesses; that the previous studies have used ratings with poor reliability and have incorporated large amounts of measurement error into the analysis. Epstein recommended the use of aggregation across items and situations to prevent reliance on single measures and therefore minimise a large source of error in research. He demonstrated that if behavioural scores over 14 day

periods were averaged, much higher correlations of .80 - .90 could be found to support behavioural consistency (Epstein).

However, Mischel and Peake (1982) have challenged both Epstein's results and his research strategy. They argue that Epstein is simply treating the influence of situational factors as measurement error. Epstein (1979) may be demonstrating consistency over time by eliminating situational variables from his analysis, but Mischel and Peake claim that the key issue is consistency across situations which arguably Epstein does not address.

The following sections will consider aspects of social psychological research that may impact the behavioural consistency of criminals: the amount of time that elapses between instances of behaviour; the difference between conscious and automated behaviour, and the level of expertise of the offender.

Time

The amount of time between behaviours has been found to have an impact on the degree of behavioural consistency (Woodhams et al., 2007). When behaviour is observed over shorter time periods, there are greater levels of behavioural consistency (Pervin, 2002). This may be because less time allows limited exposure to new experiences which may affect or develop the personality system (Woodhams et al). Also, if a behavioural strategy is produced more than once in close succession, this will potentially strengthen the associations between the behaviour and the situation more than if the same pattern had occurred over a longer time period. Therefore, serial offenders that commit crimes over a shorter time period may show greater consistency than an

offender who has his offending interrupted by a prison sentence (Woodhams et al).

Research has also found greater behavioural consistency in adulthood over childhood (Pervin, 2002). This may be due to changes in development during childhood which result in changes in the personality system, in turn affecting behaviour (Mischel, 1999). This finding has implications for the study of juvenile crime. Juvenile offenders are likely to be less consistent in their offending than adult offenders and exhibit different offending patterns as they mature from childhood through to adulthood. In relation to sexual offending, it has been suggested that as adolescents pass through puberty to sexual maturity there may be particularly high variation in their offending (Woodhams et al., 2007).

However, not all behaviours may show change in their patterns and consistency in childhood. Shoda and colleagues (1993) found that children were consistent in aggressive behaviour over a range of psychologically similar contexts. This research has been confirmed by several studies that indicate that behaviour is fairly consistent over time. One major longitudinal study carried out at the University of California, Berkeley, used 114 measures of behaviour and personality from junior school to mid-thirties. The researchers found 60 percent consistency in behaviour from junior to senior high school, and 30 percent from high school to the mid-thirties (Fonagy & Higgitt, 1984). Developmental research into antisocial behaviour has demonstrated that there is great stability from childhood to adulthood in these behaviours (Fergusson, 1998). Farrington (2003) found similar results in the Cambridge Study in the United Kingdom where composite measures of antisocial personality were developed at ages 10,

14, 18 and 32 using indicators of antisocial behaviour. These measures were all strongly intercorrelated despite the widespread environmental changes the men had experienced in their lives over this time (Farrington).

Further support for this position comes from longitudinal research by Moffitt and colleagues in the Dunedin Multidisciplinary Study that found consistency for various antisocial behaviours, supporting the argument that at least some behaviours show stability over time (Moffitt, 1993; Moffitt & Caspi, 2001; Moffitt, Caspi, Harrington & Milne, 2002). Specifically, Moffitt and Caspi have found that there are two different developmental trajectories for antisocial children; one that begins early and persists into adulthood and throughout life, and one that appears later in adolescence and does not survive past the onset of adulthood. It is the earlier onset trajectory that involves more serious antisocial behaviours that shows stability over time. Using the different construct of psychopathy, Loeber and his colleagues found that when males were assessed at ages 13 and 24 using the Psychopathy Checklist, psychopathy was stable from childhood to adulthood (Lynam, Caspi, Moffitt, Loeber & Stouthamer-Loeber, 2007; Lynam, Loeber & Stouthamer-Loeber, 2008).

Automatic Behaviour versus Conscious Behaviour

Furr and Funder's (2003) research found that there are higher levels of behavioural consistency when automatic behaviours such as laughing are used, rather than the more deliberate or conscious behaviours. Hettema and Hol (1998) have identified similar differences between behaviours under primary and secondary control. Primary control behaviours are those that act upon the

environment in pursuit of the goals, needs or desires of the individual. When considering the research on people's mental representations outlined earlier, and how goals form part of the collective cognitions that make up the personality system, it is not surprising that behaviours that allow those individuals to directly pursue those goals are likely to be consistently used. Research by Bargh and colleagues has highlighted how behaviours that pursue goals or desires are automatically triggered, and rarely under conscious active control (Bargh, Chen & Burrows, 1996; Bargh & Ferguson, 2000).

Expertise

Hettema and Van Bakel (1997) have researched the impact of a person's expertise in a situation on behavioural consistency. They found that such expertise or experience with a particular activity does increase behavioural consistency. The more often a behavioural strategy is activated the more salient it becomes and the more likely to be produced in the future (Woodhams et al., 2007). This finding has implications for criminal behaviour as it suggests that consistency may actually increase as the offender becomes more experienced (Woodhams et al). Therefore serial offenders such as serial rapists may exhibit higher levels of consistency in their behaviour further along in their offence series, (i.e. that there may be more consistency between offences earlier than between later offences).

The following section discusses the social psychological research that has focussed on the relationship between personality and context, and its effect on behaviour.

Person by Situation Interactions

The person-situation debate has now reached the stage where Mischel and his colleagues now agree that the focus of research should be on the interaction of both the person and situation (Mischel, 1999; Mischel, Shoda & Mendoza-Denton, 2002; and Shoda & Mischel, 2000). Mischel has proposed that situation interacts significantly with a person's personality traits through what he calls a 'personality system'. In similar fashion, Mischel and Shoda (1995) have put forward a 'cognitive-affective personality system' and yet other researchers have suggested other similar models (Woodhams et al., 2007). These models or systems describe a combination of cognitions made up of various beliefs, attitudes, memories, strategies and expectations that are in turn activated or inhibited by differing situations resulting in certain behaviours that can be consistent or variable across situations depending on the particular cognitions activated (Woodhams et al). For example, if a person holds a particularly strong belief in religion as well as fond memories of religious activities in his or her past, then situations imbued with religious significance are likely to activate these memories and belief and produce potentially similar behaviour.

The probability that a mental representation or cognition is activated or inhibited leading to a particular behavioural strategy across different situations is affected by how similar these situations are. The more similar two situations are, the more likely that the same cognitions and in turn behaviour will be elicited (Woodhams et al., 2007). Mischel (1999) argues that what is most important is how psychologically similar the situations are to the individual involved. Studies

have demonstrated that consistent behaviour is more likely to occur in situations that have been rated as similar (Shoda et al., 1994; Woodhams et al.).

Fantasy and planning on the part of an individual will also have an effect on personality systems and can prompt behavioural strategies (Mischel, 1999). For example, if a person holds certain goals that are pertinent to more than one context, then these situations are also likely to elicit similar behaviour (Greene, 1989; Woodhams et al., 2007). Greene suggests that the more often a behavioural strategy is used, the more salient it becomes to that individual which in turn increases the probability that it will be triggered in future situations. Overall, the behaviour produced and the likelihood of behavioural consistency will result from a combination of a person's current goals, the environmental factors affecting behaviour, and the person's prior learning experiences (Woodhams et al., 2007).

Some recent personality research offers potentially interesting paradigms for the study of Person x Situation interactions and their effect on behaviour. Alison et al. (2002) have recommended that such a framework may be the future for offender profiling models. These paradigms recognise that different people will view each situation with their own perspective, as each individual has a unique personality system through which they interpret the situation and in turn activate their relevant cognitions and associated behaviours (Woodhams et al., 2007). Mischel (1999) therefore argues that certain inter-individual variation must be expected. Mischel has proposed that individuals each have their own unique probable "if...then" relations between behaviours and situations. Recent research has supported Mischel's claim (Shoda et al., 1994). However, it is

unlikely that there will be unlimited variation in behavioural signatures as individuals are most likely to form key if-then relationships or behavioural signatures that dictate the appropriate behavioural strategies for most scenarios (Greene, 1989). Shoda et al. demonstrated how important it is to identify the underlying psychological meaning to various situations. Without this, it is difficult to accurately determine how to generalise from one situation to another and therefore be able to predict behaviour in differing situations (Shoda, 1999). Bargh et al. (1996) have argued that if a person behaves in a similar way each time a particular situation arises, then that person's behavioural response will become automatic to that situation. They cited Shoda et al's study as an excellent demonstration of how a high level of consistency can develop over time for a person's behavioural responses to certain situations, when the situations are specifically and carefully defined (Bargh et al., 1996).

The importance of research that can incorporate the impact of context on offender behaviour can not be denied, especially in an area like sexual offending where there are multiple situational factors that may affect an offender's behaviour. These may include but are not limited to: the victim's behaviour to the offender, the physical environment (inside or outside), the time of day, any sexual dysfunction suffered by the offender, the use of alcohol or drugs by the offender, and the likelihood of interruption by an outside influence. In fact the possible list of situational variables is limitless and makes the use of the Person x Situation paradigm very complicated to introduce into sexual offence research (Alison et al., 2002). One prospective area of difficulty is the degree of specificity or definition that should be applied to the behavioural and situational variables

used in future research (Alison et al). Behaviour could simply be recorded as a general variable of hostility, or be broken down into several explicit behavioural categories such as type and degree of violence, verbal violence, threats made, degree and type of injury to victim, demeaning behaviour and sadistic behaviour. Some of these specific variables will have a high frequency of occurrence with others being rarer. The same type of breakdown could be done for situational variables. The choices made as to the exact operational definition of the variables used for research will have an inevitable effect on the reliability and specificity of the results.

Alison et al. (2002) describes this dilemma as the bandwidth-fidelity trade-off where the more general or abstract a variable is defined, the less discriminative power it has (Cronbach & Gleser, 1957, cited in Alison et al). Canter (2000) has also discussed this issue from the perspective of levels of differentiation in offence behaviour in profiling research. Canter discusses how behaviour can be classified into more general psychological themes such as hostility which enables researchers to predict only general factors about an offender's characteristics. Examples of such research is Knight, Warren, Reboussin and Soley's (1998) study where the researchers were successful to a degree in predicting offender's characteristics as expressive, aggressive, antisocial and sadistic (Alison et al). In contrast, behaviour can be broken down into more specific variables which may then allow researchers to predict in turn more specific offender characteristics (Alison et al).

Another area of complication for applying the Person x Situation paradigm to criminal research is how to accurately ascertain the psychological meaning of

any one context for an offender. Alison et al. (2002) suggests interviewing offenders about the situations they find important or influential on their offending behaviour. While some responses may be easy, such as the likelihood that most offenders will respond to a victim who is physically violent in her resistance, many offenders may be unaware of the psychological impact other situations have on their behaviour. There is the added complication as found in Bargh and his colleagues' research that behavioural responses that engage to pursue an individual's goals or motives may be triggered automatically without any actual exercise of that individual's conscious will (Bargh et al., 1996; Bargh & Ferguson, 2000; Bargh, Gollitzer, Lee-Chai, Barndollar, & Troetschel, 2001). This growing area of research has implications for any consideration of the Person x Situation paradigm in criminal research.

The above findings, while non-forensic in nature, all have potential relevance to the issue of behavioural consistency in criminal offending. The research supports the possibility of behavioural consistency in offending, but also supports the importance of environmental factors and their effect on behavioural consistency. The social psychological research also highlight the importance of psychologically similar situations to consistency of behaviour: offenders are more likely to exhibit similar behaviour in contexts that are psychologically alike as they will develop consistent behavioural signatures for these situations. The other factors discussed above such as the temporal period, the experience of the offender and the type of activity involved will also all impact on an offender's consistency.

Behavioural Consistency in Criminal Behaviour

Recall that Alison et al. (2002) described two premises upon which offender profiling is based: the consistency assumption and the homology assumption. The authors go on to conclude that while there is little or no support for the homology assumption in the literature, there is some evidence for behavioural consistency in criminal offending. This section will explore what empirical evidence there is in the literature to support the concept of behavioural consistency in criminal offending.

In 1995, Canter published a review study of offender profiling in which he sets out the offender consistency hypothesis and its importance to profiling. However, the only evidence Canter cited to support this hypothesis is an internal report for the University of Surrey (Hammond, 1990, cited in Canter). This report is described by Canter as an exploratory study of the offence behaviour of 17 serial rapists. Three offences were selected from each rapist's series of assaults, from the early, middle and end of the series. Probability theory was utilised to evaluate mathematical profiles of each assault based on their expected frequency across the whole sample. This apparently resulted in less than 15 percent of the rapes having a probability so low so as not to be able to assign the offence to the appropriate offender. However, although this study may show some potential support for offender consistency, it involves a very small sample and without more detailed information on the methodology and analysis used, it is not possible to properly evaluate its strengths and weaknesses.

Knight et al.'s (1998) study examined the question of behavioural consistency across serial sexual offending. The researchers examined the last five known offences of serial rapists from either the MTC or by using archival data held by the BSU. This study was limited by its methodological weaknesses as three different samples were used for coding. The first two samples were used to identify variables that had high consistency across the offences series, and then the third sample was used to test the consistency of these variables. The methodology therefore artificially increased the probability that consistency would be found in this study. Despite the rejection of all variables that had low across crime consistency, the study only found low to moderate levels of consistency for the majority of variables and their composite scales. They found higher consistency in some behaviours such as the use of a firearm, binding of a victim, excessive response to victim resistance or the slashing of the victims' clothes. However, the researchers did not include for analysis many variables that may have yielded additional results such as further MO and sexual behaviours. For example, they did not include the use of a disguise or a gag, or taking forensic precautions, or sexual behaviours such as kissing. The coding of Knight et al.'s variables was also problematic with considerable overlap between the criteria for some variables, raising concerns about potential reliability and validity problems. Examples of this are the variables 'extensive planning' and 'planning of rape' which overlap (Woodhams et al., 2007).

Sjostedt, Langstrom, Sturidsson and Grann (2004) conducted research examining the stability of MO behaviours across serial sexual offending. The research used a sample of two offences for over 1,000 criminals. However, the

study included all forms of sexual offenders, including the legal categories of rape, child molestation and indecent exposure. The study purported to consider MO, but the variables used in the study were: noncontact versus physical contact of victim and offender, penetration, death threat, victim injury and victim characteristics. Arguably, very few of these variables amount to the definition of MO as provided by the literature as behaviours that either protect identity, allow the offender to escape safely post-offence, or to achieve the successful completion of the offence (Homant & Kennedy, 1998; Turvey, 2000). More typical MO behaviours would include the use of bindings or a gag, taking forensic precautions, the transportation of a victim, or the use of a weapon (Turvey, 2002). They found that the variable victim choice was very stable over the two offences, and noncontact offences, penetration, death threat and victim injury were moderately stable.

Salfati and Bateman (2005) carried out an investigation into behavioural consistency in serial homicide. They found that offenders tended to be consistent in whether their aggressive behaviours reflected an instrumental or expressive purpose, i.e., whether their offending was emotionally expressive in nature, exhibited by behaviours such as torture. In contrast instrumental offending is goal oriented and the aggressive behaviours often service an ulterior motive such as rape or burglary (Woodhams et al., 2007). One problem with this research was that when the authors attempted to classify their offenders into the two categories of expressive and instrumental, they found that between 36 and 59 percent of the offences could not be classified, limiting the practical application of these findings (Salfati & Bateman).

In 1995, Craik and Patrick published a brief study which examined the degree to which key behaviours were reproduced across the offence series of 2 serial sex offenders in the United Kingdom. They produced what they named a salient points chart which included every important detail of the offences including specific behaviours and details about victim and suspect demographics. These charts were actually drawn up during the investigations of the serial assaults, and were used to link the offences together. They would then calculate a percentage score for each offence based on the number of salient points or behaviours occurred in that offence. For the first rapist, the results ranged from 24 percent for the first offence to 82 percent in the final and seventh offence. The majority of the offences reached 70 percent or over. For the second rapist, the lowest percentage of 30 percent was actually that of the final and sixth offence. The remaining five offences all reached over 70 percent with the highest percentage being 92 for the fourth offence. Although this study never claimed to be a scientific analysis, it is an interesting insight into the use of consistency in an actual investigation and how offences are linked together (Craik & Patrick).

The Home Office Study

Probably the most important and comprehensive study into the behavioural consistency of serial rapists is the Home Office research carried out in the United Kingdom by Grubin et al. (2001). Grubin et al. examined 468 sexual assaults across 210 offenders to look specifically at what extent serial rapists are consistent in their offence behaviours across offences. The authors decided

to approach the issue of consistency by focusing on the interaction between behaviours across offences, rather than simply analysing the consistency of single behaviours. Sexual assaults can then be classified into certain distinct types created by the different behaviours that tend to group together over offences. Ultimately, offences committed by the same offender should be more likely to fall into the same type as compared to two offences committed by different offenders.

Grubin et al.'s (2001) methodology involved classifying offences into four overall conceptual domains: *control of the victim*, *sexual behaviours*, *escape precautions or concerns*, and *personal style of the attack*. Within each domain, cluster analysis was used to break down offenders into four further behavioural sub-types involving various combinations of behaviours. Certain behaviours were allowed to overlap and occur in more than one sub-domain if considered appropriate. So, although the original four domains were selected through content analysis and theoretical analysis, the development of the further sub-types was entirely data-driven (Grubin et al).

Every offence was allocated a specific sub-type for each domain, receiving four sub-types each in total (Grubin et al., 2001). Comparing the domains across the entire database of offences tested behavioural consistency both in single-domain consistency (whether the offenders were consistent across individual domains), and multi-domain consistency (consistent across two or more domains). The results indicated that offenders show consistency in their behaviours, but only to a certain degree. The study demonstrated that the offenders showed consistency above chance levels, but the majority of

offenders only showed consistency in one of the four domains, but showed great variability in the remaining three domains. The offenders demonstrated the highest single domain consistency for the control and escape domains, with the sexual behaviours domain showing the least amount of consistency (Grubin et al).

There are problems with the methodology used in this research. First, the database contained both one-off offenders and serial offenders, and the statistical analysis was done over the entire database rather than by examining and comparing behaviours within series of offences, and then combining the results across the database. Secondly, the researchers chose to create domains that each contained these sub-domains of four or five behaviours. Although the sub-domains were developed empirically by cluster analysis, the original domains were chosen theoretically based on a review of salient themes from past research. This meant there was no examination of any individual behaviours across offences, just domains or themes. Arguably, this study, as detailed as it was, only analysed thematic consistency rather than actual behavioural consistency.

So, a review of the research on offender consistency to date reveals that although there is some support for this notion, it has not yet been comprehensively tested looking at the consistency of a range of individual behaviours across whole series of offences. Sjostedt et al. (2004) found empirical support for the stability of victim choice over time, but this study only considered limited variables and included only two offences per offender in their analysis. Knight et al. (1998) found high consistency for some behaviours

including the use of a firearm, the binding of a victim, excessive response to victim resistance or the slashing of the victims' clothes. However, this study artificially inflated the consistency of its variables by its methodology. It also failed to consider a full range of MO and sexual behaviours. There is empirical support for the consistency of domains or groups of behaviours across serial sexual offending. Grubin et al. (2001) found the highest single domain consistency for MO behaviours included in the control and escape domains.

The following section will review the literature on linkage analysis (also called case linkage). Linkage analysis relies on the assumption that offenders are behaviourally consistent in their offence behaviour: the process relies on the similarity of offence behaviours to link offences together that have been committed by the same offender (Woodhams et al., 2007). Research into linkage analysis therefore involves an examination of the consistency of behaviour and several studies have provided empirical evidence for behavioural consistency.

Case Linkage

Case linkage is an issue of considerable interest to the police as it can help in the investigation and prosecution of serial crime in the following three ways. First, linking crimes allows police to collate all the information together from the relevant investigations, greatly increasing the amount of evidence available against the offender (Grubin et al., 2001). Second, if a link between two or more offences is made before the investigations are completed, the various

investigations can be made together. This increases both the efficiency of the process as well as the likelihood of success (Woodhams et al., 2007). Third, evidence of consistency in behaviour across linked offences has been used to introduce similar fact evidence into legal proceedings (Hazelwood & Warren, 2003; Woodhams et al.).

The Process of Case Linkage

While the most straightforward method of case linkage is physical forensic evidence such as DNA evidence, on many occasions case linkage is limited to the availability of behavioural similarities between offences. This relies on the offender exhibiting a degree of behavioural consistency from offence to offence, but also requires that one offender can be distinguished from another. Case linkage therefore also requires some inter-individual variation between offenders so that their actions can be differentiated (Woodhams et al., 2007).

The actual process of determining case linkage is a painstaking form of behavioural analysis. First, all aspects of the offender's physical, sexual and verbal behaviour is documented, usually from victim's statements in the case of sexual assault (Davies, 1992, Woodhams et al., 2007). Douglas and Munn (1992) suggest that mainly ritualistic type or signature behaviours should be considered for analysis as these are the behaviours least likely to change. They warn against using MO type behaviours as these are learned behaviours and will evolve over time. However, the results of research in this area suggest that MO behaviours such as planning or control behaviours can be successfully

utilised in case linkage (Bennell & Canter, 2002; Bennell & Jones, 2005; Woodhams & Toye, 2007).

Next, the behaviours from one offence must be carefully compared and contrasted with the equivalent behaviours in the other offences. Any similarities and differences are noted, paying particular attention to the context of each behaviour to properly assess its significance. For example, gratuitous violence has a different connotation to violence enacted upon the victim only when she resists (Grubin et al., 2001; Woodhams et al., 2007). Once the key similarities have been noted, it must be considered if any of these similarities could merely be due to coincidence. The frequency with which a behaviour occurs in this type of offending will be an important consideration, as will any unusual aspects to a behaviour that set it apart (Hazelwood & Warren, 2003; Woodhams et al.). For example, although stealing from the victim may be a common behaviour generally in sexual offending, always stealing the victim's underwear would rank as a more unique and significant behaviour. Once all the key similarities are considered in their totality a carefully reasoned decision will be made as to the likelihood of these offences having been committed by the same offender.

One problem with the case linkage process is that offences that belong to the series but that contain dissimilar behaviour to the other offences in that series may not have been identified as linked to that series. This would artificially increase the behavioural similarity and therefore consistency of the offences that were included in the offence series (Bennell & Canter, 2002; Woodhams, & Toye, 2007).

Empirical Evidence in Support of Case Linkage

One limitation with research into case linkage to date is that studies only using variables at the thematic level rather than the individual level produce results that are too general to be of any utility in linking cases together. This is because there must be sufficient specificity to enable offenders to be distinguished from one another (Woodhams et al., 2007). For example, Salfati and Bateman's (2005) research into serial homicide tested consistency by establishing either instrumental or expressive themes in 69 homicides committed by 23 different offenders (three per offender). They then examined whether the three offences for each offender could all be classified into the same theme by three models with increasingly strict criteria. While their most liberal model was able to classify all the offences and establish 100 percent consistency for each offender, the use of such general themes would be of little use to police attempting to link offences together. For example, being able to identify that three offences all involve expressive rather than instrumental hostility may allow police to conclude that the offenders who committed the offences were all gratuitously hostile to their victims. However, to link the offences to one offender they would need instances of similar specific behaviours or patterns of behaviours in the offences.

In 1976, Green, Booth and Biderman (cited in Woodhams et al., 2007) attempted to investigate the linking of offences in a study that subjected 15 burglaries by three different offenders to cluster analysis to see if they could all be correctly attributed to the right offender. They used six key variables: location of entry into residence, location of residence on block, the method used to gain

entry to the residence, the day of the week, and the type and value of property stolen. The analysis succeeded in attributing all but one of the offences to the correct offender. One limitation to this research was that the three series of burglaries were specifically chosen as their modus operandi were quite distinct from each other (Woodhams et al).

Bennell and his colleagues conducted two similar studies on linking offences together using MO behaviours (Bennell & Canter, 2002; Bennell & Jones, 2005). The main difference between the two studies was that while Bennell and Canter only used commercial burglars, Bennell and Jones included both residential and commercial burglars. Bennell and Jones took three offences from each serial burglar and tested MO domains of behaviours: entry behaviours, target characteristics, items stolen and spatial distance between offences. They found that the spatial distance between burglaries was a good predictor of linked crimes as compared to unlinked crimes. Their results also showed higher across-crime consistency for the domains entry behaviours, target characteristics and items stolen for the linked offences as compared to the unlinked ones. Although these studies only examined domains of behaviours and not individual behaviours, they provide empirical evidence for the consistency of MO behaviours. These results are contrary to the reports by the FBI that MO tends to be dynamic and subject to change.

Woodhams and Toye (2007) attempted a three-part test of the assumptions of case linkage: behavioural consistency, behavioural distinctiveness and homology. They found support for the first two assumptions, but not for the third. The authors identified two offences for 80 serial burglars.

Eighty pairs of unlinked crimes were also selected as a comparison set. Four behavioural domains were chosen by the authors: target selection, planning, control and property. Jaccard's coefficients were then calculated between every pair of crimes as a similarity measure for the linked and unlinked pairs of crimes. The results showed that the pairs of linked crimes showed greater similarity than the pairs of unlinked crimes; indicating consistency for the behavioural domains. This study therefore provides empirical support for the psychological themes of planning and control. Although this study was conducted on serial burglars, it strengthens the case for the consistency of criminal behaviour.

A much larger and more comprehensive study also provided empirical support for the linkage of serial sexual offences using behavioural similarity and differentiation. The Home Office study of Grubin et al. (2001) first established behavioural similarity within four different behavioural domains; control, sex, escape and style. Then the computer selected from the overall dataset the 10 percent of all offences that were the most similar to any one selected control offence. Then, the researchers assessed how many offences that had actually been committed by the offender who had been responsible for the control offence had been identified by the computer as belonging in the selected 10 percent of cases. This number was then compared to the number that would have expected by chance in any event. The results showed that but for only two of the 81 offence series analysed, the number of linked offences appearing in the computer's 10 percent were significantly greater than by chance alone.

Santtila et al., (2005) also attempted to establish case linkage in serial rape cases but used a different methodology. They only used 43 offences in the

analysis: 16 series of three offences. First, they chose the behaviours that showed the highest consistency levels and that also managed to differentiate between offenders. Then, the offences from each offender's series were plotted using multidimensional scaling. This resulted in a spatial plot whereby the offences that were most similar occurred close together on the plot and the offences that were dissimilar were spaced apart. This plot revealed four main themes to offending: hostility (sexual), hostility (physical), Involvement (expressive) and involvement (deceptive). This study therefore found empirical support for the influence of the themes of hostility and involvement in behaviour across offence series with three offences: these themes were therefore consistent across the offences.

For each offence, the five offences closest to it on the plot were then analysed to see if they contained at least one other offence committed in the same offence series. For over 40 percent of the offences, this was the case. When the analysis was extended to the 10 offences closest, the results expanded to include 60 percent of the offences. Next, a linkage analysis was attempted using the four behavioural themes. The percentage of behaviours that fit into each theme was then calculated for every offence. Using this as the basis for the case linkage, discriminant function analysis was used to determine if each offence could then be attributed to each offender. The number of offences successfully allocated was greater than by chance alone. Also, when the top 10 most likely offenders for each offence were considered: 86% of the time the offender was within that top 10. These results provided further support for the consistency of the themes across the offence series.

Development and Change in Offence Behaviour

Although the opposite of behavioural consistency can be described as change in behaviour, this side of the issue is rarely discussed or researched in the context of offender profiling. Yet, if behaviour is not consistent or is limited in its degree of consistency, then we must ask what explains these changes in behaviour. Perhaps what is of most interest is the possibility that behaviour is changing systematically - that it is developing over offences.

There are many factors that have the potential to impact on the consistency of an offender's behaviour and change it; the most notable being situational factors as discussed previously (Alison et al., 2002, Canter, 1995; Davies, 1992, Woodhams et al., 2007). Some obvious examples include rapists' sexual behaviour being negatively impacted by sexual dysfunction or vigorous victim resistance, or increase in the use of swearing, threats or physical violence by offenders to quell victim resistance (Davies).

Other relevant factors include the influence of past experience on offenders' learning processes so that they adapt and do not repeat past mistakes. Although the FBI generally emphasise the consistency of behaviour, one area in which they do describe behaviour as a changing process is in the area of MO behaviours. Douglas and Munn (1992) described the MO as a dynamic and malleable set of behaviours that change and develop as offenders gain experience through exposure to police procedures, what is effective and non-effective, and what minimises the chance of capture and prosecution. One example might involve a rapist being sent to prison on forensic evidence, and

learning from this experience to use a condom on future offences to remove this possibility.

There is certainly a large amount of empirical support for the proposition that behaviour develops and changes over time as a result of various factors. Behavioural theories of learning emphasise the importance of the environment in shaping behaviour (Mazur, 1998). Social-cognitive theories and the concept of cognitive scripts also support the idea that people learn how to behave in various different situations through past experiences in which persons and situations interact over time to develop behaviours that may vary immensely from situation to situation (Zelli & Dodge, 1999).

To conclude, the chapter began by examining the social psychological research on behavioural consistency. Studies from the field of personality theory have demonstrated that while consistent behaviour can be expected in most individuals, certain factors must be taken into consideration when examining consistency. The most important factor is that behavioural consistency is most likely found in situations that are psychologically similar for the individual. Second, a degree of inter-individual variation in people's consistency must be expected, as each individual will react according to their particular personality system. Third, context will always play an important part in determining consistency. However, individuals will develop their own unique behavioural signatures or if-then relationships that dictate that they will react in similar ways in similar situations. Finally, research has indicated that other factors such as experience, the type of behaviour involved and time will all impact on consistency levels (Woodhams et al. 2007).

The research on behavioural consistency and case linkage criminal behaviour has also provided empirical support for the consistency of behaviour. However, the findings have predominantly been for thematic consistency rather than individual behaviours as in Grubin et al. (2001). In addition, the studies that have considered the consistency of individual behaviours have failed to include a sufficiently wide range of behaviours for analysis (Knight et al. 1998).

Aims and Hypotheses of Research

The following section will specify the aims and hypotheses for this research. The purpose of this study is to test the assumption of behavioural consistency in serial sexual assault behaviour. The intention is to examine both the extent of the consistency of individual behaviours as well as that of any domains or themes of behaviour.

Specifically, the aims of the research are as follows. The first aim is test the behavioural consistency of a range of individual behaviours. Using previous studies into sexual offending as a guide, a wide range of sexual, physical and verbal behaviours will be dichotomously coded for a consistency analysis. Based on the literature to date on behavioural consistency, it was hypothesised that the present study would find behavioural consistency in the offence behaviour of the sample but that certain behaviours would exhibit higher consistency than others. In particular, it was hypothesised that higher consistency would be found for behaviours that reflected a degree of planning or that prioritised control of the victim and the offence environment. This was because these behaviours might be less affected by environmental factors. In contrast many of the sexual behaviours arise directly out of offender-victim interactions and therefore are most affected by environmental factors such as victim resistance. It was therefore also hypothesised that the sexual behaviours would have lower consistency scores. Although the FBI has always theorised that MO type behaviours are more dynamic and therefore less consistent, there is very little evidence for this position. Recent studies such as Grubin et al.

(2001), Bennell and Canter (2002), Bennell and Jones (2005) and Woodhams and Toye (2007) have found that MO behaviours are consistent over offences.

The second research aim was that if behavioural consistency was found in the results of the consistency analysis, to explore whether there were any underlying patterns to the consistency of offending behaviour. That is to say, whether offenders were simply consistent with their individual behaviours or whether they were also consistent with groups of behaviours across their offences. Having already hypothesised that the control type behaviours would yield higher consistency scores, it was also predicted that offenders would be consistent with groupings of control and escape behaviours, not just the individual behaviours. This is based on the findings of the research conducted by Grubin et al. (2001) who found the highest consistency for the control and escape domains.

For the purposes of this research, variables were coded dichotomously and consistency for any individual behaviour was defined as either the presence-presence match or absence-absence match of that behaviour in consecutive offences. The degree of consistency for any variable will be reflected in the consistency score received by that variable based on the number of matches for that behaviour across the offence series. The phrase 'behavioural consistency' will be used as a general concept referring to the overall issue of consistency in behaviour.

CHAPTER THREE

Methodology

This chapter will describe the methodology used in the studies reported in this thesis.

Data Collection

The data used in this research was collected from case files held by the New Zealand Police Criminal Profiling Unit ('CPU'). The study's author coded all serial sexual assault offences held by the CPU at the time of data collection that met the criteria for inclusion in the research (see below for inclusion criteria). The CPU hold copies of a large proportion of all sexual assault offences that occurred in New Zealand from 1970 to the present day. Although many police stations across the country do forward copies of their sexual assault files to the CPU, this is not compulsory and therefore the CPU's records cannot guarantee coverage of all New Zealand sexual offenders. However, the CPU does hold a greater proportion of serial sexual offender files as these represent the more serious sexual offenders in the country, and police stations are more likely to consult with the CPU on these assaults. Of course, the CPU can only hold files of sexual assaults where the victim has reported the assault to the police.

Information that pertained to the offender, victim and offence was recorded from the files. Victims' statements were used as the main source of information. Most files also contained the original offence report, any court documents, affidavits and crime scene reports, as well as any psychiatric reports prepared on the offender. While police data is subject to inevitable inconsistencies and

inaccuracies due to the effect of human error, most files contained a minimum level of detail necessary for data coding, and many files contained a wealth of information that assisted in improving the reliability of data coding. Where there were several different source documents in a police file, these documents were used to corroborate each other in key offence details. Wherever there were conflicting sources of data, preference was given to information contained in victim statements.

The only other potential sources of data were media sources and offender interviews. Media sources were easily ruled out as they generally do not cover all serial sexual assaults, and do not provide sufficient or accurate details on offender behaviour. Offender interviews are also problematic. Offenders are not reliable sources as they have multiple reasons for hiding or distorting the details of their offending. Also, offender interviews are not a suitable mechanism for large scale data collection, where information is collected on over a hundred offenders and nearly 450 offences. The time and expense involved in such an undertaking would be prohibitive.

Offenders

The serial sex offenders in this study were defined for data collection as males who had committed two or more sexual assault offences on female victims. Each sequence of sexual assaults carried out by one offender was defined as a series and was made up of between two and eight offences. Although four offenders committed over eight offences, it was decided to cap series' length at the first eight offences. Of these four offenders, one offender

had a series of 38 offences, one offender a series of 83 offences, one offender committed 14 offences and the fourth offender committed 12 offences. An offence length of eight offences allowed for inclusion of two or more offenders who had each committed an offence series of two, three, four, five, six, seven and eight offences each. No offenders had committed a series of nine, ten or eleven offences. By including this consistent pattern of series length in offending, I was able to research the effect of expertise on behavioural consistency. This was the reason why offence series were capped at eight offences for this research.

Nearly all offences involved stranger assaults on victims unknown to the offender. However, as the focus of this study was the behavioural consistency of offenders, overall priority was given to coding consecutive offences within a series where possible. This was so that consistency and changes in behaviour from one offence to the next could be analysed. Therefore, on a minority of occasions where a serial offender committed a sexual assault on an acquaintance or on the very rare occasions even a family member in the middle of an offence series, this offence would be included (17.2% of offences were non-stranger assaults). However, offences were excluded where the victim was less than 14 years old, and no serial paedophiles were included in the study. This was because I was examining the behavioural consistency of serial adult sex offenders, not child sex offenders. There are significant differences to the offence behaviour of child sex offenders and adult sex offenders (Menard, Shoss & Pincus, 2008; Walters, 1987), and it was important to exclude any offences that might limit the validity of the sample. A total of 10 offences were

excluded for this reason. Offences were also excluded if there was insufficient information in the file to reliably code the offence behaviour; specifically if more than 25% of the data required to code the variables was missing. This was because the variables were being coded as dichotomous data, and a large percentage of missing data in any offence would be treated as absent behaviour and potentially distort the consistency analysis which compared behaviours in consecutive offences. Fourteen offences were excluded from data collection because of excessive missing data.

In the majority of cases, the offender had been convicted of the offences coded. Where non-convicted offences were included in the data collection, inclusion had to satisfy one of the following criteria: the offender was currently before the court waiting a trial or a verdict on the offence in question; the offender had been acquitted only on a technicality; the offence did not proceed to trial because the victim did not wish to proceed; the police and CPU were convinced of the offenders' guilt. I do not have an exact number of non-convicted offences that were included in the data collection; however, for a sexual assault offence to be filed at the CPU the police were usually convinced of the guilt of the offender concerned.

Both attempted and actual sexual assaults were included. If any sexual behaviour was present, the offence would be automatically included. If there was no sexual behaviour, it was necessary to examine whether there were sufficient verbal and other behavioural indicators of a clear intent to rape the victim. As examples, the offender could inform the victim of his intention to rape, or he could attempt to remove her clothing or touch her in an intimate manner.

The sexual behaviours coded ranged from indecent assault through to rape. The rationale for including indecent assaults was again that as the focus of this study was the behavioural consistency of offenders, overall priority was given to coding intact offence series. A total of 16 offences were excluded from data collection because of insufficient grounds in the offence behaviour to conclude that a sexual assault was intended by the offender. In all but two of these offences, there was no sexual behaviour at all.

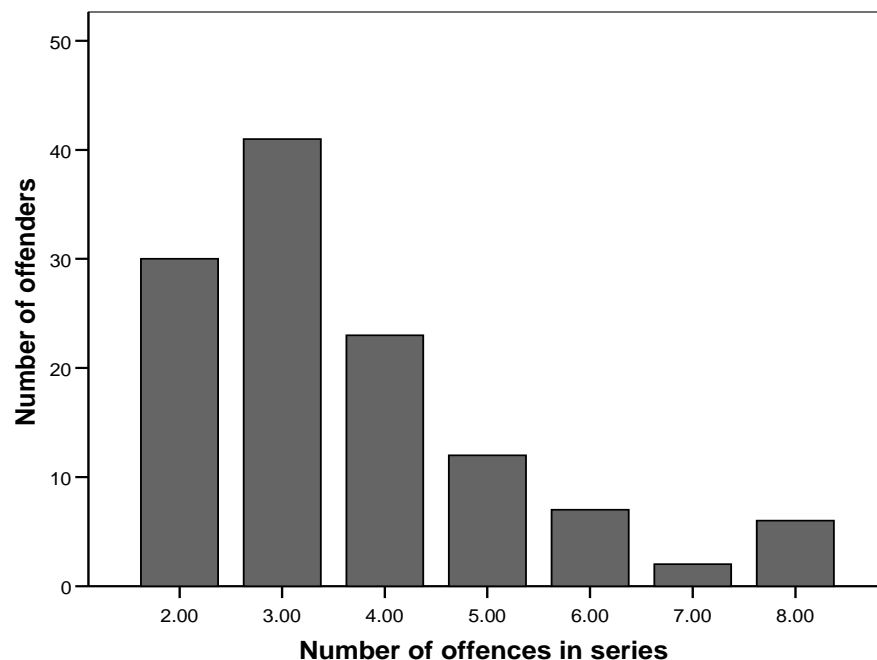


Figure 3.1 Number of offenders per series length

The final sample included 121 serial offenders who had committed two or more offences in New Zealand between 1970 and 2005. Out of this sample, 91 serial offenders had committed three or more offences in their offence series.

Figure 3.1 above demonstrates the exact numbers of offenders who committed between two to eight offences across their offence series over the entire sample.

Data Coding

Each offence was coded separately on coding sheets (see Appendix A). These contained ten pages of demographic and behavioural data on each offence. The behavioural data covered over 70 variables previously identified as salient from theory and data. VICLAS is an international coding system used by many countries' police forces to code and keep track of sexual assault and homicide behaviour (Collins et al., Johnson, 1994; Turvey, 2000). Although VICLAS is a much more detailed and precise data recording system than this study required, where possible all coding was consistent with VICLAS so as to promote reliability across the whole sample as well as generalisation across other samples.

The first page began with the offender's identifying three letter code. All information coded was confidential and the only record made of the offenders' names was on a Master List held at all times in the CPU offices with the original police files. No record was made of any identifying victim details and each victim was also given a three letter code.

This first page went on to collect detailed demographic information on offender and victim such as date of birth, occupation, ethnicity and the relationship between victim and offender. Offender alcohol and drug usage was recorded, if known, and the location and date of the offence.

Next, information was coded on the offender's initial identification of the potential victim and his approach to the victim i.e. was the offender outside or in a pub or bar, or did he commit a home invasion to assault the victim? When the offender first directly assaulted the victim, it was recorded whether he used a surprise attack or a more deceptive approach to the victim.

Next, data was recorded on the actual sexual assault. This involved a detailed account of all aspects of the physical, sexual and verbal behaviour committed by the offender during the assault. Examples of sexual behaviour recorded included whether the following sexual behaviours were committed or attempted by the offender upon the victim: vaginal penetration, anal penetration, digital penetration, kissing, fondling, licking, cunnilingus, fellatio and forced participation by the victim herself (see Appendix B for more details).

Physical behaviours recorded included any physical contact between offender and victim that was non-sexual in nature. For example, the method of approach the offender used, whether the victim was abducted and transported to a separate offence site, was the offender violent to the victim, did the offender carry a weapon, were any restraints used such as bindings or a gag, did the offender wear a disguise or steal any items from the victim, or whether the offender extended his time with the victim outside the immediate sexual assault.

Verbal behaviours recorded included all verbal statements made by the offender to the victim. For example, threatening comments, inquisitive remarks, revealing details about the offender, complimentary remarks, excuses, apologies, reassuring comments, hostile comments, sexual comments, or

insistence on victim participation or even victim enjoyment (see Appendix B for more details).

Ethical Approval

Ethical approval for this research was obtained from the Human Ethics Committee for the School of Psychology at Victoria University of Wellington. Approval was also required and obtained from the New Zealand Police Service before permission was given to use the CPU' police files. This involved a background check by the police on the author as well as assessment and approval of the proposed research by the New Zealand Police Service's research committee.

Procedure

In order to code the offence information it was necessary to travel from Wellington to Auckland for three months as all coding from police files occurred at the CPU's offices in Otahuhu, South Auckland. As previously specified, the Master List which identified the offenders also remained at the CPU's offices at all times.

After coding from the police files was complete, all data was entered into a SPSS spreadsheet. At this time, it was decided that it was sufficient for behavioural data to be entered as dichotomous data. In other words, each variable was entered as either present or absent into SPSS. The alternative was to attempt to enter levels of behaviour, (e.g. in an attempt to convey the degree to which an offender was violent to the victim, data would be entered as low,

middle or high occurrences of that behaviour). The problem with this procedure is that subjective decisions would have to be made for each data entry as to which level was considered appropriate for that offender's behaviour. This would adversely impact the overall reliability of the study. Another issue was that many variables actually were coded as present or absent, and attempting to code levels of occurrences for other variables would have resulted in a mix of measurement types. Coding data as either present or absent was a much simpler and reliable procedure and was considered sufficient for the aims of this study, which was to study the degree to which an offender was consistent in his offending behaviour. Therefore, whether the offender committed each behaviour or not in consecutive offences was considered satisfactory for this research. This approach was also consistent with previous research on sexual offending (Canter et al., 2003; Canter & Heritage, 1990; Hakkanen et al., 2004; Mokros & Alison, 2002; Salfati & Canter, 1999).

If data was unavailable for any variable it was entered as missing data. For the majority of analyses carried out this unknown data was then treated as a non-occurrence of that behaviour.

When the data had been completely entered into SPSS, there were over 70 variables included. This number of variables was too high for data analysis and had to be narrowed down. First, the frequency of the variables was calculated and any outliers excluded, (i.e. any behaviours that were too low in frequency.) The cut off point for inclusion was fixed at ten percent frequency. Behaviours that occurred at less than 10% frequency may distort the dataset. The low frequency behaviours which were excluded at this stage were a blitz attack by

the offender at the start of the offence (1.7% frequency), any verbal excuses made to the victim (4.1% frequency), any verbal statements attempting to script or direct the victim's behaviour (3.3% frequency), and any demeaning verbal statements made to the victim (1.7% frequency).

Other variables were coded originally as predictor variables for later stages of the analysis and were therefore removed from the main analysis (Opportunity, Alcohol).

Certain variables were also collapsed into one variable if they coded different aspects of an overall behaviour. These variables were originally coded separately but then made into one variable for the purposes of data analysis. For example the variables Personal Theft and Valuable theft were collapsed into one theft variable. In other words, if an offence had a positive occurrence for either of these variables, it was given a present coding for the new combined theft variable. If the offence had a non-occurrence of behaviour for both the original variables, then it was given an absent coding for the new variable. Further examples of this were the variables Weapon Threatened and Weapon Used. These were initially coded as separate variables but were collapsed into one overall dichotomous weapon present variable for the data analysis.

Variables that split the sample had one of the variables in question removed. For example all offences were either committed indoors or outdoors, and this was coded based on where the offence was initiated. If the offender first attempted to gain control of the victim outside in a park having followed her from a bar, the variable was coded as outdoors. However, as there were only two possible codings (outdoors or indoors) and as all offences had to be initiated

somewhere, the frequency of occurrences of all outdoors and indoors attacks added up to 100% occurrence. By its very definition, if an attack was outdoors, it could not be indoors and vice versa. Therefore the variable Outdoors was included in the analysis of the data. A similar decision was made for the variables Con Approach and Surprise Approach which also divided the entire sample between them. All offences were initiated by either a surprise or a con/deceptive approach to the victim. It was decided to only include the variable Con Approach in the analysis.

Variables that raised concerns about their potentially low reliability or validity were also excluded. For example the variable that described the abduction of the victim was an issue for reliability reasons. This is because it was very difficult to code whether or not an event was an actual abduction. Some victims were clearly abducted by being transported by a vehicle either to the offender's home or to public accommodation where they were not allowed to leave for a substantial amount of time. During this time the victims were assaulted on more than one occasion before they were released by the offender or escaped. However, other events were not so clear-cut. If a victim is removed against her will to a second location it may be simply that the offender wished to have privacy in case of interruption. For example if the assault is initiated outdoors, the offender may drag the victim to a nearby indoor site to complete the sexual assault. Even if the victim is transported by a vehicle, it may only be briefly and would still not legally be classified as an abduction. It was therefore decided to remove this variable from the analysis. There were similar problems with the coding of the variables Reveals and Inquisitive. For example when an offender

engaged in verbal behaviour that appeared to be inquisitive in nature he asked personal questions of the victim (e.g., her name, where she lived, whether she had a boyfriend etc). The variable was meant to be coded as an attempt by the offender to get to know the victim or to make a personal connection with the victim. However, it may be that the offender is trying to discover information that may aid his assault such as whether the victim has money on her or how far the victim has to go to raise help. The variable Reveals should be coded as present only when the offender reveals personal information about himself to the victim. However according to police, offenders may lie to their victim and give them false information in an attempt to mislead the police and evade capture. These behaviours were therefore dropped from the analysis for these validity concerns.

Other variables that were eliminated at this stage for reliability reasons were where the offender rips the victim's clothing, the offender extending time with the victim after the sexual assault itself is over, the level of force used and the exact type of violence (punch, kick, stab etc.) These variables were difficult to code reliably each time. For example, problems were incurred with the type of violence as it was often impossible to be certain whether a particular blow was an actual punch or just a slap.

Finally, the core sexual variables such as sexual penetration, and front and rear entry were excluded as they form the legal requirements for a charge of sexual assault and therefore occurred at an extremely high frequency. For the purposes of a consistency analysis they are unnecessary as it can be assumed these behaviours are the main goal of such a sexual assault and if not occur do not actually reflect the intention of the offender but rather the influence of some

contextual impact, (eg. the offender being interrupted before he can attempt sexual penetration and the victim escaping).

This reduced the number of behaviours to 30 variables which was an acceptable number for the initial factor analysis (Kline, 1994). See Appendix B for a full description of all 30 variables used in the subsequent data analysis and their coding requirements.

Reliability Measures

All data for this research was coded by this study's author, who had previous experience in coding from police sexual assault files. In order to assess the reliability of the coding, the author recoded the first offence of 100 offence series two years after the initial data collection was completed using the original coding scheme. This amounted to nearly 25% of the offences previously coded (total number of offences coded in main sample was 439). These 100 cases were then compared to their original counterparts from the main sample and using SPSS Cohen's kappa coefficients calculated (Cohen, 1960). Cohen's kappas were used to test the reliability of the coding scheme as the data for this research was categorical data. Kappa is considered to be a more robust measure for dichotomous data as kappa takes into consideration any match up between variables occurring by chance alone (Landis & Koch, 1977).

Cohen's kappa coefficients produce a score for each variable between 0 and 1, with scores that are closer to one indicating perfect agreement (Cohen, 1960; Landis & Koch, 1977). Table 3.1 below sets out the kappa coefficients for

Table 3.1 *Cohen's kappa coefficients for variables*

Variable	Cohen's kappa coefficient
Fellatio	.97*
Digital	.94*
Transport Victim	.94*
Hostility	.94*
Phone	.93*
Bindings	.93*
Anal	.92*
Fondling	.92*
Outdoors	.92*
Kissing	.90*
Theft	.89*
Victim Participation (Physical)	.88*
Demands	.88*
Apologetic	.88*
Violence	.87*
Reassures	.87*
Threats	.87*
Home Invasion	.86*
Con Approach	.86*
Victim Participation (Verbal)	.85*
Weapon	.85*
Forensic	.85*
Victim Enjoyment	.84*
Cunnilingus	.82*
Compliments	.82*
Gag	.81*
Licking	.79*
Blindfold	.78*
Sex Comments	.78*
Disguise	.71*

Note. * $p < .01$.

all 30 variables used in the exploratory factor analyses and the main consistency analysis reported in chapters four and five. The majority of variables in Table 3.1 received high kappa values indicating good levels of reliability (Landis & Koch, 1977). Only four variables fall below .80 indicating slightly lower reliability, though still well above acceptable levels. All kappa's exceed the common .70 criterion used to indicate satisfactory reliability (Landis & Koch).

Description of Sample

The last section described the methodology used in the data collection for this research, and reported on the reliability measures taken to assess the coding scheme used in the research. This section will provide a description of offender and victim characteristics of the data collected for this study. Very little research has been carried out in New Zealand on sexual offenders (see Czarnomski, 2003; Polaschek et al., 2001) and the following demographic data can be used to compare this sample with any further research conducted in New Zealand.

Offenders

The characteristics of the 121 offenders in the present sample were analysed as to their age, ethnicity, criminal history, employment status and relationship status.

Age

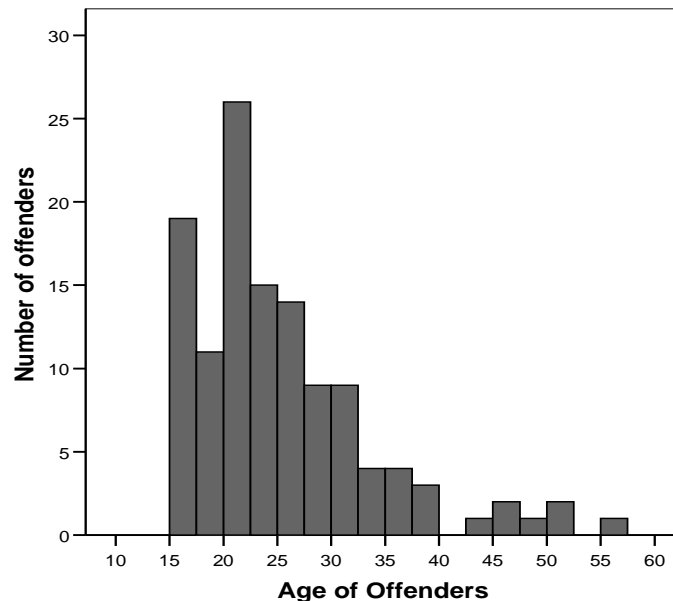


Figure 3.2: Offenders' age at time of offence over 439 offences

Several different statistics were taken as to the offenders' age at the time of offending. The average age of the offenders at the time of their offences was 27.97 (SD=8.30). The median age of the offenders was 27.00, almost identical to the mean. This mean included the age of the offenders at the time of each of their offences; therefore all 439 offences are included in this statistic. For example, if an offender committed four offences in his offence series then his age at all four offences were included. The youngest offender was 15 at the time of his earliest offence and the oldest offender was 58 at the time of his last offence. Figure 3.2 above sets out the ages at which the offences were committed. It is clear that the majority occurred during offenders' late twenties to early thirties. This was consistent with previous research. Oliver, Beech, Fisher

and Beckett (2007) found an average age of 30.4 in an United Kingdom sample, and Warren, Reboussin and Hazelwood (1995) an average age of 26 or over in their United States sample.

The age at which the offenders' committed their first sexual offence in their series was also recorded. This statistic differs from the previous one in that it only includes 98 offences as each offender is only represented once; this is the age of the first sexual offence in each offence series. The mean age for the first sexual offence was 23.98 ($SD=7.00$). It must be noted that the number of offenders included in this average was only 98 (121 offenders actually in sample); this is because for some offences that occurred pre-1990 this statistic was not provided in the police files. This average age is slightly younger than that reported in previous research (Oliver et al., 2007; Warren et al., 1995); this may be because those studies used offenders at different stages of their careers, or it may just be an artefact of the New Zealand sample. It is consistent with an earlier New Zealand study (Czarnomski, 2003) on a similar sample of rapists. However as Czarnomski also collected her data from police files held at the CPU there is likely to be considerable overlap between these samples.

Figure 3.3 below shows that the majority of first sex offences occurred when the offenders were in their late teens and early twenties. The minimum age was 15 and the maximum was 48.

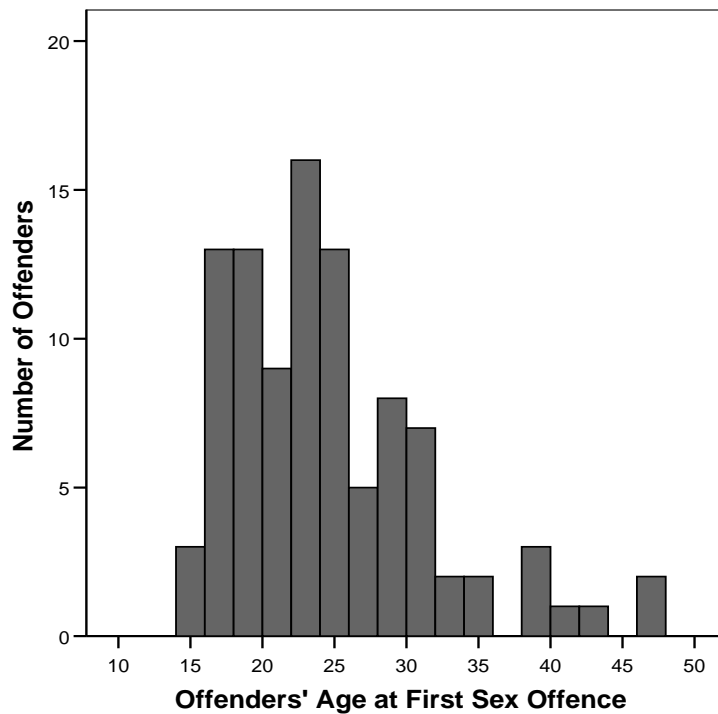


Figure 3.3: Offenders' age at time of first sexual offence

Finally, the time taken to commit each offender's offence series was calculated. This was a measure of the number of years between the offenders' first and last offence. The average series' length was 5.6 years ($SD=5.89$) while the median was slightly lower at 3.5 years. The high standard deviation demonstrates that many offenders vary a large amount from the mean. This is reflected by the fact that the maximum series' length recorded was 24 years long and the minimum series' length was actually less than 12 hours in duration from first to last offence.

Ethnicity

The ethnicity of the offenders was also recorded. Figure 3.4 below displays the major ethnic groups that divided the sample. The largest ethnic group was Māori offenders who made up 46.5% of the sample, a total of 60 offenders. Pakeha/European offenders accounted for a further 28.7% of the sample (37 offenders), followed by Pacific Islanders who comprised 14% (18 offenders). The remaining offenders were Indian, Middle Eastern and African and accounted in total for only 4.7% (6 offenders). The police files did not contain the ethnicity details for 8 of the offenders.

What is notable about this ethnic breakdown is that it does not reflect the actual ethnic breakdown of New Zealand's population. According to the latest 2006 Census, Pakeha/European is the largest ethnic group, making up 67.6% of our total population. Māori people account for only 14.6% of the population, followed by Pacific Islanders who comprise 6.9 percent of the population. By comparing the two breakdowns, it is clear that according to this research Māori are over-represented in the offender sample (46.5% compared to only 14.6%). Pacific Islanders are also over-represented, but not to such a large degree (14% compared to 6.9%). In contrast, the Pakeha/European group is under-represented (28.7% compared to 67.6%). What is also of note is that while Asian people make up 9.2% of the New Zealand population, not one of the offenders included in this sample was of Asian ethnicity.

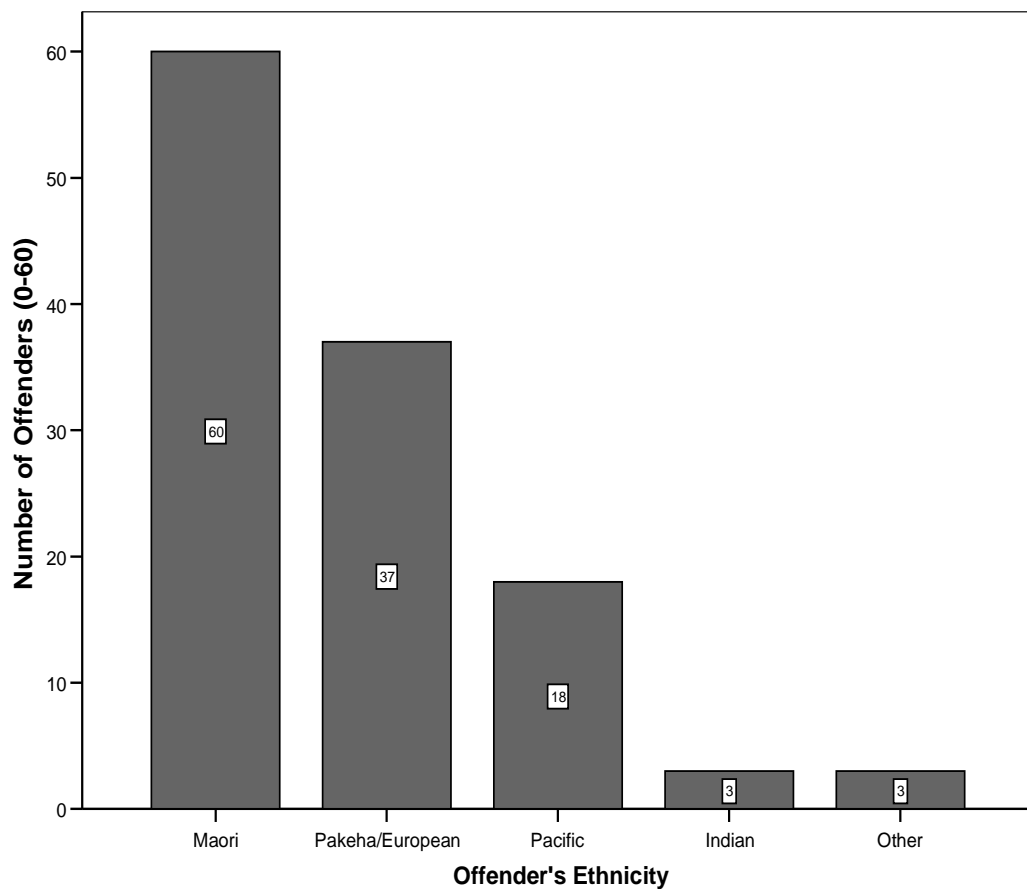


Figure 3.4: Offenders' ethnicity

It must be noted that these statistics are not consistent with the wider sexual offender population in New Zealand. The Department of Corrections (2008) reported that between 1996 and 2005 almost double the numbers of Pakeha/European than Māori offenders were apprehended by police on sexual offence charges. In 2005, approximately 500 Māori sexual offenders were apprehended compared to approximately 950 Pakeha/European offenders. These statistics include a range of sexual offending from rape through to lesser charges such as obscene exposure and immoral behaviour. These statistics are

also not consistent with the ethnic breakdown of the sexual offenders uploaded to VICLAS to date: 42% are Pakeha/European, 38% are Māori and 14% are Pacific Islanders. The ethnic breakdown is compatible with Scott et al. (2006) who also used a sample of offenders based on police files held at the CPU: in their sample, Māori rapists accounted for 63% of the sample, Pakeha/European 25% and Pacific Islanders 12%.

It must therefore be concluded that this sample of offenders may not be representative of the wider population in New Zealand. The offences included in our sample represent some of the most serious sexual offenders in New Zealand, as these are the police files that the CPU collects. Also, the CPU relies on individual police precincts around the country to forward their files to the central CPU. In terms of the data for this research, 55.5 percent of the sexual assaults occurred in Auckland which has less than one third of the total population of the country. The 2006 Census recorded nearly 25 percent of all Māori as living in the Auckland area. In contrast, Statistics New Zealand has estimated that only 12 percent of Māori people live in the entire South Island region. Therefore, it is possible that many Pakeha/European sexual offenders from the South Island and lower North Island are omitted in this offending sample. Therefore, this sample of offenders can only be viewed as representative of the wider Auckland region.

Offence Type

All the offences in the offenders' series were recorded as to whether they were a rape, an attempted rape or an indecent assault. Figure 3.5 below

displays the breakdown of offences over the entire sample. Every offence is included: a total of 439 offences. The largest group of 247 offences committed were sexual violations (56.26%). The next largest group of 133 offences were attempted acts of sexual violation (30.30%). Finally, the smallest group of 59 offences were indecent assaults (13.44%). Out of the 121 offence series analysed, only 26 series were comprised of the same offence type throughout. The remaining 95 offence series all involved more than one type of offence.

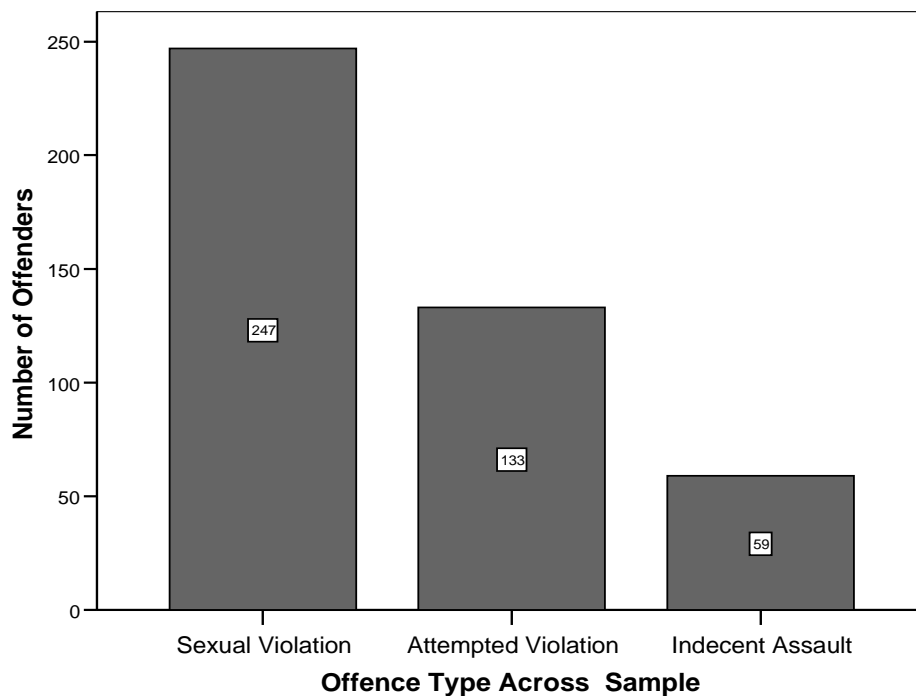


Figure 3.5: Type of sexual offence across entire sample

Victims

The 121 offenders in this offending sample committed sexual offences against 439 victims in total. Information on victims was not routinely recorded in

the police files on the offences, so this limited the quantity of data that could be collected on the victims' demographic characteristics. The following statistics should therefore be treated with a degree of caution. Data was collected on the victims' age, ethnicity and their prior relationship to the offender.

Age

Data was collected on the age of 361 of the victims. The average age for the victims was 27 years (\underline{M} =27.05, \underline{SD} =14.63). The median age was slightly younger at 22 years. The large standard deviation indicates that the victims' age varied a great deal from the average age. This is confirmed by the range of ages of the victims; the oldest victim was 91 years, and the youngest was 13 years. This average is slightly lower than that of 28 years found in overseas research (Warren et al., 1995) but is consistent with an earlier study of New Zealand serial sexual offenders (Czarnomski, 2003). However, as Czarnomski also collected her data from police files held at the CPU there is likely to be considerable overlap between the samples.

Figure 3.6 below shows the overall spread of the victims' age. Clearly, the majority of the victims were aged between 16 to 25 years of age; 205 victims in total, or 56.79 percent of the victims whose age was known. This matches fairly closely to the offenders; a majority of offenders committed their offences in their late teens to early twenties. However, the offenders continued at a fairly high rate into their early thirties, whereas the number of victims in their early thirties can be seen in Figure 3.6 to reduce sharply. A total of 34 victims or 9.4 percent were aged between 13 and 15 years at the time of the assault against them.

Twenty victims or 5.5 percent were aged 60 years or over at the time of the assault.

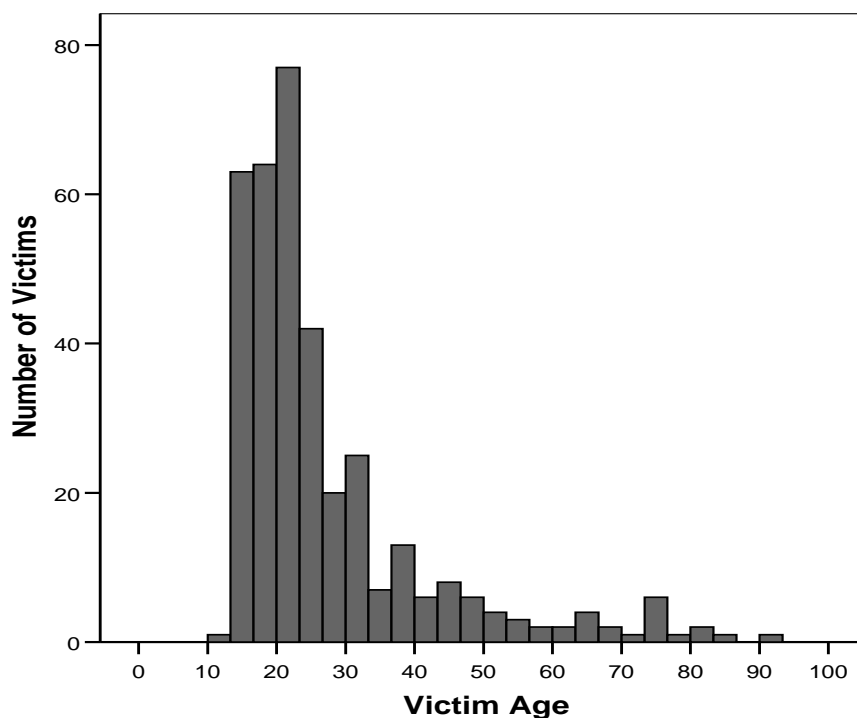


Figure 3.6: Victims age per number of victims

Ethnicity

Victim ethnicity was only collected on 345 victims out of the 439 total victims due to inconsistent recording in the police files. Figure 3.7 below shows the breakdown of victims' ethnicity per number of victims. What is noticeable is that this breakdown is different to that of the offenders. The largest group is that of Pakeha/European victims who accounted for 77.1% of the victims whose age was known. The next largest group is Māori women who accounted for only 13.6%, followed by Pacific Island women who accounted for 6.4%, and finally Asian women who accounted for 2.9%.

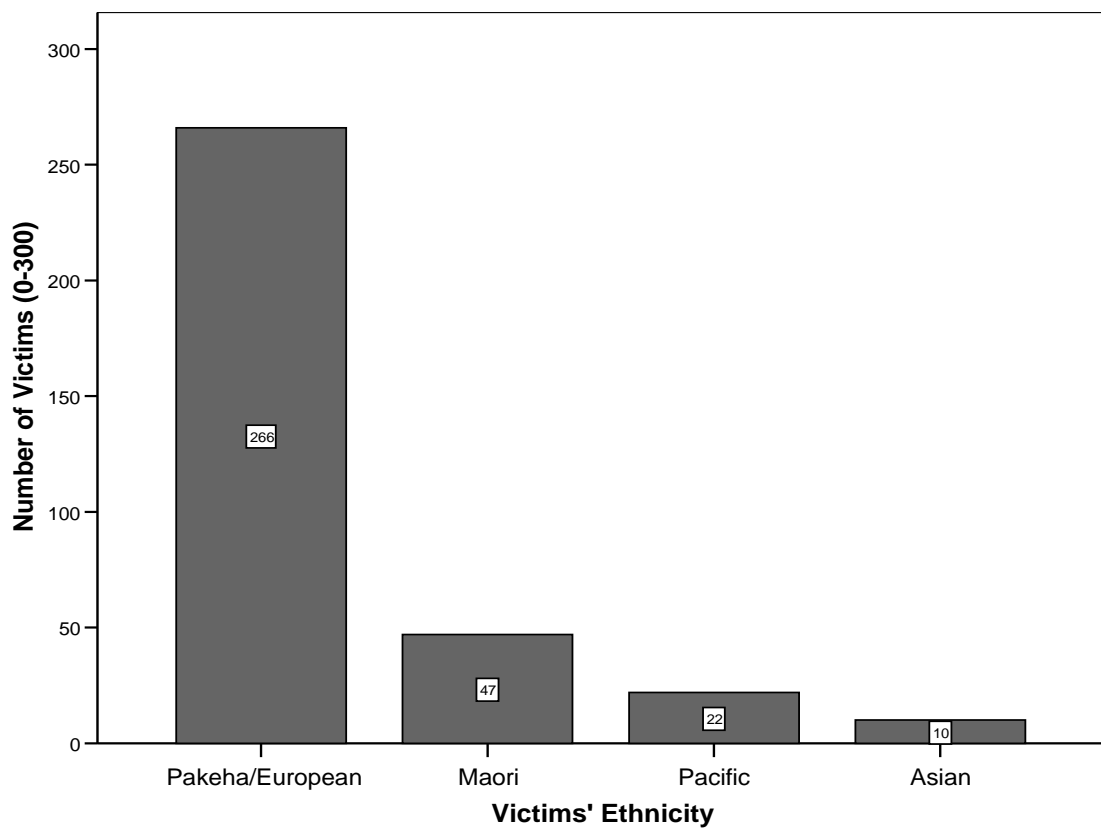


Figure 3.7: Victims' ethnicity per number of victims

This breakdown in ethnicity matches closely to the breakdown of ethnicity in the overall New Zealand population. Compared to the offenders' ethnic breakdown, the relative positions of the Pakeha-European and Māori groups are reversed here.

Victim-Offender Relationship

Data was recorded on the status of the victim-offender relationship prior to the sexual assault in all but one case. Table 3.2 below sets out the details of the prior relationships.

Table 3.2: *Prior relationship status between offender and victim per offence*

<i>Relationship</i>	<i>Number of offences</i>	<i>Percentage of offences</i>
Stranger	361	80.8
Acquaintance	68	15.2
Relative/Friend	4	0.9
Ex-Partner	5	1.1

Table 3.2 shows that the largest group of offences involved victims who were complete strangers to the offenders prior to the assault. This group accounted for 80 percent of all the offences. The second largest group of offences involved victims who were acquaintances to the offenders prior to the assault. This group accounted for 15 percent of all offences. The term acquaintance refers to someone the offender knows but is not an intimate or friend. The final two groups only accounted for a very small proportion of the offences.

Summary

This section reported on the offender and victim characteristics of the sample. An average offender was young and Māori. His preferred victim was

also young, Pakeha/European and a stranger to the offender prior to the assault.

The assault was most likely to occur in the greater Auckland region.

CHAPTER FOUR

Exploratory Study 1: Factor Analysis of Offenders' First Offence

The previous chapter explained first the methodology used to code the data. Next, the demographics of the sample were described including offender, victim and offence characteristics. The next stage in the research was to conduct the consistency analysis on the variables. However with 439 offences coded in total, there was a large amount of data to be analysed. It was decided to first subject the data from the offenders' first and second offences to exploratory factor analysis. Factor analysis has two advantages: it can both summarise and reduce data. These are both useful tools at this early stage of data analysis.

The following chapter will describe the factor analysis procedure used in some detail. This is because factor analysis is a statistical technique that will be used throughout this study, and as such I will set out the criteria used for its employment in this research. Also, factor analysis is not a statistical technique that is often used in the profiling and behavioural consistency literature so I will provide information on the nature of the process. This chapter will begin by discussing the nature of factor analysis and the advantages it brings to the research. Following this I will report on the assumptions for factor analysis and the process by which the factors were extracted. Next is an analysis and discussion of the resulting factor solution for the first offences. Following this, the chapter will report on the factor analysis of the offenders' second offence.

Factor analysis is suited to analysis of large amounts of data with multivariate relationships where the goal is to summarise the information contained in the data into its key conceptual relationships to establish the latent structure of the data collected. Factor analysis can detect and define these relationships by extracting from a large set of variables, a smaller set of latent interconnected variables or factors (Hair, Black, Babin, Anderson & Tatham, 2006). By factor analysing the 121 first offences at this stage, it is possible to get a sense of how the data fits together and in particular whether it has a sound underlying structure. This will provide important feedback on the variable selection procedure, and allow identification of variables that need to be removed from any future analysis. It must be noted at this point that the factor analysis will only be performed on every first offence committed by the offenders in their offence series. It therefore only involves a subset of the data collected and is intended as a preparatory stage of analysis before the main consistency analysis is started.

The factor analysis process involves an examination of the degree of correlation between all variables, to determine if any groups of variables are highly interrelated. These groups of variables are then identified as potential factors for interpretation (Hair et al., 2006). In other words, in the case of survey data the analysis looks for how participants responded to the variables, and specifically if certain variables tended to be responded to in similar ways. In terms of this research, the analysis will examine whether the serial sexual offenders tended to exhibit groups of behaviours in conceptually similar patterns, or whether their choice of behaviours was more random. For example, within the

variables used for data collection there are a number of behaviours that could loosely be classified as hostile from the offender's point of view. Hostility has been found by previous research to be a salient theme in sexual offending (Canter, 1994; Canter et al., 2003; Canter & Heritage; Groth et al., 1977; Knight & Prentky, 1990, 1991; Polaschek et al., 2001). Will factor analysis of the data reveal that offenders are more likely to commit or not commit these hostile-type behaviours in the same offences, thereby revealing an underlying hostility factor? Or will the analysis show that the hostile behaviours are unconnected, and that it is indeed random whether and how these behaviours are used?

Assumptions for factor analysis

The following section presents the suitability of the data for factor analysis by examining certain assumptions considered important for factor analysis. This section will only be discussed in detail in this section to avoid repetition throughout this thesis, but the same procedure was used for every factor analysis conducted during the course of this research.

Factor analysis is usually conducted on metric data. Non-metric data is difficult, as it cannot utilise the same correlation methods as metric data (Hair et al., 2006). However, one exception to this rule is that of dichotomous data or dummy variables. Researchers concur that using dichotomous data is appropriate for factor analysis (Field, 2005; Hair et al.).

A statistical tool for determining the suitability of a dataset for factor analysis is to consider the Bartlett test of Sphericity and the Kaiser-Meyer-Okin Measure of Sampling Adequacy ('KMO'). The KMO was adequate at .59 (Kline, 1994)

and Bartlett's test was significant ($p < .01$), indicating that there are several significant correlations in the resulting factor structure, making the data suitable for factor analysis (Kline). Another check for the suitability of the data for factor analysis is to perform a visual analysis of the correlation matrix to identify whether there are sufficient correlations high enough to justify a factor analysis. In this case, there were more than sufficient correlations higher than .30 and significant at the 0.01 and 0.05 level, to justify the use of factor analysis (Hair et al., 2006)..

Extraction of Factors

The following sections will describe the stages of factor extraction including an examination of which factor analysis technique was employed, the best form of factor rotation for this analysis and the number of factors extracted.

Principal components analysis

There are two major techniques possible for performing a factor analysis: Principal Components Analysis (PCA) and Common Factor Analysis (CFA). The preferred option depends on the aim of the analysis, and the degree of knowledge about the variance contained in the dataset (Hair et al., 2006). PCA is considered more appropriate when the goal of the factor analysis is to identify the minimum number of factors to explain the highest amount of variance among the variables. This is because PCA examines the total variance, i.e. not just the common variance shared between the variables, but also a degree of specific

and error variance which are only associated with individual variables. CFA by contrast, examines only the common variance. CFA therefore excludes some of the variance used in PCA (Stevens, 2002). The practical implications of this difference is that PCA is more appropriate for real-world analysis as most data derived from the real world will inevitably contain both unique and error variance (Giles, 2002; Stevens). For this reason, it was more appropriate to use PCA for this research as the dataset was derived from police files that inevitably will contain a degree of unreliability as well as measurement error. PCA was also the most suitable technique for data reduction as it prioritises the optimal number of factors to explain the maximum amount of variance (Stevens). As the terms factor and component are often used interchangeably, for the sake of consistency the term factor will be used throughout, despite the use of PCA as a technique.

Orthogonal rotation (varimax)

Factor rotation is essential for interpretation of the resulting factor structure. This process involves rotating the axes of the factors or the variables to reach a more interpretable position. The unrotated solution generally has as its first factor a general factor on which virtually every variable then loads to a significant degree. This first factor therefore explains a large amount of variance, with the following factors accounting for much smaller amounts of variance. The rotation effectively reallocates the variance so that larger amounts of variance are explained by the later factors. This ultimately results in a simpler and more interpretable factor structure (Hair et al., 2006).

The more straightforward form of rotation is orthogonal rotation whereby the axes cannot move from 90 degrees. The other major procedure is the oblique factor rotation where the axes are not restricted in this way resulting in a more flexible process (Hair et al., 2006; Kline, 1994). The orthogonal technique tends to be more commonly used as the oblique rotation makes the distinction between the resultant factors more difficult to ascertain, while maximising the loading of the variables on to the factors (Kline). The orthogonal technique instead focuses on loading variables as highly as possible on one factor while loading low on the remaining factors, thus ensuring a more easily interpretable factor solution (Hair et al.). In practice both methods can produce similar results (Hair et al.), but in this case the orthogonal (varimax) technique was applied.

Criteria for the number of factors to extract

The first step in deciding how many factors to extract is to employ Kaiser's latent root criterion. With this technique, only the factors having an eigenvalue of more than one are extracted (Hair et al., 2006; Kline, 1994; Stevens, 2002). An eigenvalue is a measure of the variance in the variables loading on that factor. The ratio of eigenvalues is therefore the ratio of the degree of explanation of that factor for the variance of those loading variables. A factor with a low eigenvalue indicates that the factor is unable to explain much of the variance and can be safely discarded in favour of previous factors with higher eigenvalues (Hair et al.). With PCA each variable supplies a value of one to the factor's eigenvalue. Therefore, a factor with an eigenvalue of more than one is accounting for the

variance of at least one variable. This is the criterion that is considered minimum for useful extraction (Kline).

After examining the eigenvalues for the factors, only the first 11 factors had eigenvalues over one, and therefore only these factors were initially extracted. PCA was thus performed with orthogonal rotation (varimax with Kaiser normalisation) to extract 11 factors. In the resultant factor structure, the first six or seven factors contain four or more factor loadings, and a preliminary examination revealed that the variables loading together on each of these seven factors appeared capable of conceptual interpretation. After the seventh factor, the factors contain fewer factor loadings and seem less internally coherent. This suggests that extraction of seven factors or less may actually be appropriate. Therefore, the scree test was consulted.

With PCA, common, unique and error variance are contained within the extracted factors. The percentage of unique as opposed to common variance tends to increase proportionally in later factors. The scree test criterion is used to recognize the best number of factors to extract before the unique variance becomes more predominant than the common variance (Hair et al., 2006; Kline, 1994; Stevens, 2002).

Figure 4.1 below contains the scree plot with the eigenvalues plotted against the factor numbers. The shape of the curve is the key to determining the optimum number of factors to extract (Hair et al., 2006). It can be seen how the curve initially slopes steeply downwards but then slides out into a gentler curve. At the point where the curve begins to ease off is called the elbow of the curve and is considered a good indicator of the maximum number of factors advisable

(Hair et al). From the plot, the elbow begins at around the fourth factor. It was therefore decided to extract three, four and five factor solutions to determine the best fit for the data.

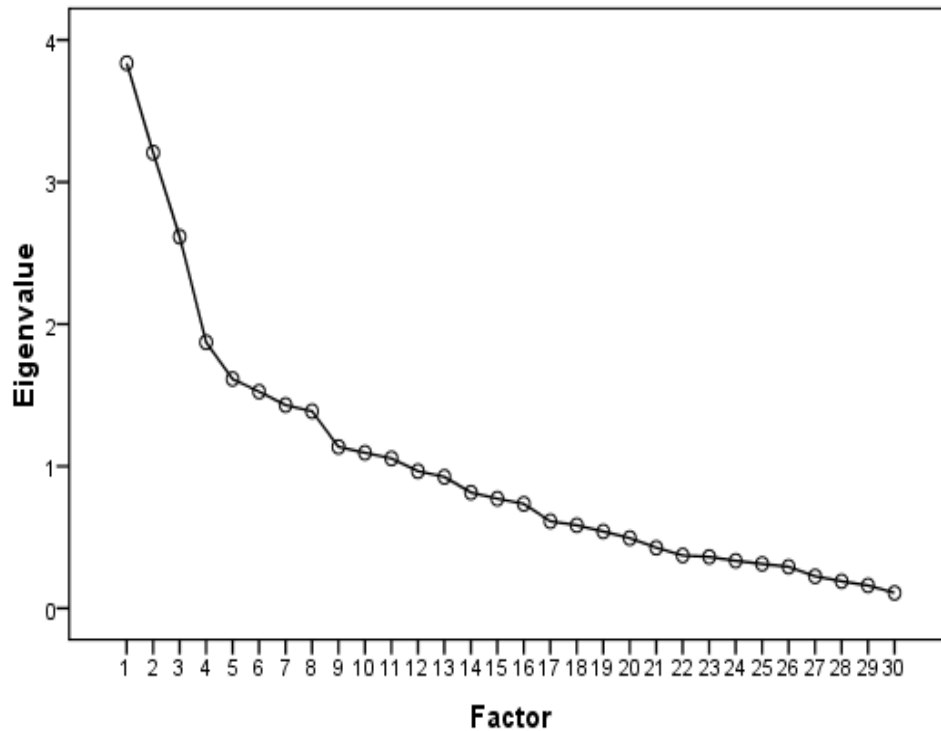


Figure 4.1 Scree plot for factor analysis of offenders' first offences

Orthogonal rotation was therefore performed for the possible three, four and five factor solutions. After careful consideration a three factor solution was decided on as it offered the optimum interpretability. Each factor was capable of clear interpretation and the variables loading onto each factor were all conceptually linked to an underlying theme. The themes identified by this three factor solution were hostility, control and involvement. These are all themes consistent with previous research (Canter, 1994; Canter et al., 2003; Canter &

Heritage; Groth et al., 1977; Knight & Prentky, 1990, 1991; Polaschek et al., 2001).

The four and five factor solutions contained a number of cross-loadings of variables already explained by other factors. In addition, they contained redundant factors that did not increase the interpretative power of the matrix. In particular although the four and five factor structures also had factors identifiable with the themes of hostility, control and involvement, they contained fewer variables each because several of the variables from the factors featured in the three factor solution described above now formed the last two factors in this five factor structure. The first of these final factors contained variables representative of control behaviours performed during a home invasion offence (Home Invasion, Outdoors, Con Approach, Transportation, Phone and Disguise). These variables all loaded onto the identified control factor in the three factor solution. Overall the existence of one control factor was more interpretable and compatible with previous literature than that of two factors representing control and home invasion behaviours (Canter et al., 2003; Canter & Heritage, 1990). In this five factor solution four variables relating to victim participation loaded onto a separate fifth factor (Victim Participation Verbal and Victim Participation Physical), Victim Enjoyment and Fellatio). This fifth factor was redundant as the variables that loaded on that factor were all conceptually linked to the involvement factor.

The four factor solution was rejected for similar reasons to the five factor solution. The control factor identified in the three factor solution was weakened by the existence of a fourth factor that contained the same variables relating to a

home invasion offence as in the five factor solution. Overall, there was nothing about the variables contained in this additional factor that set them apart from the control factor; all the variables in both factors were conceptually linked together by a concern about controlling the victim and the offence environment. It was therefore decided that this fourth factor was redundant to the interpretation of the data.

Analysis and Discussion

Table 4.1 below contains the factor loadings for the three factor solution extracted. The three factors accounted in total for 32.2% of the variance. Two variables did not load above the cut-off value of .30: Apologetic and Forensic.

Involvement

The first factor accounted for 11.9% of the variance. The nine variables included in this factor contributed to a primary factor representing behaviours conceptually linked together by the overall theme of pseudo-involvement on the part of the offender with the victim. This factor had an acceptable Cronbach's alpha of .73 (Hair et al., 2006). The only variable that did not fit within the overall theme of involvement was the Bindings variable. However, this variable loaded negatively onto this factor with the same value as it loaded positively onto the control factor. Conceptually it clearly belonged to the control factor but its loading on this factor indicated its simultaneous negative association with the involvement behaviours.

These involvement behaviours are all commonly definitional of a particular type of rapist known as a power-reassurance rapist in the rape typologies (Groth et al., 1977; Hazelwood, 1995; Douglas et al., 1992). These types of behaviours co-occurring together in sexual offending are supported by previous research (Canter, 1994; Canter et al., 2003; Canter & Heritage, 1990; Groth et al., 1977; Hazelwood, 1995; Douglas et al., 1992). This type of rapist engages in offender-victim interactions where the offender exhibits apparent concern for the victim's welfare through verbal or physical behaviours (Hazelwood), e.g. the behaviours Compliments, Reassures and Kissing. This offender tends to engage in high levels of sexual behaviours, though with a definite emphasis on the gentler types of behaviours such as Kissing or Licking. For this offender, his offence is a fantasy where his victim is willing, completely under his control, and capable of enjoying his attentions (Groth et al.; Douglas et al.).

Control

The second factor accounted for 10.47% of the variance and contained ten behaviours concerned with methods of control and theft. This factor had a Cronbach's alpha of only .18 due to the negative loadings variables Outdoors and Con Approach. When these variables were removed from the calculation the alpha was a more acceptable .67. This factor contained behaviours reflecting concern on the part of the offender with controlling his victim and preventing her from recognizing him, escaping or calling out for help. The factor also contained two variables concerned with theft from the victim. Two of the variables negatively loaded onto this factor: Outdoors and Con Approach. This

Table 4.1 *Factor loadings for three factor solution for factor analysis of offenders' first offences*

Variable	Involvement	Control	Hostility
Cunnilingus	.67		
Victim Participation (Physical)	.64		
Victim Participation (Verbal)	.62		
Reassures	.58		
Kissing	.58		
Digital	.56		
Compliments	.49		
Licking	.47		
Victim Enjoyment	.44		
Apologetic			
Bindings		.32	
Home Invasion		.74	
Blindfold		.61	
Gag		.56	
Theft		.54	
Outdoors		-.50	
Con Approach		-.49	
Demands		.49	
Phone		.47	
Disguise		.32	
Forensic			
Transport Victim			.59
Threats			.53
Hostility			.50
Fellatio			.49
Anal			.48
Fondling			-.36
Violence			.36
Weapon			.30
Sex Comments			.30
Cronbach's Alpha	.76	.67	.56

Note. Absolute values less than .30 suppressed.

N = 121

may be the result of the inclusion of the Home Invasion and Outdoors variables in the same factor as no Home Invasion offences occur outside. Also, qualitative information from the police files revealed that the majority of Home Invasions are Surprise Approach assaults rather than Con Approach assaults. This may account for the negative loading of the Con Approach variable.

There is empirical support from previous research into sexual offending for the salience of the themes of control and theft. Previous researchers have theorised that these types of control and theft behaviours represent a generally antisocial offender who treats the victim as an impersonal object to be used for their gratification (Canter, 1994; Canter et al., 2003; Canter & Heritage, 1990).

Hostility

The third factor accounted for 9.8% of the variance and was interpreted as a hostility factor. It contained nine variables reflecting an attitude of hostility on the part of the offender towards the victim. This factor had a surprisingly low alpha of .42. When the Cronbach's alpha was calculated a second time without the negative loading variable Fondling, the alpha improved slightly to .56. However, this result was still low suggesting that this factor was less internally consistent than the first two factors. I can only surmise that this low alpha was due to the majority of the variables loading onto this factor with less strength than those in the first two factors. In particular the variables Weapon and Sexual Comments barely loaded above .30.

Despite the low alpha this factor did contain nine sexual, verbal and physical variables representing behaviours associated with hostility on the part

of the offender. The behaviours of Hostility and Violence demonstrate direct acts of hostility towards the victim, while the behaviours Anal and Fellatio are more unusual and antisocial sexual behaviours that may cause even greater distress to the victim. The behaviours Threats and Weapon are behaviours potentially used to control the victim but also reflect a negative attitude towards the victim. The fact that the variable Fondling negatively loaded onto this factor also contributes to the overall theme of hostility. This theme has also been found to be salient in previous research. Groth and his colleagues (1977) found that anger was a central motivating force in sexual offending and this was confirmed in research conducted by the FBI on serial rapists (1992). The theme of hostility was also salient in research carried out by Canter and his associates into sexual offending (Canter, 1994; Canter et al., 2003; Canter & Heritage, 1990).

Relationship between the Factors

Each factor received a score calculated from the average occurrence of the variables defining each factor. Pearson correlation coefficients were then calculated between the three factor scores. These correlations are shown in Table 4.2 below. Only the involvement and hostility factors were significantly correlated with a low to moderate correlation indicating that there was a degree of association between these two factors (Cohen, 1992). There was no apparent relationship between the hostility and control factors, or between the involvement and control factors. The demonstrated association between the hostility and involvement factors was unexpected, considering that previous

research has shown these themes to be essentially inversely correlated (Canter et al., 2003; Canter & Heritage, 1990).

Table 4.2 *Inter-factor correlations between factors for factor analysis of first offences*

	Hostility	Control	Involvement
Hostility	1	.12	.30*
Control		1	.07
Involvement			1

Note. * $p < .01$.

N = 121

Summary

In summary, the data collected on the behaviours committed by our offenders from all their first offences was subjected to an exploratory PCA with orthogonal (varimax) rotation resulting in an extraction of a three factor solution. The resulting factor structure had three conceptually interpretable factors accounting for a total 32.2% of the variance. These three factors appeared to express the underlying themes of involvement, control and hostility.

The primary goal of the factor analysis has been achieved as the factor structure has clearly revealed the way in which the variables relate to each other and to their underlying factors. The relationships between the variables as represented by the factor structure can be interpreted from a conceptual standpoint that is supported by previous research. In addition, two variables

Apologetic and Forensic, were identified as potential variables to remove from further analysis.

Exploratory Study 2: Factor Analysis of Offenders' Second Offences

In the previous sections of this chapter all first offences were successfully subjected to exploratory factor analysis, resulting in an easily interpretable factor structure. However, as this analysis was only carried out on the first offence of every series, these results only represent just over 25% of the total offences (121 out of the 439 offences coded). While every offender in the sample was included in the analysis, it is possible that their offending may change from the first offence to the second offence to such a degree that the factor structure underlying the first offences becomes unrepresentative of the overall offender sample. Using factor analysis on the second offences also allows a test of the results of the factor analysis conducted on the first offences.

It was therefore considered advisable to test the factor structure by comparing it to a factor analysis of all second offences. As all offenders were coded for a minimum of a two offence series, there was an equal number of second as first offences, i.e. 121 offences. Therefore by factor analysing all first and second offences, a total of 242 offences were analysed, amounting to over 50% of the 439 total offences.

This second factor analysis will consequently present important additional information about the underlying conceptual relationships to the data. Should a comparable factor structure surface from the factor analysis of the second offences, this will provide corroboration of the salient themes of involvement, hostility and control that emerged from the first factor analysis. The second factor analysis also allowed for the problematic variables Apologetic and

Forensic to be tested in the second factor structure to confirm whether they should be removed from further analysis.

Extraction of Factors

To determine if the data was suitable for factor analysis, the KMO and Bartlett's test of Sphericity were considered. The Kaiser-Meyer value for the data was .62 and Bartlett's test was significant ($p > .01$), indicating that there are several significant correlations in the resulting factor structure and that the data is therefore appropriate for factor analysis (Hair et al., 2006; Kline, 1994).

In the previous factor analysis, both Kaiser's latent root criterion and the scree plot were employed as standards for the number of factors for extraction. The scree plot was much more precise in its prediction of the appropriate number of factors to extract than Kaiser's principle. So, for this second factor analysis it was decided to use the scree plot as the main indicator of the number of factors to consider for extraction. The curve of the scree plot was initially quite steep but then flattened out into a gentler curve. The curve began to smooth out at the four factor mark.

Orthogonal rotation was therefore performed for possible three, four and five factor solutions. Oblique rotations were also performed, but the factor structures produced were almost identical to those generated by the orthogonal rotations. It was therefore decided to use those produced by the orthogonal rotations, to match the process as closely as possible to that carried out in the first factor analysis. After close examination of these three possible factor solutions, it was decided that the three factor solution was the best possible fit

for the data. The factor loadings for this three factor solution can be seen below in Table 4.3. The resultant three factors are all strong and internally coherent factors with few cross-loadings. These three factors are very similar to those produced by the factor analysis of the first offences, representing the themes of control, involvement and hostility.

The four and five factor solutions were closely considered as they accounted for 38.5% and 44.7% of the variance respectively, whereas the three factor solution accounted for just 33.3%. However, the three factor solution provided a much simpler and complete interpretation of the data than these alternatives. This three factor solution was very similar to the three factor solution extracted for the factor analysis of the first offences. Overall, the patterns of variables and their loadings onto factors were very similar between the factor structures for the first and second offences. The main difference was that with the factor analysis for the second offences, the four and five factor solutions did not contain clearly delineated hostility and control factors. Instead one of the factors in the four factor solution and three of the factors in the five factor solution contained a mix of variables that belonged conceptually to both the hostility and control factors.

Table 4.3 *Factor loadings of three factor solution for factor analysis of offenders' second offences*

Variable	Control	Involvement	Hostility
Home Invasion	.73		
Con Approach	-.67		
Blindfold	.57		
Weapon	.54		
Disguise	.52		
Phone	.51		
Threats	.49		.40
Outdoors	-.43		.42
Theft	.41		.40
Gag	.39		
Forensic			
Kissing		.63	
Compliments		.63	
Licking		.57	
Victim Participation (Verbal)		.55	.39
Apologetic		.53	
Victim Enjoyment		.52	
Victim Participation (Physical)		.51	.41
Cunnilingus		.50	
Digital		.48	
Reassures		.47	
Sex Comments		.33	
Fellatio			.62
Transport Victim	-.33		.60
Hostility			.55
Anal			.55
Demands			.47
Violence			.46
Bindings			.31
Fondling			
Cronbach's Alpha	.35	.74	.60

Note. Absolute values less than .30 suppressed.
N = 121

It must be noted here that the variable Apologetic that was problematic in the factor analysis of the first offences, actually loaded well onto the involvement factor in this three factor structure. Instead as can be seen from Table 4.3 below, the variables Forensic and Fondling did not load strongly enough on any one factor to appear above the .30 value which was the cut-off point for inclusion in the factors. While the variable Forensic was also problematic in the factor analysis of the first offences, the variable Fondling loaded onto the hostility factor in that factor structure.

Analysis and Discussion

Control

The first factor accounted for 11.6% of the variance and contained ten variables that mainly reflect methods of controlling and stealing from the victim the victim. These variables are the verbal behaviour threatening the victim, and the physical behaviours Gag, Disguise, Blindfold, Phone, Weapon, Theft, Home Invasion and the negatively loading variables Outdoors and Con approach. As with the control factor in the first factor analysis, this factor may represent an experienced offender whose preference is to control the victim and/or the situation with a variety of practical MO behaviours (Canter, 1994; Canter et al., 2003; Canter & Heritage, 1990). Unlike the first factor analysis this factor does not contain the variables Demand with Menace or Bindings which are instead included in the hostility factor. The alpha for this factor was .35, due to the

negatively loading variables Outdoors and Con Approach. Without these two variables the alpha was a more acceptable .69 similar to the .67 of the control factor in the first factor analysis.

Involvement

The second factor accounts for 11.00% of the variance and the eleven variables loading on this factor are all conceptually linked together in the overall theme of involvement: verbal behaviours such as Compliments, Apologetic, Reassures, Victim Participation (Verbal); and the sexual behaviours Kissing, Digital, Licking, Cunnilingus and Victim Participation (Physical). As explained in the discussion of this theme in the first factor analysis, this theme of involvement is well represented in the literature on rape behaviour (Canter, 1994; Canter et al., 2003; Canter & Heritage, 1990; Groth et al., 1977; Hakkanen et al., 2004; Hazelwood, 1995; Douglas et al., 1992). It reflects an offender-victim interaction style where the offender shows pseudo concern for the victim's physical and mental wellbeing through his behaviours (Hazelwood). The alpha for this factor was .74, similar to the alpha of .76 for the involvement factor in the three factor structure of the first offences.

Hostility

The third factor accounted for 10.7% of the variance and was interpreted as a hostility factor. It contained seven variables representing behaviours that express a hostile offender-victim interaction style: the physical behaviours of Violence and Transportation, the sexual behaviours of Anal and Fellatio, and the

verbal behaviours of Hostility and Demands. The only variable that doesn't clearly fit within the hostility theme is that of Bindings. This variable is most likely loading onto this factor as a control behaviour that is often used by offenders exhibiting generally aggressive behaviours. As discussed with regards to the hostility factor for the first factor analysis, the theme of hostility is salient throughout the earlier literature on sexual offending (Canter, 1994; Canter et al., 2003; Canter & Heritage, 1990; Groth et al., 1977; Knight & Prentky, 1990, 1991; Polaschek et al., 2001; Douglas et al., 1992). The alpha for this factor was .69, again a higher value than for the hostility factor in the first factor analysis.

Relationship between the Factors

Pearson correlation coefficients were again calculated between scores calculated for the three factors to examine the relationship between the factors. The results are shown in Table 4.4 below. The only significant correlation was between the hostility and control factors. The correlation between these two factors was moderate (Cohen, 1992) indicating that there was a degree of association between these factors. This is not unexpected as in this second factor analysis the control factor contained three variables that also loaded onto the hostility factor. In addition, the variable Transportation from the hostility factor cross-loaded onto the control factor.

Table 4.4 *Inter-factor correlations between factors for factor analysis of second offences*

	Hostility	Control	Involvement
Hostility	1	.42*	.10
Control		1	.08
Involvement			1

Note. * $p < .01$.

N = 121

There was no apparent relationship between the hostility and involvement factors, or between the involvement and control factors. This was in contrast to the inter-factor correlations from the first factor analysis where there was a significant moderate correlation between the involvement and hostility factors.

Summary

In summary, the data from the offender's second offences was subjected to an exploratory PCA with orthogonal (varimax) rotation resulting in an extraction of a three factor solution accounting for 33.33% of the variance. This factor structure clearly revealed three salient and conceptually interpretable factors, very similar to the three factors from the first factor analysis. In terms of data summary, the second factor analysis confirmed the results of the initial exploratory research on the first offences.

Conclusion

To conclude, the exploratory factor analyses of the offenders' first and second offences produced conceptually interpretable three factor structures in both factor analyses that were interpreted as representing the themes of involvement, hostility and control. These three themes are all salient in previous research on sexual offending (Canter, 1994; Canter et al., 2003; Canter & Heritage, 1990; Groth et al., 1977; Hazelwood, 1995; Polaschek et al., 2001; Knight & Prentky, 1990, 1991; Douglas et al., 1992). Overall, these exploratory analyses have summarised the data to reveal three extremely salient themes underlying the offence behaviour of the first and second offences.

There were some discrepancies between the two factors. The involvement factor from the second factor analysis contained two extra variables than the involvement factor from the first factor analysis (Sex Comments and Apologetic). In the second factor analysis, two of the variables loaded onto the control factor that had previously loaded onto the hostility factor (Weapon and Threats). In addition, the involvement and hostility factors were correlated in the first factor analysis but not in the second factor analysis. However, apart from these exceptions the two factor solutions were compatible.

CHAPTER FIVE

Consistency Analysis

The previous chapter described how the first and second offences were subjected to exploratory data analysis to examine any underlying patterns and relationships in offence behaviour, and to determine if any variables should be removed from further data analysis. Both analyses resulted in clear and interpretable factor structures that indicated the themes of hostility, control and involvement were salient in offence behaviour. In terms of data reduction, the Apologetic variable did not load above the cut off point of .30 in the first factor analysis, and the Fondling variable did not load above the cut off point in the second factor analysis. The variable Forensic did not load over the cut-off value in either factor structure. It was decided at this stage to include these variables in the consistency analysis, with a view to eliminating them should they cause further problems in the analysis.

The focus of this chapter is the behavioural consistency of offenders across their entire offence series. While it is highly improbable that any individual will produce perfectly consistent behaviour across all offences due to the impact of both learning and unpredictable environmental factors, the degree of consistency is of interest. In their theoretical review of profiling Alison et al., (2002) pointed out that the majority of authors in the profiling area assume that behavioural consistency exists; indeed, that it is fundamental to the profiling process. The assumption is that behaviour is dominated by stable personality

traits that influence offence behaviour to a far greater extent than any contextual effects (Alison et al). As discussed earlier, Canter's (1995, at p.347) offender consistency hypothesis states that "the way an offender carries out a crime on one occasion will have some characteristic similarities to the way that he or she carries out crimes on other occasions".

The most thorough test of the assumption of behavioural consistency to date is the research completed for the Home Office in the United Kingdom by Grubin and his colleagues (2001). One criticism of this comprehensive study was that their analysis focussed on the degree of consistency of certain very specific groupings of behaviours, rather than on the consistency of individual behaviours. Arguably this research analysed only thematic consistency rather than actual behavioural consistency. As there was no analysis of the consistency of individual behaviours, it was not possible to compare the consistency of different specific behaviours. This question is one of the key research questions asked by this study. This analysis will therefore begin by examining the extent of consistency of individual behaviours committed by offenders over the course of their offence series. Following a discussion of these consistency analysis results, the consistency scores resulting from the analysis will then be subjected to factor analysis to determine whether there are any patterns in the consistency data and the degree to which there is thematic consistency as well as consistency for individual behaviours. Based on the results of the exploratory factor analyses in the last two chapters, it is hypothesised that the factor analysis of the consistency scores will produce factors that reflect similar themes to those identified by the earlier analyses. The

three themes of hostility, control and involvement from the previous chapter are all consistent with previous research into profiling and rape typologies (Canter et al., 2001; 2003; Canter & Heritage, 1990; Groth et al., 1977; Knight & Prentky, 1990; 1991; Polaschek et al., 2001). The control theme was also salient in Grubin et al.'s study and had the highest single domain consistency.

Method of Data Analysis

This chapter will begin by reporting the chi-square analyses conducted on the first two offences to provide a form of significance testing for the consistency analysis. The chapter will then describe the measure used in the consistency analysis. The results of the consistency analysis will then be presented and discussed in detail. Following this discussion, the results of the factor analysis of the consistency scores will be examined and discussed.

Chi-Square Analysis

Before the consistency analysis was carried out, chi-square analyses were conducted on all variables across the first two offences to provide significance testing for the consistency scores as the main consistency analysis did not provide any significance testing for the consistency scores calculated for each variable. A form of significance testing was necessary because the consistency analysis included both the occurrence and non-occurrence of behaviour. As some of the variables had high degrees of non-occurrence, the consistency scores for those variables could be inflated and yet remain within chance levels. It was therefore necessary to calculate the likelihood that the presence or

absence of any particular behaviour in one offence was systematically rather than randomly related to the presence or absence in the subsequent offence. Chi-square tests were conducted on the first and second offences in the offence series, to compare the expected frequencies of each variable with the actual frequencies that were observed. The first and second offences of all offenders were used for this analysis as these were the only two offences that involved the whole sample of 121 offenders.

Results

The results of these chi-square analyses are summarised and provided in Table 5.1 below. The frequencies are reported in the second and third columns as the number of offenders who were respectively either expected or observed to perform each behaviour. The chi-square values are reported in the last column.

Table 5.1 *Chi-Square analysis of first two offences*

Variable	Offence 1 vs. 2 Expected Frequency	Offence 1 vs. 2 Observed Frequency	Chi-Square (x ²)
Phone	101.6	114	55.0**
Transport Victim	80.6	105	48.1**
Con Approach	60.4	97	46.0**
Home Invasion	68.2	99	41.3**
Forensic	100.6	111	37.8**
Outdoors	60.4	92	33.8**
Disguise	99.2	109	28.6**
Threats	60.6	88	27.2**
Reassures	81.6	98	26.4**
Hostility	91.4	102	21.6**
Sexual Comments	75.6	92	19.7**
V. Participation Verbal	79.6	93	15.7**
Demands	94.4	103	14.1**
Bindings	96.6	104	12.7**
Theft	81	93	11.7**
Fondling	60	78	11.3**
Compliments	87	96	11.3**
Blindfold	99	105	11.0**
Weapon	70.4	84	9.0**
Victim Enjoyment	91.4	98	8.7**
Gag	100	104	5.0*
Cunnilingus	89.8	95	3.7
Digital	78	85	3.6
Kissing	70.8	79	3.5
V. Participation Physical	80.6	87	3.3
Violence	82.8	88	2.3
Fellatio	87.8	90	0.6
Anal	96.6	98	0.4
Apologetic	89	89	0.0
Licking	94.4	94	0.0

Note. * * p < .01

* p < .05

N = 121

Of the 30 variables subjected to chi-square analysis, the majority (21 variables) resulted in Pearson's chi-square values that were significant ($p < .01$), indicating that the presence or absence of these behaviours across both the first two offences was significantly greater than chance. Nine variables resulted in chi-square values that were not significant, indicating that for these variables the presence or absence of these behaviours across the first two offences was not above chance levels.

The majority of the non-significant variables represent sexual behaviours. Although the chi-square analysis is not a measure of consistency across the whole offence series, the non-significant chi-square values are a strong indicator that these behaviours were not consistent across the first two offences. For these variables the observed frequencies were not significantly greater than the expected ones, indicating that the pattern of occurrence for these variables was no different than that expected by chance in any event. The only two non-sexual variables that did not result in significant chi-square values were Violence and Apologetic.

Procedure for Measuring Consistency

Measuring consistency across the entire offence series can be accomplished in a variety of ways. Perhaps the most obvious would be to simply calculate the frequency of occurrences of each behaviour over the offence series. However, this method would not allow for changes in behaviour by individual offenders from offence to offence, nor would it measure the

consistency of behaviour in consecutive offences. Another limitation to using the frequency of occurrences over offence series is that it does not allow for equal comparisons to be made across offenders with different length offence chain, (i.e. comparing an offender with three offences to one with eight offences). An alternative measure is one that was used to measure consistency of behaviour in Czarnomski (2003); to compare each offence in a series with the next offence in the series, i.e. for an offender who has committed five offences, four comparisons would be made: the fifth offence would be compared to the fourth offence, the fourth offence would be compared to the third offence, the third offence would be compared to the second offence, and finally the second offence would be compared to the first offence. As behaviour was coded as dichotomous, each behaviour could only either occur or not occur in each offence. Within each comparison, a score of one was given whenever each behaviour occurred in **both** offences, a score of one was also given whenever each behaviour did not occur in **both** offences, and a score of zero was given whenever a behaviour occurred in one of the offences being compared but did **not** occur in the other offence. Therefore, a positive grading of one was given for every positive-positive or negative-negative comparison, but a score of zero was awarded for positive-negative and negative-positive comparisons. The scores are then added up over the offence series to result in a final score for each behaviour for each offender. Finally, as different offenders have differing offence series' lengths, the score is divided by the number of comparisons made for each particular offence series. For example, the score for an offence series containing five offences will be divided by four, and the score for an offence

series containing eight offences will be divided by seven. The higher the final score, the higher the degree of consistency for that behaviour by that offender. Each score is then turned into a percentage to make it easier to understand and compare consistency levels. To determine an average consistency score for each behaviour over the entire sample, the mean percentage is then calculated for each behaviour resulting in an overall consistency percentage over the whole sample for each behaviour.

To explain the effect of the difference in the two approaches, take this example. An offender has a six offence chain. If he performs a behaviour in every second offence across an offence series, this would result in a frequency count of 50% for that behaviour. If the Czarnomski (2003) method is used, five comparisons would be made. All comparisons would be positive-negative or negative-positive matches resulting in an overall score of zero, indicating no consistency. This would reflect the fact that the offender never performed the behaviour in consecutive offences. This second measure is a more discriminative evaluation of *consistency* in behaviour.

To elaborate, what if the offender had committed the behaviour in his first three offences, but had not committed the behaviour in the last three offences? The frequency method the frequency of the behaviour over the series remains 50%, the same result as in the first example. However, the Czarnomski (2003) method would produce a completely different result from the first example. Five comparisons would be made as follows: the first and second offence comparison would result in a positive-positive score of one, the second and third offence comparison would result in a positive-positive score of one, the third and

fourth offence comparison would result in a positive-negative score of zero, the fourth and fifth offence comparison would result in a positive-positive score of one, and the fifth and sixth offence comparison would result in a positive-positive score of one. The result is an overall consistency score of four out of a possible total score of five; 80%, indicating high consistency. The second method therefore produces a more discriminative reflection of behavioural consistency.

It was hypothesised that some behaviours would be more consistent than others. For example, behaviours that required a degree of planning and forethought by the offender such as bindings, disguise, weapon, gag and blindfold, are more likely to be consistent than behaviours that may be more affected by environmental factors such as victim resistance or interruption. Examples of these behaviours might be violence, sexual behaviours and verbal behaviours. This hypothesis has already received support from the chi-square analyses reported in Table 5.1. Out of the nine variables with non-significant chi-square values, seven were sexual variables, indicating that this group of variables were not consistent above chance levels. In contrast, the chi-square values for many of the variables that evidence a concern on the part of the offender to control the victim such as Bindings, Blindfold, Forensic, Phone, Weapon, Threats, Home Invasion, Con Approach and Transport Victim were all highly significant ($p < .01$).

Table 5.2 *Descriptive statistics of consistency scores and frequencies for variables*

Variable	Consistency Score Mean (%)	Consistency Score Standard Deviation (%)	Frequency Mean (%)	Frequency Standard Deviation (%)
Phone	94.7	20.0	9.3	25.4
Disguise	90.7	28.7	10.0	23.7
Forensic	90.2	26.2	9.8	22.3
Gag	88.9	31.3	9.6	21.8
Bindings	87.8	30.6	12.2	25.3
Demands	86.2	29.5	13.1	25.7
Blindfold	86.1	29.4	12.0	24.0
Anal	82.5	32.1	11.3	22.6
Home Invasion	82.4	33.2	32.4	40.3
Cunnilingus	80.6	35.1	13.4	24.1
Transport Victim	80.5	29.7	22.2	34.0
Victim Enjoyment	80.3	31.9	11.5	23.0
Con Approach	80.0	35.6	45.0	42.3
Compliments	79.9	36.0	15.7	25.5
Theft	78.1	35.1	22.9	31.8
Fellatio	78.0	34.5	16.0	24.4
Apologetic	77.1	36.9	12.6	22.0
Outdoors	76.9	34.0	44.7	41.1
Hostility	75.2	18.1	27.9	18.2
Reassures	74.6	34.3	19.6	29.3
Licking	74.2	36.0	13.6	21.1
Threats	73.3	35.5	59.2	39.8
Violence	73.2	35.7	21.3	27.6
Weapon	70.8	36.6	29.1	33.3
V. Participation Physical	70.1	38.2	21.6	28.0
V. Participation Verbal	70.1	38.2	21.6	28.0
Digital	69.2	36.0	23.5	29.2
Kissing	68.2	37.9	28.4	31.9
Sex Comments	67.1	36.0	23.4	29.0
Fondling	58.4	39.7	43.9	35.8

N = 121

Results

Table 5.2 above presents the results of the consistency analysis in descending order from most consistent to least. The left hand columns contain the means and standard deviations for the consistency scores presented in percentage terms, with perfect consistency at 100% and zero consistency at 0%. It must be noted that high consistency scores indicate that the offenders' tendency to either commit or not commit that behaviour over their offence series was consistent. This measure is a more accurate reflection of true consistency in that consistency is exhibited both by the behaviours that are consistently absent as well as those that are consistently present. Therefore, a variable with an extremely high consistency percentage of 94.7% such as the Phone variable indicated that offenders are extremely likely either to perform this particular behaviour in most of their offences or in hardly any of their offences.

The column second from the right in Table 5.2 contains the average frequency of each variable across all offences, accompanied by the corresponding standard deviations in the far right column. This statistic provides a contrast to be considered when examining the consistency scores, as it draws attention to the high non-occurrence rates of many of the variables. Taking the example used just above, Table 5.2 shows that the variable Phone received the highest consistency score and in Table 5.1 Phone had a significant chi-square value ($p < .01$). However, Table 5.2 also shows that across the sample the Phone variable occurred on average in less than 10% of offences. Therefore, a large part of this variable's consistency score came from high levels of consistent *non-occurrence* of that behaviour. In other words, many more

offenders consistently did not perform this behaviour than did. This result does not undermine the overall consistency of the offenders with respect to this behaviour, but provides additional information as to the source of consistency.

Overall, it can be seen that a large number of the variables had high consistency percentages. The percentages ranged from 94.7% for Phone down to a low of 58.4% for Fondling. Only five out of the total 30 variables have a consistency score less than 70% indicating that offenders are exhibiting moderate to high levels of consistency for these behaviours. However, these results must be weighed against the results of the chi-square analyses. The majority of the variables with high consistency scores also had significant chi-square values, and several of the variables with low consistency scores had non-significant chi-square values. With some exceptions such as Fondling and Sex Comments, the majority of the variables had results from the consistency analysis consistent with the chi-square analysis. That is to say, variables that received a significant chi-square value also received a moderate to high consistency score, and variables with a non-significant chi-square value received the lowest consistency scores. This consistency between the two analyses provides further support for their results.

The standard deviations for the variables were all also high. These standard deviations indicated that offenders varied to a large degree in their consistency for most variables. Generally but with some exceptions, the standard deviations grew in size as the consistency scores decreased. The highest standard deviation came from the Fondling variable, closely followed by the Victim Participation variables and the Kissing variable. The lowest standard

deviations were for the Home Invasion variable and the Hostility variable.

Therefore, the Home Invasion variable not only had a high mean consistency score but also the least amount of variance. The chi-square test run on the Home Invasion variable also demonstrated a significant association across the first and second offences ($\chi^2 (1) = 41.32, p < .01$). The variable showed one of the highest consistency levels above chance across the first two offences.

In order, the behaviours with the five highest consistency scores were: the Phone variable, the Disguise variable, the Forensic variable, the Gag variable and the Bindings variable. Table 5.1 shows that all these behaviours had higher consistency across the first two offences than would be expected by chance alone. The five lowest consistency scores were: the Fondling variable, the Sex Comments variable, the Kissing variable, the Digital variable, and the two Victim Participation variables. Although the Fondling, Victim Participation (Verbal) and Sex Comments variables all demonstrated above chance levels of consistency across the first two offences, the Kissing and Digital variables had not shown any significant consistency over the first and second offences as per the chi-square analysis.

Throughout the following reporting of the results of the consistency analysis, extra information as to the frequency of the behaviour of offenders will be provided to afford additional insight to this discussion. This is because the consistency scores were calculated to reflect both the consistent presence and absence of behaviour in consecutive offences, and the frequency statistics provide relevant information as to the presence and absence of behaviour across offence series overall. However, two notes of caution must be made

about these frequency statistics. First, as mentioned in the earlier section on the procedure used in the consistency analysis, the use of frequency statistics does not allow for any consideration of behaviours that occur in consecutive offences, instead it only provides information about the number of times a behaviour is performed. Only the consistency scores reflect the consistency of behaviour over consecutive offences. Another limitation to the frequency of behaviour over offence series as a measure is that it does not allow for equal comparisons to be made across offenders with different length offence series, (i.e. comparing an offender with three offences to one with eight offences).

MO behaviours

As predicted, the behaviours that received the highest consistency scores were all behaviours that arguably reflect a concern for control of both the victim and/or the offence environment. The high consistency scores indicate that offenders are either highly likely or unlikely to consistently commit these behaviours over their entire offence series. However, the high consistency scores for these behaviours must not be considered as evidence of large numbers of offenders consistently committing these behaviours because of the overall low frequency levels of these behaviours throughout the sample.

For example, the Home Invasion variable refers to offences committed in the victim's home, usually by breaking in when the victim is asleep or otherwise unawares. The high consistency score for this activity reveals that offenders either use this particular strategy the majority of the time, or they are highly unlikely to use it at all. The act of breaking into another person's residence

effectively without drawing attention to oneself is an act that requires a certain degree of skill and advance planning and it allows the offender access to the victim in an environment where he can control the elements of his offence with less fear of interruption or victim escape, as compared to an outdoors offence. For example, 53.7% of offenders committed a home invasion in none of their offences, while 20.7% committed a home invasion in 100% of their offences. Of those offenders who committed a home invasion in at least one offence, 82.6% of these offenders went on to perform a home invasion in at least 50% or more of their offences. These frequency statistics provide some confirmation of the high consistency score for this variable.

The high consistency score for the Phone variable also indicates that offenders are highly consistent in whether they commit or do not commit this behaviour. From the low frequency mean of less than 10% occurrence, it would seem that the majority of offenders fell into this latter category. However, it must be noted that the opportunity to commit this behaviour does not occur in all environments, for example in any offences committed outdoors. For this variable, 85.1% of offenders never committed this behaviour, whereas only 5% committed it in all their offences. Of those offenders who committed this behaviour in at least one offence, 67.1% of these offenders went on to cut the phone or power lines in at least 50% or more of their offences.

After the Phone variable, the Disguise, Forensic, Gag, Bindings and Blindfold variables had the highest consistency scores, ranging between 90.7% for Disguise to 86.1% for Blindfold. These are all examples of MO behaviours (Turvey, 2002). The Disguise, Gag and Bindings variables require either that the

offender bring a suitable item with him to the offence site, or that he locates an appropriate item to use at the offence site. The results of the consistency analysis suggest that offenders are likely to commit or not commit these behaviours consistently. Table 5.2 shows that these behaviours all had low mean occurrence rates across the offences (all under 15%). Like the Phone variable, the majority of consistent offenders were therefore likely those who did not perform these behaviours on a regular basis. Offenders who never committed these behaviours ranged from 75.2% of the sample for the Blindfold variable to 80.2% for the Disguise and Forensic behaviours.

Two behaviours that were considered together were the Theft variable and the Demands variable. These two variables both demonstrated significant association between the first and second offences in the chi-square analysis and received high scores in the consistency analysis indicating that offenders are either highly likely or highly unlikely to commit these behaviours across their offence series. 57% of offenders never committed theft during an offence, and 72.7% of offenders never performed the variable Demands during their offences. Only 7.4% and 4.1% of offenders committed the Theft and Demands variables respectively 100% of the time. 57.4% of offenders who committed Theft in at least one offence committed it 50% or more of the time, and 48.3% of offenders did so for Demands.

It must be noted here that with the exception of the Theft variable, these variables all had low mean frequency occurrence across the sample. In addition, the percentage of offenders who never committed these behaviours ranged from 75.2% to 85.1%. This high percentage of offenders with 100% consistency will

be responsible for a large degree of the overall consistency of these behaviours. However, that does not mean that the offenders who committed these behaviours did not also demonstrate high levels of consistency.

The Transport variable and the Con Approach variable received highly significant chi-square values across the first and second offences. These three variables also all had moderate to high consistency scores, indicating that these behaviours were consistently carried out or omitted by offenders. The Transport variable requires the offender to transport the victim a distance from the initial approach site before the offence is committed. This behaviour often requires the use of a car and therefore needs a degree of planning and organisation. The variable Con Approach refers to the behaviour whereby offenders use a deceptive initial approach to the victim; for example, they use a ruse to get inside a victim's house, or they stop the victim outside and ask a question. This variable is linked to a variable that was earlier dropped from the analysis: the Surprise variable which refers to offenders initially assaulting victims by physically overpowering them. This variable was removed from the analysis as it split the sample with the Con Approach variable. The high consistency for the Con Approach variable therefore shows that offenders tend to use either the Con Approach or Surprise Approach method quite consistently. Thirty seven percent of offenders never used the Con Approach behaviour in their offences, which means that 63% of offenders used the Surprise behaviour 100% of the time.

Sexual Behaviours

Also as predicted, the sexual behaviours had a lower degree of consistency which confirms the finding from the chi-square analyses that the sexual behaviours showed only marginally more consistency than chance across the first two offences. The Grubin et al. (2001) study also found that the sex domain had less consistency than the control and escape domains. Four of the five behaviours with the lowest consistency scores are sexual behaviours: the Fondling variable, the Sex Comments variable, the Kissing variable, and the Digital variable. Other sexual behaviours with slightly higher consistency scores are: the Licking variable, the Fellatio variable, the Cunnilingus variable and the Anal variable. Not surprisingly, the less frequent sexual variables (Anal and Cunnilingus) received the higher consistency scores indicating that offenders were either inclined to commit or not to commit these behaviours. Table 5.1 shows that only Sex Comments and Fondling received significant chi-square values: therefore the majority of the variables were not consistently committed or not committed above chance levels.

Seventy-five percent and seventy percent of offenders did not commit the Anal or Cunnilingus behaviours respectively on even one occasion. In contrast, only 1.7% and 2.5% of offenders respectively committed these behaviours across all their offences. Of those offenders who did commit these behaviours in at least one offence, 50% went on to commit them over 50% of the time.

In contrast the lower consistency scores for the behaviours Fondling, Licking and Kissing indicate a more variable approach to these behaviours; offenders will commit or not commit these sexual behaviours as the situation

Demands, with lower levels of consistency. In particular, the Fondling variable barely managed to achieve consistency above chance levels. This behaviour did have a higher mean frequency rate of 43.9%, one of the highest from the variables. Only 27.3% of offenders never committed this behaviour, with 16.5% committing the behaviour across all offences. Of those offenders who did commit this behaviour, 51.4% committed it in 50% or more of their offences, a similar statistic to the less frequent Anal and Cunnilingus variables. In contrast, 63.6% of offenders never committed the Licking behaviour and only 0.8% performed it 100% of the time. Only 31.6% of offenders who carried out this behaviour did so in over 50% of their offences.

Verbal Variables

The verbal variables showed a degree of variation in their consistency scores, ranging from a low of 67.1% for the Sex Comments variable to a high of 80.3% for the Victim Enjoyment variable. Other verbal variables included Compliments, Hostility and Reassures. These mixed results indicate that while some conversation may be offender-driven and volitional, other remarks made by offenders are more dependent on environmental factors. This argument can be enhanced by examining the frequency statistics for this behaviour in more detail. Only 10.7% of offenders never express hostility to their victims in their offences, and no offenders commit this behaviour on 100% of occasions, which is in line with the only moderate consistency score for this variable. In addition, only 15.6% of offenders perform this behaviour in more than 50% of their offences, and half of the offender sample only makes hostile comments in 25%

or less of their offences. Therefore, this is a behaviour that is performed both less consistently and less frequently across offences.

The variable Apologetic also received lower consistency scores and followed similar patterns to the Hostility variable. Apologies were never offered by 67.8% of offenders, and this was one of the variables with a low frequency occurrence across the whole sample (12.6% mean frequency). However, only 2.5% committed this verbal behaviour all of the time, and 78.5% of offenders only committed this behaviour in 25% or less of their offences. This variable also did not achieve a significant chi-square value and therefore did not occur above chance levels. This is arguably another behaviour that is reactive to victim behaviour. For example, one possibility is that while by far the majority of offenders never apologise to their victims, offenders with strong fantasy elements to their offending involving victims who respond to the sexual behaviour may be dismayed by victims who show great fear or distress during the assault and these offenders may end up apologising to calm down their victims and produce greater co-operation.

Discussion

The predictions made for the consistency analysis were confirmed with the variables that received the highest consistency scores reflecting MO behaviours concerned with controlling the victim or ensuring escape from the crime scene. These variables all also received highly significant chi-square values, indicating that they were consistent across the first two offences above chance levels. It

was also predicted that the sexual behaviours would received lower consistency scores: this was also confirmed by the results of the consistency analysis. In addition, seven of the nine sexual variables also received non-significant chi-square values, indicating that they were not consistent across the first two offences above chance levels.

These results are compatible with the factor structures resulting from the exploratory factor analyses of the first and second offences. Identified in both these factor structures was a control or MO factor that indicated offenders tended to commit or not commit these behaviours together in their first and second offence.

A note of caution here: the lower levels of consistency for the sexual behaviours as compared to the control type behaviours do not mean that the offenders did not prioritise sexual behaviours. This analysis can not determine what behaviours the offenders intended to commit, only those they did commit (or those behaviours the victims recall being performed). It is possible that environmental factors had more of an impact on the offenders' ability to perform certain sexual behaviours as compared to the control type behaviours. This is because the sexual behaviours arise directly out of the interactions between victim and offender and are subject to victim resistance and negotiation as well as potential offender limitations such as sexual dysfunction. In addition, these behaviours may not be reported by all victims to the police due to embarrassment in discussing such intimate details. Also, as attempted sexual assaults were included in the analysis along with completed sexual assaults, a number of these assaults may have been interrupted before the offender was

able to commit the sexual behaviours he intended. On the other hand, the control type behaviours may be planned in advance and suitable objects brought with the offender or located at the scene, increasing the likelihood that the offender is able to commit these behaviours. Behaviour such as the use of a disguise would be almost completely within the offender's control and not subject to victim resistance or offence interruption. Many of these MO behaviours such as Home Invasion, Outdoors, Disguise, Con Approach or Transport also occur early in the offence sequence before an interruption may occur or the victim is able to resist.

Grubin et al. (2001) also found the highest levels of consistency for control and escape behaviours in their study on the behavioural consistency of sex offenders in the United Kingdom. Their research findings were that the control domain was the most consistent, with the same domain type occurring in consecutive offences 68% of the time. Their results also found that the sexual behaviours received the lowest single domain consistency in their study. The theme of control is also consistent with the earlier studies on sexual offending as a theme that is salient throughout rape behaviour (Canter, 1994; Canter et al., 2003; Canter & Heritage, 1990; Davies, 1992; 1997; Hakkanen et al. 2004).

The present research has provided the first comprehensive analysis of the consistency of a range of sexual offence behaviours, and has found moderate to high levels of consistency for many of these behaviours. The results of the current study have also provided support for one of the key assumptions that underlies the process of profiling. Many researchers writing on the profiling process have highlighted the importance of behavioural consistency

to profiling (Alison et al., 2002; Canter, 1995, 2000; Craik & Patrick, 1995, Grubin et al., 2001; Hazelwood et al., 1989; Mokros & Alison, 2002). The importance of behavioural consistency comes from the theory that offenders bring their offence behaviour with them to the crime scene, rather than finding it in the environmental factors at the crime scene (Canter, Hazelwood et al). This is because for profiling to be possible, behaviour must be influenced by the offender's own personality and inclinations (Alison et al). If behaviour was simply the result of whatever contextual factors happened to be prevalent at any crime scene, than behaviour would be too random and unpredictable for profiling to have any success (Alison et al). This research has therefore provided empirical support that some behaviour is consistent from one offence to another.

Potential Limitations to the Consistency Analysis

One of the limitations to this analysis is the different number of offences in the various offence series. The more offences an offender committed in his offences series, the more comparisons will be done between offences and the more scores the offender will accumulate towards his overall consistency score. This can vary between one score for a two-offence series and seven scores for an eight offence series. I considered using only the 91 offenders who had committed three offences or more in their offence series rather than the total sample of 121 offenders. To test whether this would affect the results of the consistency analysis, the analysis was run twice, once with all 121 offenders and once with only those 91 offenders who had committed at least three offences. The results produced very similar consistency scores for all variables.

The most that any variable differed in the two analyses was by about 2%. It was therefore decided that it was best to use the largest possible number of offenders in the analysis as the next step in the analysis was to factor analyse the resultant consistency scores. For this factor analysis of 30 variables it was decided that the extra statistical power from the 30 offenders with only two offences would be advantageous as it would increase the total number of offenders by around 30%.

Summary

The chi-square analyses first determined that the majority of variables demonstrated well above chance levels of consistency across the first two offences. The procedure for the consistency analysis across the entire sample was explained and the results of the analysis described and examined in detail. It was reported that there was a moderate to high level of consistency for the majority of the variables. There were also high standard deviations for many of the variables, indicating a large amount of variance in the offenders' consistency. The behaviours that recorded the lowest consistency scores from the consistency analysis also demonstrated the least degree of consistency above chance levels across the first and second offences. These variables were predominantly the sexual variables which are most likely to be directly affected by contextual factors such as victim resistance. As predicted the variables with the most consistency are those that show a concern on the part of the offender to control the victim and the offence environment. However, the corresponding high standard deviations for these behaviours also indicated a large amount of

variance in this consistency, suggesting that some offenders also exhibit much smaller degrees of consistency for these behaviours. This variety in consistency was supported by the frequency statistics which suggested that a degree of caution is advisable in interpreting these high consistency scores because of the high numbers of offenders who do not perform control type behaviours at all.

Overall, the results of this analysis have provided empirical support for moderate to high degree of behavioural consistency in serial rape offences from this sample of offenders. It is consistent with the work carried out in the United Kingdom in 2001 by Grubin and his colleagues on offender consistency; in particular that the behaviours that demonstrated the highest level of consistency were those concerned with control and escape. In contrast, the analysis also found that the behaviours with the overall lowest degree of consistency were the sexual behaviours; also consistent with Grubin et al.'s finding that sexual behaviours were less consistent in consecutive offences than control and escape behaviours.

However, there is also the suggestion in these results of the influence of environmental factors such as victim resistance and offence interruption. While there is no direct empirical evidence for the impact of these environmental factors, the findings that some sexual and verbal variables have relatively low consistency in consecutive offences does lend support. As sexual behaviours and to an extent some verbal behaviours arise directly out of the offender-victim interactions, it is not unexpected that these behaviours should be subject to the degree and type of victim resistance and offence interruption. However, I can only surmise at the exact impact of these factors; without extensive data on the

types of contextual variables found at the offences, it is not possible to come to any firm conclusions about the nature, extent and influence of these environmental factors. Unfortunately, the police files used to code this research did not contain this information.

CHAPTER SIX

Factor Analysis of Consistency Scores

The previous chapter examined the degree of consistency of individual behaviours. This section will explore the data further by reporting on the factor analysis conducted on the consistency scores. As previously discussed, earlier studies provide empirical support for the consistency of certain domains of behaviour in serial sexual assault (Canter, 1995; Grubin et al., 2001; Knight et al., 1998; Sjostedt et al. 2004). The present research has already established moderate to high consistency above chance levels for the majority of the variables with the exception of the sexual behaviours and the variables Apologetic and Violence. This factor analysis was conducted to investigate whether there were any patterns to the consistency in offending. The exploratory factor analyses of the first and second offences found clear and consistent underlying themes to the offenders' behaviour that were compatible with earlier research (Canter, 1994; Canter et al., 2003; Canter & Heritage; Groth et al., 1977; Knight & Prentky, 1990, 1991). It is therefore hypothesised that evidence of similar themes or domains will be found when the consistency scores are factor analysed. To recap, the exploratory factor analyses found empirical evidence for the influence of the themes of hostility, control and pseudo-involvement in offence behaviour.

Procedure

To determine if the consistency scores were suitable for factor analysis, the KMO and Bartlett's test of Sphericity were first considered. Initially the two Victim Participation variables were too highly correlated for the factor analysis to run so the Victim Participation (Physical) was taken out of the analysis. Following this, the KMO for the data was .59 and Bartlett's test was 1117.14 ($p < .001$). Although a KMO of .59 was only mediocre (Field, 2005), the highly significant Bartlett's test suggested that the data contained sufficient significant correlations for factor analysis (Field; Hair et al., 2006). As in the earlier exploratory factor analyses the scree test was the better predictor of the number of factors to extract, the scree test was initially studied to estimate an approximate number of factors to extract for the analysis.

The curve of the scree plot was initially steep but then began to smooth out after the two factor mark. The curve then smoothed out into an even flatter line from the four factor mark. Therefore, the potential number of factors lay between two and four factors as this area is where the elbow of the curve falls. It was decided to carry out orthogonal rotation for possible two, three and four factor solutions. Oblique rotations were also performed but the resultant factor structures were again almost identical to those obtained by orthogonal rotation. The only difference of note was that the oblique rotation had two more variables falling below the .30 cut-off point for inclusion in the factors. The orthogonal method was therefore preferred as it allowed for more variables to be included in the resultant factor structure.

The three different possible factor structures were studied carefully to consider which solution offered the best fit for the data. The two factor structure accounted for 23.7% of the variance. This factor solution was discarded as the two factors were not internally coherent and contained multiple cross-loadings. Although the second factor was a clear control factor with many control and planning variables loading onto it, it also contained multiple cross-loadings of variables that were inconsistent with its overall interpretation as a control factor. The first factor was even more problematic as it contained a mixture of many hostility and involvement variables. The empirical evidence to date suggests that the themes of hostility and involvement are negatively correlated (Alison et al., 2003; Canter & Heritage, 1990). In addition, six variables did not load above the .30 cut-off point on any factor. It appeared clear that at least another factor was necessary for a proper fit for the data.

The three factor solution produced three clear internally consistent and interpretable factors, representing the themes of hostility, control and involvement. This factor solution accounted for 30.4% of the variance. Nine or ten variables loaded onto each factor. There were minimal cross-loadings between the three factors, indicating that the concepts embodied in these factors are discrete from each other. Only one variable did not load onto any factor above the .30 cut-off value. This three factor solution evidently offered a better fit for the data than the two factor solution.

Finally the four factor solution accounted for 39.2 % of the variance. This contained the three factors found in the three factor solution as well as a fourth factor that contained a mix of variables. This fourth factor appeared to contain

some of the variables that had been contained in the involvement factor in the three factor solution plus one of the hostility variables and one of the control variables. The variables loading onto this fourth factor did not conceptually belong together and added nothing to the overall analysis of the data. The other three factors were similar to the hostility, involvement and control factors from the three factor solution but with fewer variables that loaded onto each factor. Overall, the three factor solution offered a better fit for the data than both the two and four factor solutions.

Results

The results of the three factor solution are presented below in Table 6.1. All three factors are strong factors with clear interpretable themes and only three cross-loadings. The factors accounted for similar degrees of the variance: 12.5% for the first hostility factor, 11.1% for the second control factor and 9.8% for the third involvement factor.

Hostility

The first factor is a hostility factor and accounted for 12.54% of the variance. All nine variables that loaded onto this factor represented behaviours that are conceptually linked by the overall theme of hostility. These variables included two sexual variables, Anal and Fellatio; three verbal variables, Hostility, Threats and Victim Participation (Verbal); and five physical variables, Outdoors, Transport Victim, Violence, Weapon and Con Approach. This hostility factor had

an acceptable Cronbach's Alpha of .71, indicating that this factor had a sufficient degree of internal cohesion (Field, 2005).

The variables loaded from a high of .93 to a low of .32. The highest loading variable was the Hostility variable. This variable represents offenders' behaviour when they verbally express hostility. This behaviour requires more than simply swearing at the victim, it involves actual hostility or anger towards the victim. It is not surprising that it loaded the highest on this factor as it is most directly reflective of feelings of hostility on the part of the offender towards the victim. The lowest loading variable was the Victim Participation (Verbal). This is also a verbal variable, and it denotes the times when an offender Demands that the victim participate in the sexual acts. This behaviour can also be negative, even hostile in nature. For example, an offender can give orders as to specific sexual acts he wants performed, or he may be ensuring that the victim performs behaviours that she is resistant to. However, this behaviour is not always hostile in nature; the contradictory nature of this behaviour may explain the variable's low loading on the hostility factor.

Table 6.1 *Factor structure for three factor solution*

Variable	Hostility	Control	Involvement
Hostility	.93		
Outdoors	.63		
Fellatio	.57		
Transport Victim	.52		
Anal	.52		
Violence	.50		
Con Approach	.48		
Threats	.39		
Weapon	.32	.31	
Victim Participation (Verbal)	.32		
Gag		.66	
Blindfold		.64	
Disguise		.61	
Demands		.58	
Forensic	.34	.55	
Theft		.55	
Bindings		.44	
Phone		.44	
Home Invasion		.44	
Compliments			.73
Victim Enjoyment			.62
Apologetic			.60
Licking			.59
Cunnilingus			.40
Fondling			.40
Sex Comments	.37		.39
Reassures			.38
Kissing			.36
Digital			-
Cronbach's Alpha	.71	.74	.69

Note. Absolute values less than .30 suppressed.

The hostile attitude towards the victim was also reflected in the Fellatio variable, the Anal variable, the Threats variable, the Weapon variable and the Violence variable. The Fellatio and Anal variables represent fairly extreme sexual behaviours that are associated with feelings of degradation and often pain on the part of the victim. The Threats variable refers to behaviour whereby the offender verbally threatened the victim usually with the promise of violence. The Weapon variable refers to the occasions when the offender either threatens the victim with a weapon that he carried with him or actually used against the victim. This variable loaded nearly as strongly onto the control factor, reflecting its use as a control device. Finally, the Violence variable refers to acts of violence committed by the offender against the victim. The Threats, Weapon and Violence variables are all means by which this type of offender controlled the victim; by threatening the victim and by following up any threats with violence, the offender can control the victim's behaviour and minimise any victim resistance or attempts to escape.

Also included were the variables Con Approach, Transport Victim and Outdoors. These variables reflect the more practical aspects of the offence; how to successfully approach and take control of the victim. While these variables are not as directly linked to the overall concept of hostility, they are reflective of a generally callous attitude towards the victim.

This hostility theme is a salient theme that has run throughout the analyses performed on the data; a hostility factor was apparent in both the exploratory analyses run on the first and second offences. It is also consistent with the literature; all the major typologies on rapists have found empirical evidence that

anger or hostility towards the victim is one of the major motivating forces in sexual offending (Barbaree et al., 1994; Canter, 1994, 2000; Canter et al., 2003; Canter & Heritage, 1990; Groth et al, 1977; Hazelwood, 1995; Knight & Prentky, 1990, 1991; Polaschek et al., 2001, Douglas et al., 1992). In fact, the major typologies of Groth et al. and the MTC:R3 (Knight & Prentky) consider anger to be at the very heart of offending for a large percentage of offenders. This view of sexual offending sees the act of rape as a means of expressing rage against women; often the actual victim is just a representation of the real target of the anger (Groth et al). This research of Polaschek et al. also provide support; their study found that victim harm may be one of the express initial goals set by offenders, even before the goal of sexual offending is formed. Santtila et al. (2005) also provided empirical evidence for the consistency of the psychological theme of hostility across serial rape offences.

Control

The second factor was a control factor that accounted for 11.15% of the variance. This factor contained nine variables that loaded between .66 and .44. The Cronbach's Alpha for this control factor was .74, indicating an internally consistent factor (Field, 2005). All nine variables reflected behaviours that are predominantly strategic in nature, that indicate an offender's concern with controlling the victim and minimising the possibility of identification or arrest. This factor contained only physical variables and no sexual or verbal variables. The variables are: Gag, Blindfold, Disguise, Demands, Theft, Bindings, Forensic, Phone and Home Invasion.

The variables Blindfold and Disguise are different methods of preventing the victim from seeing the offender and thereby describing him to the police. The variable Gag prevents the victim from calling out for help and also precludes any verbal resistance or negotiation by the victim. The variable Bindings controls the victim physically and minimises the degree of physical resistance by the victim. The variables Phone and Forensic are different methods of minimising capture by the police; Forensic by removing any identifying forensic material from the victim, and Phone by cutting off the victim's access to either power or the telephone so that she cannot contact the police until after the offender has made his escape. The variables Demands and Theft are behaviours associated with stealing from the victim during the course of the assault; revealing criminal goals on the part of the offender other than just sexual assault. Finally, the variable Home Invasion refers to the use of the victim's home as the assault site, usually by breaking and entering into the residence.

The control factor incorporates general antisocial or criminal behaviours that show a disregard for the victim's welfare such as stealing from the victim, the use of a weapon, as well as binding and gagging the victim. There are no sexual or verbal behaviours; strategy and control are more prominent in this factor than interaction with the victim, even over sexual activity. It must be noted here that the basic sexual act itself was not included as a variable for the consistency analysis. This is because this behaviour was assumed to be the main goal of the sexual assault and therefore of no use in a consistency analysis.

Theft and control are themes that are also consistent with the literature; although these themes are not apparent in Groth and colleagues' (1977) typology or Knight and Prentky's MTC:R3 (1990; 1991), there is empirical support for these themes in Canter's work. Canter (1994), Canter et al., (2003) and Canter and Heritage (1990) all found evidence of the importance of theft and control in sexual offending in their work on rapists in New Zealand. Woodhams and Toye (2007) also found evidence of the consistency of the domains of planning and control in their investigation of behavioural consistency across serial burglaries. One possible explanation for these themes not being raised by Groth et al. and Knight and Prentky in their work may be that as these researchers used interviews with offenders, they focussed on the offenders' motivations and the issue of why they offend, and not the issue of how they offend.

Involvement

The third factor was a pseudo-involvement factor that accounted for 9.80 % of the variance. This factor contained eight variables that loaded between .71 to .35. The Cronbach's Alpha for this factor was also just acceptable at .69, indicating a degree of internal consistency (Field, 2005). All the behaviours loaded onto this factor were sexual or verbal behaviours and all reflected an intense focus on interactions with the victim.

The variables involved in this factor are: the sexual behaviours Licking, Cunnilingus, Kissing, and Fondling; and the verbal behaviours Compliments, Victim Enjoyment, Apologetic, and Reassures. This factor is also best summed

up by the fact that the variables Compliments, Victim Enjoyment and Apologetic are those that loaded highest onto this factor; these offenders were totally immersed in their interactions with the victim and in their minds did all they could to minimise the unpleasant aspects of the assault for the victim. Indeed, for many of this type of offenders, a sexual assault may actually be viewed as a primarily social interaction, such as the power-reassurance rapist invoked by Groth et al. (1977) and Douglas and his colleagues (1992). All the verbal behaviours are positive in nature, either by complimenting the victim, or apologising to her or attempting to reassure her that nothing bad will happen to her; or by urging the victim to participate in and enjoy the sexual activity. The sexual behaviours while quite varied in scope are also on the more positive end of the spectrum, especially when compared to the sexual behaviours included in the hostility factor (Fellatio and Anal). These sexual behaviours included the more personal sexual behaviours such as Kissing, Fondling, Licking and Cunnilingus. There were no overt control behaviours apparent in the involvement factor; this type of offender was more likely to use negotiation and reassurance than violence or threatening behaviour.

The involvement factor is compatible with Groth et al.'s (1977) and Douglas et al.'s (1992) power-reassurance rapist types in that many of the behaviours (eg., Reassures, Compliments, Apologetic) show attempts by the offender to form a pseudo-relationship with the victim. Groth et al. has suggested that these behaviours are related to inadequacy and poor sexual self-image on the part of the rapist. The apparent attempts by the offender at involvement with his victim are also related to Marshall's (1993) work suggesting that many rapists may

have difficulty forming relationships and establishing intimacy. Canter et al. (2003) and Canter and Heritage (1990) also found empirical evidence for the importance of the involvement theme in sexual offending.

The involvement factor is also consistent with the concept of pseudo unselfish behaviour as put forward by Hazelwood (1995). This behaviour reflects an offender-victim interaction where the offender exhibits concern for the victim's welfare, mainly in an attempt to calm the victim and possibly convince her of his more desirable attributes. This offender uses positive language and compliments to try and persuade the victim to cooperate with the sexual activities demanded. Sexually, he is usually adventurous and will take the opportunity to act out all the sexual acts he desires if the victim is too scared to protest. When the victim does resist, the offender will first attempt to negotiate and if the victim is very aggressive or resistant, he may even give up and leave. This offender is reluctant to use physical force, and usually relies on threats and negotiation to overcome resistance (Hazelwood).

Alternatively, in relation to the sexual offence pathways described by Polaschek et al.'s (2001) offence model, the involvement factor is also compatible with certain post-offence control behaviours. By reassuring the victim and attempting to make conversation with her, the offender is arguably attempting to control the situation by convincing the victim that the encounter had not actually been a forced sexual assault but was instead consenting sex. Presumably these post-offence attempts to minimise the impact of the sexual assault are in the hope that the victim will not report the offender to the police.

There is also evidence from the variety of sexual behaviours included in the involvement factor as well as the focus on the victim's participation in the sexual activity that this type of offender is highly sexually motivated. Groth et al.'s (1977) typology and the feminist theorists have tended to downplay sexual motivation as a key factor in sexual assault behaviour (Polaschek et al., 1997). However, Knight and Prentky's (1990; 1991) two *sexual non-sadistic* categories in the MTC:R3 typology do recognise sexuality as a motivating factor.

Relationships between the Factors

The Pearson correlation coefficients between the three factors were calculated to examine the degree of association between the factors. These correlations are shown in Table 6.2 below. All the correlations were significant but moderate (Cohen, 1992), indicating that the three factors were all relatively discrete from each other. From these relatively moderate correlations it appeared that each factor represented a fairly distinct type of offending style and there was only slight overlap between these three different themes of offending. However, it must be noted that the correlation between the hostility and involvement factors was larger than expected, considering that previous research has shown these to be essentially inversely correlated (Canter et al., 2003; Canter & Heritage, 1990).

Table 6.2 *Inter-Factor Correlations between Factors*

	Hostility	Control	Involvement
Hostility	1	.32*	.37*
Control		1	.35*
Involvement			1

Note. * $p < .01$.

N = 121

The descriptive statistics for the three factors were also examined. The mean and standard deviation for each factor was calculated using the consistency scores for the variables belonging to each factor. The results are set out in Table 6.3 below. All the means were high, reflecting the moderate to high levels of consistency seen in the consistency analysis. By far the largest mean was found for the control factor. The hostility factor and the involvement factor had lower means but were relatively close together. It was expected that the control factor would have the largest mean as many of the variables that made up that factor were those that received the highest consistency scores. Conversely the involvement factor contained a number of sexual behaviours that received some of the lowest consistency scores. These results clearly indicate that the control factor has the highest overall consistency with the least amount of variance. This is followed by the hostility factor and then the involvement factor.

Table 6.3 *Descriptive statistics for the three factors*

Factor	Mean	Standard deviation
Control factor	84.99	15.60
Hostility factor	76.56	17.82
Involvement factors	73.35	19.51

In order to confirm whether the control factor has significantly higher overall consistency than the other two factors, a repeated measures ANOVA was carried out to examine the differences between the three factors. Mauchly's test of Sphericity was non-significant ($\chi^2(2) = .87, p = .65$), indicating that the assumption of sphericity was not violated. The type of factor had a effect on the consistency scores, indicating that there was a significant difference between the consistency scores of at least one factor ($F(2, 240) = 21.28, p < .01$). Contrasts revealed that the consistency scores for the control factor were significantly higher than those of the hostility factor ($F(1, 120) = 22.59, p < .01$). The consistency scores for the control factor were also significantly higher than those of the involvement factor ($F(1, 120) = 39.92, p < .01$). The consistency scores for the hostility factor were not significantly higher than those of the involvement factor.

This confirms my analysis in the previous chapter that the control or MO behaviours had the most consistency; this has provided further evidence that the prediction that the control behaviours would exhibit higher consistency has been fulfilled.

Does the Offender's Experience Affect Consistency?

Pearson correlation coefficients were calculated between the number of offences per series and the consistency scores for the whole sample to determine if the consistency of behaviour is affected by the experience of the offender. In other words, whether offenders with series of seven or eight offences long were more or less behaviourally consistent than offenders who only committed two or three offences. The correlations between the three different factors and the number of offences per offence series were also calculated to determine if the experience of the offender differentially affected the style of offending.

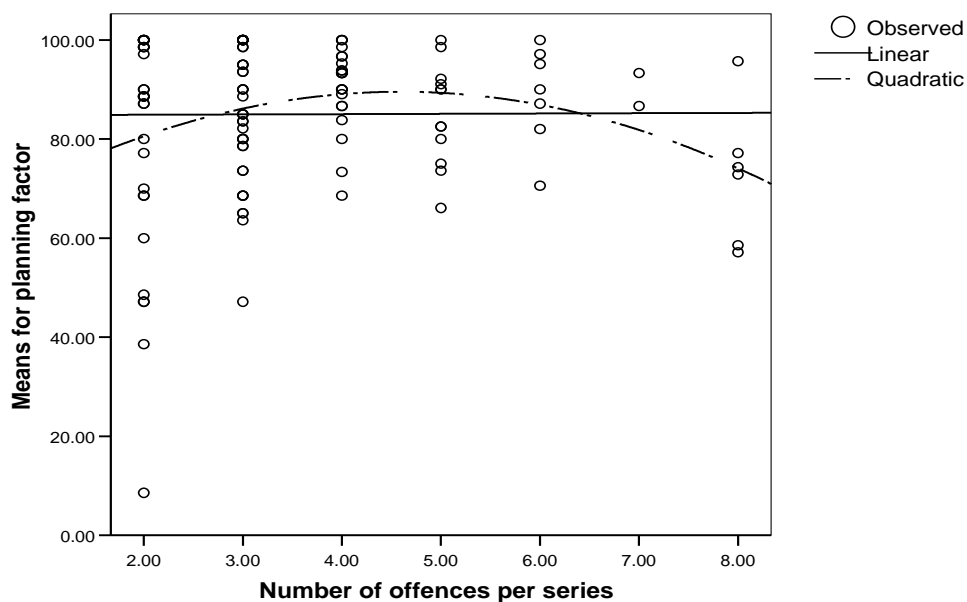


Figure 6.1: Relationship between number of offences in a series and consistency in control behaviours.

Hettema and Van Bakel (1997) found that experience does increase behavioural consistency. It was therefore predicted that there would be a positive linear association between the number of offences in a series and the overall amount of consistency exhibited. This prediction was not confirmed. All the resulting correlations were negligible and non-significant ($r < .05$ and $p > .06$), indicating that there was no linear relationship between the length of the series and the extent of behavioural consistency.

As no linear relationship was demonstrated, curve estimations were run on the consistency scores for the three factors as well as for the whole sample using the number of offences as the independent variable. This analysis was carried out to determine whether a non-linear relationship described this association. As expected from the correlations reported above, the linear line did not fit the data well. All the r^2 values were negligible and non-significant. The quadratic explanation did not perform any better, with the exception of the control factor. For the relationships between the number of offences and the behavioural consistency demonstrated by the overall sample of offenders, the hostility factor behaviours and the involvement factor behaviours, the quadratic r^2 values did not fit the data well. However, for the control factor a comparison of the r^2 values for each type of line showed that the quadratic curve fit the distribution significantly better than the straight line, ($r^2(2) = .07$, $p < .05$). The quadratic curve that fit the data is shown in Figure 6.1 above. From this figure it is clear that the quadratic curve better describes the relationship between the number of offences in a series and the consistency of the control behaviours.

It can therefore be concluded that there is no relationship between the number of offences in a series and the overall amount of consistency exhibited. There is also no relationship between the consistency of the hostility and involvement behaviours and the number of offences committed. However, consistency of control behaviours increased as the number of offences did until the offenders reached around five offences and then started to decrease in consistency. This result can possibly be explained by offenders who had previously committed a number of control behaviours over their initial offending, beginning to leave off some behaviours in their later offences as they grew more confident in their offence experience.

Does the Offender's Age Affect Consistency?

Although there was no relationship between the experience of an offender and the degree of consistency shown overall (as demonstrated by the number of offences in a series), I also examined whether there was any relationship between the age of the offender and the degree of consistency demonstrated. Pearson correlation coefficients were calculated between the age of the offender at their first offence and the consistency scores. The resulting correlations were very small and non-significant ($r = -.12$ and $p > .05$), indicating that there was no linear relationship between the age of the offender and the extent of behavioural consistency.

As no linear relationship was demonstrated, curve estimations were run on the consistency scores using the age of the offender as the independent variable. This analysis was carried out to determine whether there was a non-

linear relationship between the age of the offender and the consistency scores. A comparison of the r^2 values for each type of relationship revealed that there was no association between the age of the offender and the degree of consistency demonstrated.

Finally, an independent samples t-test was conducted on age and the consistency scores using two groups of offenders aged 20 or more years or 15 to 19 years at their first offence respectively as the independent variable. Offenders aged 20 or more ($M= 78.09$, $SE= 1.41$) and offenders aged 15 to 19 years ($M= 78.19$, $SD= 2.31$) demonstrated almost no difference in their consistency scores. The difference was non-significant $t(119)= -.03$, $p =.98$.

Does Consistency Change Over Time?

Pearson correlation coefficients were also examined between the length of time of each offence series and the consistency scores for the whole sample as well as the scores of the three factors. These correlations were calculated to determine if an offence series committed over an overall shorter period of time would show greater consistency than one committed over a longer period of time. Recall from the literature review that behaviours performed over shorter periods of time have exhibited greater amounts of consistency in social psychological research (Pervin, 2002; Woodhams et al., 2007). It was therefore predicted that there would be a positive linear correlation between the length of the series and the amount of consistency.

This prediction was not confirmed. All the resulting correlations were negligible and non-significant ($r < .05$ and $p > .05$), indicating that there was no

linear relationship between the length of the series and the extent of behavioural consistency overall. Curve estimations were also run on the consistency scores using the length of the series as the independent variable. However, a comparison of the r^2 values for each type of relationship revealed that there was no association between the length of the series and the extent of behavioural consistency overall.

Does the Offender's Ethnicity Affect Consistency?

Recall from the Methodology chapter that the ethnic breakdown of the sample in this study did not accurately reflect that of the general population in New Zealand, with Maori offenders being over-represented in the sample as compared to the ethnic breakdown of New Zealand's population. However, there is nothing in the literature to suggest that ethnicity would have a differential effect on the consistency of offending. The recent studies conducted on sexual offenders in New Zealand have similar ethnic breakdowns to the current study (Czarnomski, 2003; Scott et al., 2006). To determine if the ethnic breakdown may have affected the results of the consistency analysis, an independent samples t-test was conducted on ethnicity and the consistency scores using the Maori and Pakeha/European groups as the independent variable. Maori ($M=77.1$, $SE=1.9$) and Pakeha ($M=78.7$, $SD=1.6$) offenders demonstrated almost no difference in their consistency scores. The difference was non-significant $t(95)=.57$, $p=.57$.

Relationships between Consistency Scores for First and Second Offences

Using the behaviours from each factor, three scores were calculated for each offender for their first and second offences. As the data was coded as dichotomous, every offender received a present or absent coding for each behaviour. The codings for every behaviour for each factor were combined together to produce a score for each offence. In other words, each offender received a hostility score, a control score and an involvement score for their first and second offences. Table 6.4 below sets out the Pearson correlation coefficients between the scores for the factors over the first and second offences. These correlations provide a measure of the association between the offenders' behaviour for each factor across these offences.

From Table 6.4 it is clear that in comparing offenders from offence one to offence two, the only significant correlations were found between the consistency scores of the same factors. That is to say, offenders who committed behaviours from one factor in their first offence were more likely to commit behaviours from that factor in their second offence; and offenders who did not commit behaviours from one factor in their first offence were also more likely to not commit behaviours from that factor in their second offence. The largest degree of association was with the control factor, followed by the hostility factor and then the involvement factor.

Table 6.4 *Correlations between factors of first and second offences*

	Control (2 nd offence)	Hostility (2 nd offence)	Involvement (2 nd offence)
Control (1 st offence)	.51*	.05	-.08
Hostility (1 st offence)	-.03	.45*	-.01
Involvement (1 st offence)	.01	-.06	.35*

Note. * $p < .01$.
N = 121

Conversely, there were no significant correlations between different factors and the correlations were all negligible in size. There was no apparent relationship between the performance of behaviours from one factor in the first offence with the performance of behaviours from a different factor in the second offence. Overall these correlations indicate that offenders have a stronger tendency to commit or not commit groups of behaviours from the same factor across their first two offences, than to commit behaviours from different factors. These correlations were only conducted on the first two offences as these were the only two offences in the series with 121 offences each. However, it provides empirical support for the possibility that these offenders could be classified by offence into one factor or another.

Discussion

The following section will consider the implications of the results of the factor analysis with respect to previous research. Following that discussion will be a brief section on the potential limitations of the factor analysis.

Theoretical Implications

The factor analysis of the consistency scores has provided further evidence for the salience of the three key themes that were identified in the exploratory analyses reported in chapter four. However, what is of most significance here is that this factor analysis also provides empirical evidence that these three themes even affected the consistency of behaviour. The factor analysis relays important information about the relationships between the variables. Offenders were not only consistent to a high degree in their choices of individual behaviours over their offence series; they were consistent in the groups of behaviours they exhibited across their offence series.

This was predicted; empirical evidence from a range of perspectives has demonstrated the salience of the three themes of hostility, involvement and control (Alison et al., 2003; Canter & Heritage, 1990; Groth et al, 1977; Grubin et al., 2001; Hakkanen et al., 2004; Knight & Prentky, 1990; 1991; Polachek et al., 2001). Even though many of these studies only examined one offence per offender, the converging results have painted a very strong picture of the importance of these themes to different offenders. It is predictable that these influences would be evident throughout offenders' offence series.

Grubin et al.'s (2001) study for the Home Office specifically studied patterns in offending when they tested consistency. As discussed in chapter two, Grubin et al.'s study classified sexual offences empirically into four domains: control of the victim, sexual behaviours, escape precautions, and attack style. These domains were selected using content analysis and theoretical guidance, but the remainder of the analysis was data-driven. Using cluster analysis each

domain was then categorised into four further behavioural types. Each behavioural type was a combination of four behaviours. Every offence was categorised for all four domains by allocating each offence to its most appropriate behavioural type. This resulted in each offence being assigned to four different behavioural types, one for each domain.

Grubin et al. (2001) then examined behavioural consistency across these domains. Grubin et al. found that 83 % of offenders had at least one domain across offences for which they were always the same behavioural type. With regards to which domain showed the best consistency, the control domain was the strongest and most stable followed by the escape domain (Grubin et al). These control and escape domains are made up of modus operandi type behaviours that an offender may find instrumental to carry out his offence. If these behaviours lead to a successful completion of the offence, they are likely to be retained and form part of a behavioural script for future offences (Davies, 1992; 1997). Such modus operandi behaviours can be found in the control factor from this factor analysis. Therefore it is not unexpected that not only should these behaviours score the highest levels of consistency, but that there is evidence these types of behaviours are committed or not committed together over offences. Our results also showed moderate inter-factor correlations, indicating that like Grubin et al. offenders were consistent in more than one domain of offending.

The results of the factor analysis also support Canter's (1995) assertion that offenders tend to commit their crimes with an overall repertoire of behaviours. Not all the behaviours will be appropriate or relevant in every

offence committed due to differing circumstances, but the majority of them will be used in most offences. Canter (2000) described it as a form of what criminalists label routine activity theory; a consistent link between criminal and non-criminal activity. The repeated use of the same repertoire of behaviours will partly be due to habit, experience, practicality and also personality, depending on the individual offender. According to Canter (1995), this consistency is because crime is just another interpersonal transaction that will reflect an offender's particularly typical and unique method of dealing with other people. Therefore, the characteristic behaviours that an offender uses in his offence will also be reflected in other parts of his non-criminal life and in his very personality and attributes. This is the very essence of profiling; that an offender's behaviour during an offence will provide inferences as to his characteristics (Canter, 1995). This factor analysis provides empirical support for the existence of both consistent behaviour and for coherent patterns in the consistency of behaviour.

The results of the factor analysis show that the themes of hostility, involvement and control are the most salient themes to emerge. These themes affected behaviour right across the offence series, not only offenders' choices of individual behaviours but in their collective choice of behaviours per offence. Canter (1995) predicted that research into offender consistency would most likely find empirical support for the importance of themes of behaviour, rather than the strict combinations of behaviour and motivation that make up clinical typologies. Based on the results of this study in conjunction with supportive earlier theory and empirical data (Alison et al., 2003; Canter, 1995; Canter, 2000; Canter & Heritage, 1990), it can be hypothesised that further research into

offender consistency that used slightly different variables would still find that the same overall themes would emerge as influential on behaviour.

For example, Hakkanen et al. (2004) analysed the behaviour of sexual offenders in Finland using multidimensional scaling. The majority of the offenders in their sample had only one offence included in the analysis but a minority of offenders did have two or even three offences included. Although the 41 variables used in their analysis differed from those used in this factor analysis, their results also showed three salient themes running through their data: hostility, involvement and theft. While the third theme of theft differed from the theme of control in my factor analysis, this was more an artefact of the different variables used in the analysis.

One advantage to the importance of themes of behaviour over individual behaviours is the allowance for error that it provides. In any research into offender behaviour or in a police investigation, human error can lead to a behaviour being incorrectly recorded. Police error can lead to mistakes in how the information is recorded, and victim error can result in mistaken recall of offence behaviour. Also, contextual factors may impact the course of any one offence, leading to certain behaviours being left out that would otherwise have been performed. If the ability to link offences together or to relate offence behaviour to an offender's characteristics relies solely on the appearance of certain specific behaviours then the omission of these behaviours may prove fatal. However, the use of a group of behaviours will allow investigators or researchers to identify the overriding theme that dominates behaviour and can be related to the offender's dominant characteristics (Canter, 2000).

An example of this can be seen in Davies, Wittebrod and Jackson's (1997) study. They analysed over 200 sexual offences to determine if by using the offence behaviour, any links could be established to prior criminal activity. They established that if the offender took forensic precautions, used forced entry into the victim's residence, committed theft during the offence, and had used alcohol, that there was over a 90 % chance that the offender had previous experience as a burglar.

Canter and Fritzon (1998) also found support for the inference of offender characteristics from thematic offence behaviour. They measured four themes of behaviour in the offences of arsonists. They then also measured four themes in offender characteristics. Their analysis which examined the degree that the two sets of themes were correlated established that the most significant relationships were between behaviours and characteristics with the same themes, and that the least significant relationships were between behaviours and characteristics with the least similar themes.

The results of the factor analysis have also provided support for the initial conclusions reached from the consistency analysis of the individual behaviours. Those results showed that the control type behaviours had the highest consistency scores, in particular higher than the sexual behaviours. The results of the factor analysis has provided empirical evidence that the control factor received significantly higher consistency scores than either the hostility or the involvement factors, which contained all the sexual variables.

Potential Limitations

One limitation to the factor analysis was that the three factor solution only explained a total of 30.4% of the variance. Clearly, the majority of the variance in the relationships between the consistency scores remains unexplained. While other possible factor solutions were explored that explained a greater proportion of the variance, only the three factor solution was capable of a clear and consistent interpretation.

Summary

This section reported on the factor analysis of the consistency scores. This factor analysis resulted in three salient factors that represented the themes of hostility, control and involvement. All the variables that loaded onto each factor belonged conceptually to the theme that that factor represented. These factors were very similar to the factors derived from the exploratory factor analysis of the first and second offences, which supported the finding that these three themes were influential right throughout the data.

The three factors were found to be relatively discrete from each other with only moderate relationships between any of the factors. The mean consistency for the three factors was high, reflecting the moderate to high consistency scores found in the consistency analysis. The mean of the control factor was extremely high and a repeated measures ANOVA on the factors confirmed that this factor had significantly higher consistency scores than the hostility or involvement factors. There was no association between the number of offences in a series and the behavioural consistency exhibited by the offenders overall,

the hostility factor or the involvement factor. However, there was a quadratic relationship between the number of offences committed and the degree of consistency of the control behaviours. There was also no relationship between the age of the offender and the degree of consistency shown overall, and no significant difference in consistency scores when Maori and Pakeha/European groups were compared. The chapter concluded by relating the results of the factor analysis to the results of previous research.

CHAPTER SEVEN

Case Study: Offender X

This chapter will report on a case study that was conducted on one serial rapist's offence series ('Offender X'). Offender X is a good example to use because of the extended length of his offending. This case study was conducted as an illustration of the offence behaviour and consistency of one serial sex offender to throw some illumination on the results of the consistency analysis reported in the previous chapters. In addition, I intend to demonstrate how an individual offender's behavioural consistency and change develops over the course of his offence series, and how a difference in environment can have an impact on the consistency of behaviour.

This chapter will report on three consistency analyses conducted on the Offender X offences: the first a repetition of the main consistency analysis, followed by two additional consistency analyses on the home invasion assaults and outdoors assaults respectively. The majority of Offender X's offences occurred inside as home invasion assaults (21 offences). However, a minority of his assaults occurred outdoors. Offender X committed sexual assaults both as home invasions and as outdoors assaults. As well as a consistency analysis on all of Offender X's offences, two additional analyses were conducted on the home invasion and outdoors assaults separately. It was hypothesised that the further consistency analyses on the home invasion and outdoors offences will result in increased or decreased consistency scores for the majority of the

variables. This is because it is predicted that offenders may have to adapt to different environments with different behaviours; that when analysed separately, behaviours that may seem inconsistent when considered over the entire offence series may be more consistent when considered just within a particular environment such as a home invasion. However, it is also predicted that the consistency scores for the sexual and verbal variables would be less likely to increase as these are behaviours that can be performed in either context.

This chapter will begin by describing the procedure for the data collection of the Offender X data. Following this will be a description of the main demographic data for both Offender X and his victims, so that this can be compared to the main sample. The consistency analyses will next be described, followed by the report and discussion of the results of the three analyses. Finally, the implications and possible limitations of this case study will be discussed.

Methodology

The data for this case study was collected using the same methodology as set out in Chapter Three. The first 8 offences in his series were used in the main consistency analysis, but for this study further data was collected on the remaining offences in his series. As in the main data collection, no identifying information was recorded on the victims. Offender X's ninth offence was a rape homicide; consequently the victim was not left alive to provide any information to the police about the sexual assault. For the reason of this lack of data, this offence was excluded from the case study's analysis.

Overall the 26 offences coded were 18 sexual assaults and 8 attempted sexual assaults. Dichotomous data was collected on the same 30 variables used in the main consistency analysis as well as one additional variable:

Masturbation. The variable Masturbation was coded for the behaviour when the offender would masturbate himself during the offence following an apparent inability to achieve penetration. This act never involved the victim, the offender preferring to attempt to rectify the problem himself. This variable was unable to be included in the main consistency analysis because there was too much missing data. However, for the Offender X analysis this variable was successfully coded for all cases.

Background

Offender data

Offender X was of Māori ethnicity. He committed the 26 offences between the years 1987 through to 1996, when he was aged between 34 and 43 years old. Figure 7.1 below sets out the ages at which he committed his 26 offences. Offender X was convicted of an attempted rape in 1975 (this file was not available to be included in the analysis). The police believe it is highly unlikely that Offender X did not continue to offend through the early 1980's; however, the police have no information on the extent of his probable offending during this period.

All but two of his offences were committed in Auckland, with the geographical locations of his offences varying across the city. His other two

offences were committed in Rotorua and Levin. All offences were committed in the night-time or early morning, between the hours of 9pm and 8am.

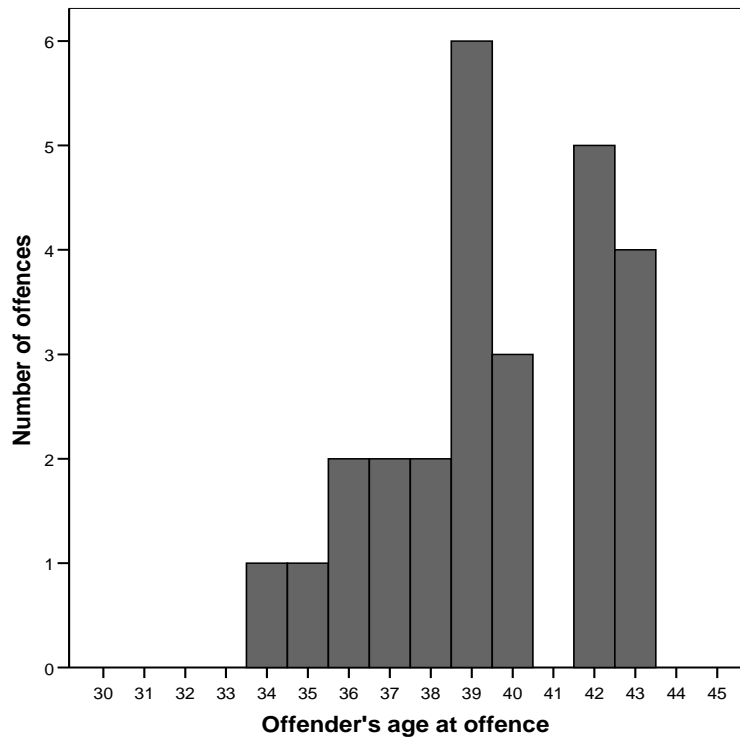


Figure 7.1 Offender's age at time of offences over 26 offences

Offender X had an extensive criminal history with previous gang affiliations. His first known offence was recorded at age 14 (burglary). His previous offences are heterogeneous in nature, covering a wide range of offending including property crimes, assault, fraud and drug offences. He had extensive experience in property crimes such as burglary, presumably giving him the necessary skills to enter a victim's residence illegally.

Victim data

Unlike the main sample, victim data was available for all 26 victims (all the Offender X files had detailed information on all aspects of the offences). All but three of the victims were previously strangers to the offender, with no previous relationship to him. The first victim in the series was aware of who Offender X was through his gang affiliations. The other two victims had met Offender X before but did not recognize him at the time of their attack. The majority of the victims were of Pakeha/Caucasian ethnicity (88.5%), followed by Māori (7.7%) and Asian (3.8%) ethnicity. This is consistent with the breakdown in victim ethnicity from the main sample of victims. Figure 7.2 below sets out the numbers of victims per ethnic group.

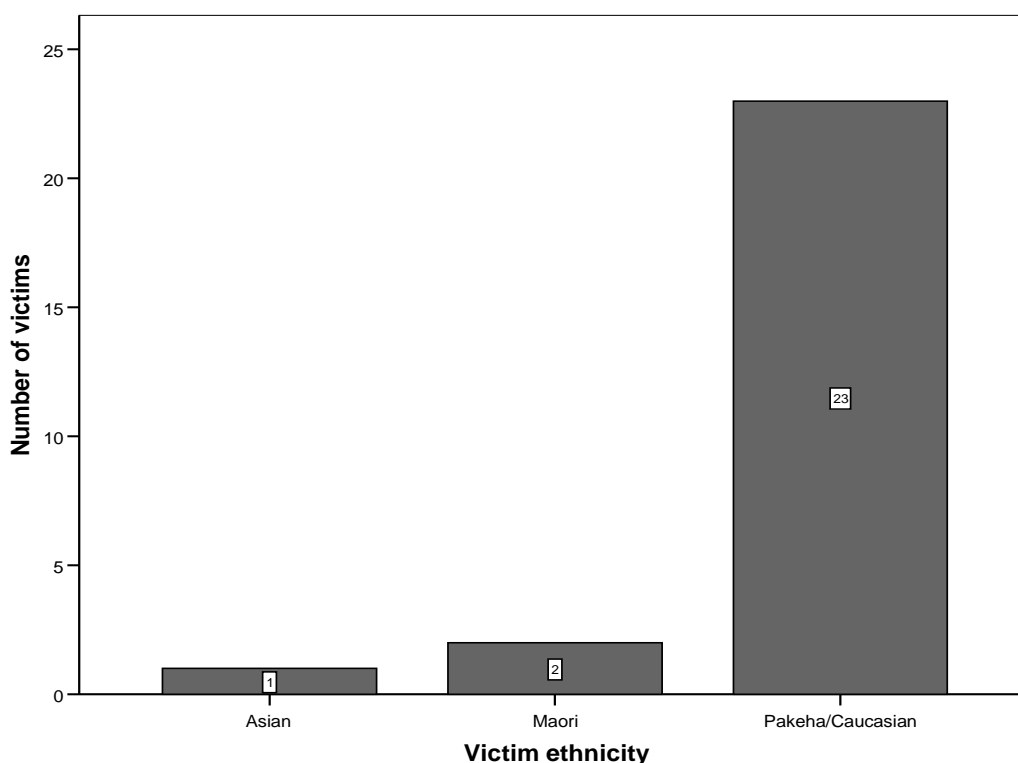


Figure 7.2 Victims' ethnicity per number of victims

The average age for the victims was 29 years ($\underline{M} = 29.1$, $\underline{SD} = 8.6$), with a similar median age of 30 years. This was similar to the mean age of 27 years for the main sample. However, the standard deviation for Offender X's victims is smaller than that for the main sample ($\underline{SD} = 14.6$). This reflects the smaller age range of Offender X's victims; the victims were aged between 15 and 43 years, and contrasts to the main sample, where 5.5% were aged 60 years or over. Figure 7.3 below sets out the spread of the victims' ages. Offending was relatively steady across the range, with a spike at the 30-35 year mark.

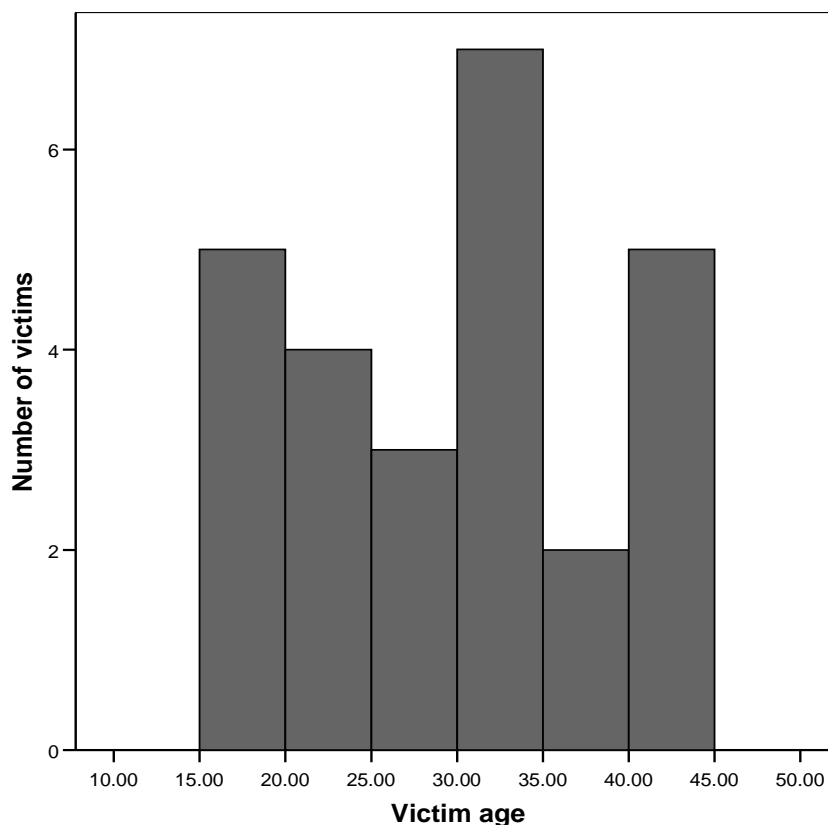


Figure 7.3 Victims' age at time of offences per number of victims

Consistency Analysis

The same procedure was used for the consistency analysis as set out in Chapter 5 for the main dataset. For every variable, each offence was compared to the next offence in the series for a total of 25 comparisons from 26 offences. For each comparison, a score of one was given whenever each behaviour occurred in both offences, a score of one was also given whenever each behaviour did not occur in both offences, and a score of zero was given whenever a behaviour occurred in one of the offences but not the other. Therefore, a positive score of one was given for every positive-positive or negative-negative comparison, but a score of zero was awarded for positive-negative and negative-positive comparisons. The scores were then added up over the offence series to result in a final score for each behaviour that was translated into percentage terms.

As reported above, two additional consistency analyses were conducted. The majority of Offender X's offences occurred inside as home invasion assaults (21 offences). However, a minority of his assaults occurred outdoors. It was hypothesised that the consistency scores for the variables would increase or decrease for the majority of variables if consistency analyses were conducted separately on the home invasion assaults and the outdoors assaults. This is because offenders would potentially change certain aspects of their behaviour to suit the change in environment. For example, the behaviour Phone refers to the act of cutting phone or power lines in a victim's residence. These are acts associated with the Home Invasion variable and yet irrelevant to as assault that occurs outside; this variable would likely increase its consistency score if the two

contexts were separated out. In addition, offenders who rely on the victim's residence to find suitable objects to use as bindings, a gag or a blindfold in a home invasion may not perform these behaviours in an outdoors context. This would be reflected in an increase the consistency score for this variable in both contexts. In contrast, it is predicted that the consistency scores for the sexual and verbal variables would be less likely to increase as these are behaviours that can be performed in either context.

Results

Table 7.1 below sets out the results of the three consistency analyses: the second column from the left reports the consistency scores from the analysis run on all the offences, the third column reports the consistency scores from the analysis run on the 21 Home Invasion offences, and the last column reports the consistency scores from the analysis run on the five offences committed outdoors. The following quantitative report of the results will be illustrated with qualitative details of the crimes.

The variables Outdoors and Home Invasion both evidenced only moderate consistency; this is because they split the offences between them. While the Home Invasion offence was more popular with Offender X, it was interspersed with the occasional Outdoors assault. When the types of assault were separated out the consistency scores increased to 100% for both variables.

Six variables achieved a 100% consistency score across all offences: Con Approach, Fellatio, Compliments, Victim Enjoyment, and Victim Participation Verbal. They therefore also achieved 100% consistency in the subsequent

Home Invasion and Outdoors analyses. All six variables achieved 100% consistency through 100% non-occurrence; Offender X never performed these behaviours in any of his sexual offences. The 100% rate for the Con Approach behaviour means that Offender X always used a Surprise Approach towards his victims; in other words he used surprise to instantly overwhelm and take control of the victim. This was the case whether the assault took place in a Home Invasion or Outdoors. However, the manner of the Surprise assault was quite different: outside he would use force to overpower his victim, whereas in the Home Invasions he would surprise the victims in their bedrooms and take control usually without recourse to any overt acts of violence by straddling the victim's body on their bed as they slept and then binding the victims. Also included in this group are one sexual behaviour and four verbal variables; three of which belong to the Involvement Factor reported in the previous chapter.

Other variables that achieved high consistency scores include two Hostility factor variables, Anal and Hostility. Both behaviours achieved high consistency predominantly through non-occurrence; Offender X only performed the Anal and Hostility behaviours on one occasion. Both were performed during a Home Invasion offence, with the consequence that in the follow-up analyses consistency increased to 100% for the Outdoors offences with the removal of the one conflicting occurrence. In contrast, the consistent rate for the Home Invasion offences decreased slightly following the removal of the outdoors offences. The Anal behaviour was performed in the very first recorded offence then never repeated. In contrast the Hostility variable occurred in one of his last

known offences, at approximately the same time that Offender X began to display noticeably more violence in his offences.

The Violence variable achieved one of the lowest rates of consistency across all the offences. However, this variable increased in consistency to 100% when considering the Outdoors offences alone; this is because Offender X committed acts of violence against his victim in all five Outdoors offences. This violence was committed predominantly at the beginning of the offence to gain initial control of his victim. In contrast, his violent behaviour during the Home Invasion assaults was far more inconsistent and subject to changing circumstances. On these occasions, Offender X would typically enter the victim's house in the middle of the night while she was asleep and entering her bedroom would gain control without violence. In his first six recorded sexual assaults, Offender X only used violence on one occasion. However, later on in his offence series he began to use increasing amounts of violence; in his last six offences he used violence on all occasions. Overall in his Home Invasion offences Offender X's consistency for the Violence variable was at a relatively low level. This is because he predominantly used violence in response to resistance from the victim as a strategy to maintain control. This meant that he would not necessarily commit acts of violence in consecutive offences; this behaviour was primarily subject to environmental factors. Overall, Offender X committed acts of violence in 17 out of his 26 offences.

Table 7.1 *Descriptive statistics of consistency scores for variables*

Variable	Consistency Score (%)	Consistency Score (Home Invasions) (%)	Consistency Score (Outside Offences) (%)
Con Approach	100	100	100
Fellatio	100	100	100
Compliments	100	100	100
Victim Enjoyment	100	100	100
Victim Participation Verbal	100	100	100
Sex Comments	100	100	100
Anal	96	95	100
Hostility	96	90	100
Phone	92	90	100
Transport Victim	92	100	75
Victim Participation Physical	92	90	100
Masturbation	84	95	75
Kissing	84	80	100
Licking	84	80	100
Apologetic	84	80	100
Home Invasion	76	100	100
Outdoors	76	100	100
Demands	76	70	100
Weapon	76	80	75
Theft	75	84	25
Gag	74	70	75
Forensic	72	80	75
Bindings	72	90	75
Reassures	72	65	50
Blindfold	71	85	50
Cunnilingus	64	55	75
Digital	64	65	50
Fondling	64	55	75
Violence	64	65	100
Disguise	56	45	50
Threats	48	45	100

The Threats variable followed a similar pattern to the Violence variable. It evidenced only a low degree of consistency over all 26 offences. While this remained low for the Home Invasion offences, it increased over 50% to 100% consistency for the Outdoors assaults due to Offender X never using threatening language in these assaults. For the Home Invasion offences, the behaviour was again used mainly as a strategy to subdue resistance from his victim and was used only when the situation required it.

The control type behaviours all scored relatively low consistency, with the exception of the Phone variable. This variable increased in consistency to 100% for the Outdoors assaults due to the fact that this behaviour could not be performed in an outdoors environment. Within the Home Invasion assaults committed, Offender X used this behaviour on only one occasion. This is another example of a high consistency score being achieved mainly from non-occurrence of that behaviour.

The other control behaviours Gag, Forensic, Bindings, Blindfold and Disguise all scored only low to moderate consistency; this is contradictory to the main consistency analysis reported in the previous chapter where the control behaviours received the highest consistency scores. The behaviours Blindfold and Disguise reflect the same underlying concern on the part of the offender: to prevent the victim from seeing the offender. The Disguise variable was very inconsistent and this remained at similar levels when the Home Invasion and Outdoors assaults were separated out. This is because a disguise is something the offender most often brings with him to the offence site whether it be an indoors or outdoors assault. This behaviour appeared random, on some

occasions he would bring something to cover his face, on other occasions, he would not. As this behaviour was not subject to any known environmental factors, this is an example of true inconsistency. Offender X used a disguise on 11 of his 26 assaults. The variable Blindfold was used more consistently; this behaviour increased in consistency in the Home Invasion assaults and decreased markedly in the Outdoors assaults. This is because Offender X's preferred object for a Blindfold was the bedclothes on the victim's bed; these he could rely on using in a home Invasion, but in an Outdoors assault he was forced to try and use the victim's clothing which was less successful. Offender X used a Blindfold on 20 of his assaults; one of his most frequent behaviours. He didn't use either a Blindfold or a Disguise on either of his first two known sexual assaults; after this he used a Blindfold in 11 of the following assaults. He also used a Blindfold continuously for his last 7 assaults. It should be noted that as well as using a Blindfold on many occasions, Offender X also always turned the victim over in bed or away from him outside to prevent her from seeing his face.

The variable Gag also received only a moderate consistency score. Offender X committed this behaviour in 13 of his 26 offences. This behaviour is a useful illustration of the difficulties faced by investigators in attempting to link offences together through behavioural similarity. In his first 13 offences, Offender X used a gag on his victim in 11 offences. However, in his last 10 offences he only performed this behaviour twice. Therefore during the majority of his offending Offender X was committed to a pattern with regards to this behaviour; however, this pattern involved a decision during the middle section of his offending to drop this behaviour from his offence strategy. Following this

change in pattern, Offender X was once again consistent in relation to this behaviour. This would be problematic for the police attempting to link these offences together unless this change in pattern was recognised.

Offender X's offences only demonstrated moderate consistency for the Forensic variable, yet he used the behaviour in 20 of his 26 offences. When his offences were separated out into Home Invasion and Outdoors offences his consistency only increased marginally. Offender X's main method of attempting to minimise the chance of leaving identifying forensic material was to wear gloves during his assaults. Offender X used some form of forensic precautions in nine of his last ten offences; between his ninth and twenty sixth offences, he committed the behaviour on 15 out of 18 occasions. Despite the only moderate consistency score, he was consistent with this behaviour for large periods of time during his offending.

The Bindings variable also achieved only a moderate consistency score but this consistency increased significantly when the Home Invasion offences were considered alone. Offender X only used bindings in one of his five Outdoors offences, but committed the behaviour in 19 out of his 20 Home Invasion offences: a highly consistent behaviour in both environments, but especially in the Home Invasion offences.

The variables Theft and Demands produced interesting results from the consistency analyses that exemplify the importance of considering context when evaluating consistency. Both variables achieved only moderate consistency in the consistency analysis of all offences. The variable Theft increased in consistency for the Home Invasion offences but decreased significantly for the

Outdoors offences. The Demands variable decreased slightly in consistency for the Home Invasion offences but increased to 100% for the Outdoors offences. Theft was a high frequency variable: it was performed on 21 out of 26 occasions. Offender X therefore often stole from his victims: he had a clear pattern during Home Invasion offences. He would first establish that he had control of his victim in her bedroom. At some point Offender X would leave the victim and commence wandering around the house looking for items to steal. On the majority of occasions Offender X was able to find sufficient items such as cash or jewellery. On those occasions he would not perform the Demands variable. However, in six offences Offender X was unable to locate items of value during his inspection of the residence and would come back to the victim and demand on promise of violence that the victim inform him where he could find such items. The behaviour Demands was never committed in an Outdoors offence, producing 100% consistency for those offences. In Outdoors offences, Offender X would steal items when they were available but he was limited to what the victim had on her person; he was successful in stealing items in three of these six offences.

The verbal variables were all extremely low frequency variables; Offender X rarely spoke to his victims. In fact he was quite consistent with one expression that he kept repeating to the victims: "shut up, shut up". This verbal utterance was not coded as it did not meet the criteria for any of the verbal variables. As reported earlier four of the verbal variables received 100% consistency due to complete non-occurrence. The variable Apologetic was only used on three occasions, and was 100% on Outdoors occasions when he never used it. It

achieved relatively high consistency because of its rare usage across offences. The Reassures variable was used in six offences only; this was used sporadically throughout the first half of Offender X's offending. The moderate consistency rate was due to his last 12 offences when he failed to perform this behaviour even once.

The majority of the sexual variables were also low in frequency for this offender. The variables Kissing and Licking scored high on consistency because of the rarity of these behaviours. All the sexual behaviours increased in consistency in the Outdoors offences because of the increased difficulty for Offender X in accomplishing his goals outside where he had less control over his victims; half of his offences amounted only to attempted rapes in the outdoors environment as the victim managed to escape. The consistency scores remained essentially the same for the Home Invasion offences. The two sexual behaviours with higher frequency occurrence were Digital and Fondling. Both these variables received low consistency scores because they were inconsistently performed across offences.

The variable Masturbation was new to this case study. In relation to the Masturbation variable, the majority of victims reported that Offender X appeared to suffer from erectile dysfunction which he attempted to cure using self-masturbation. This variable received a high consistency rate but his actual consistency was probably even higher. There were six occasions when the victim was not sure whether the offender had committed this behaviour and these occasions were all coded as non-occurrences. In addition there were four

attempted sexual assaults where Offender X did not have the opportunity to perform this behaviour.

Discussion

To summarise the results: Offender X had a strongly established pattern for his Home Invasion assaults but was more varied in his Outdoors assaults due to the more difficult and limited circumstances. He would obtain illegal entry into the victim's residence, usually at night and without the victim's awareness. He would often wear gloves to minimise the chance of fingerprints. He would enter the victim's bedroom, straddle her body on the bed and take effective control by surprise and without an overt act of violence. Offender X would then place his hand or the bedclothes over the victim's eyes and/or mouth. He would often bind and gag his victims using clothing in the bedroom. He would then turn the victim over in bed and perform his chosen sexual activity. This involved rear entry vaginal penetration with occasional digital penetration and/or fondling. He would often suffer erectile dysfunction and would perform self-masturbation to address this problem. If the victim resisted too vigorously he would threaten her and/or act violently with her. These acts of violence usually involved choking the victim, and occasionally punching her with his fist or an object. He got increasingly violent towards the end of his offence series. Once the sexual activity was over, Offender X would wander around the house examining the victim's belongings and selecting items of value to steal such as cash and jewellery. If he could not find such items he would violently threaten the victim until she told him where he

could find such items. He made very little conversation except threats and the occasional reassurances and the repeated utterance “shut up, shut up”.

In his Outdoors assaults, Offender X would also use a surprise approach to his victim, but would use violence to take control. He was markedly less successful in this arena, only half these offences led to a completed rape. When he had the opportunity Offender X attempted to commit basically the same behaviours; he would turn the victim over and attempt to cover her face and/or mouth and to bind her. If able, he would commit the same range of sexual behaviours. He would steal from the victim if he could find valuable objects on her to steal. If not, he would not bother to demand from her what he had already established she did not have. He made very similar conversation to his Home Invasion assaults. The main differences in his offending were due to the outdoors environment; Offender X had less control over his victim and he had fewer items to choose from to steal or use as bindings, a blindfold or a gag.

Implications

These three consistency analyses have highlighted two difficulties in both consistency research and linkage analysis. First, an offence series that involves more than one environment can have a large impact on overall consistency or behavioural similarity. As predicted with many of the behaviours discussed above in this chapter, the consistency of the offender either increased or decreased when the Home Invasion and Outdoors offences were separated out for the follow-up consistency analyses. Second, the consequence of the outdoors environment had an impact on Offender X’s consistency; due to the

effect of environmental factors, he was not able to perform all the behaviours he may have preferred to.

These consistency analyses have only been conducted on just one offender in this case study, and as such any results are preliminary and must be treated with caution. The analyses have been run in this case study as an illustration of how the consistency scores can be affected by a change in context, rather than as an empirical exercise. Nonetheless, the potential effects discussed above should be taken into account when considering any implications of the results of the main consistency analysis; particularly the practical implications. For example, in the case of police investigations where they are attempting to link one offender to several unsolved sexual offences using only the behavioural similarity of the offences, it will be much harder to link the offences together if they occur in different contexts. Also, two offences from different contexts that may have been committed by the same offender may not initially appear so to investigators because of the impact of the contexts on the consistency of the behaviour. For example, during the two taskforces set up in 1995 to 1996 to investigate the extensive sexual intruder rapes before they were successfully attributed to Offender X the police initially profiled the offender as an intruder rapist based on his MO. It wasn't until a violent attempted sexual assault occurred on a 16 year outside her home in 1996 that the taskforce realised that this offender was also committing street assaults, not just home invasion assaults. The police then researched further street blitz style assaults until they identified two further assaults with sufficient behavioural similarity to be linked to the intruder rapes (Henwood, 2006).

The police officers were successful in using profiling and behavioural linking to not only link the two taskforces together (the police originally believed they were investigating two separate offenders), but also to link eight additional sexual assaults to the series that had not been previously considered by the two taskforces. These eight offences ended up linking the two taskforces together both geographically and chronologically (Henwood, 2006). The police officers used the experience that they had gained from a previous investigation into a prolific serial intruder rapist in 1983 - 1995 to recognise that the MO behaviours could be used as behavioural links (Henwood). The use of MO behaviours to link offences together is consistent with the results of the main consistency analysis reported in the previous chapter where the control or planning behaviours received the highest consistency scores, highlighting their suitability for behavioural linkage. This is however, inconsistent with the FBI's position that MO behaviours change while only signature behaviours remain stable over time (Homant & Kennedy, 1998; Turvey, 2000, 2002). It should be noted that there is very little empirical evidence for the FBI's theory. Arguably though while offenders may change or refine their MO behaviours as they learn from experience, once they find a MO or overall strategy to offending that is successful and suits their abilities and inclinations, there is no reason to predict that MO will then continue to change. The police did use signature to link Offender X's offences together. One of the key factors in the linkage of Offender X's offences was his treatment of all his victims as props for his offending; there was absolutely no involvement between Offender X and his victims. This is a

possible explanation for the fact that he never carried out the behaviours
Fellatio, Compliments, Victim Enjoyment, and Victim Participation Verbal.

The police also managed to eliminate from consideration a number of other unsolved sexual assaults using the behavioural patterns identified. In fact, no offences that were eliminated from the investigation due to behavioural variance were ever linked to Offender X through other forms of identification such as DNA (Henwood, 2006). This is another reason why Offender X was a good choice for this case study: the police investigation into his offences series was able to use the behavioural similarity of his offences to link his offences together. Ultimately, eight of the sexual assaults were linked by DNA evidence, but only after they had already been behaviourally linked by police. The remaining offences in the series all resulted in convictions based on their behavioural similarity alone (Henwood).

The behavioural patterns that the police recognised were as follows: the victim was usually alone at night or with only her children present; the assaults usually occurred during the night-time; a surprise approach was used to the victim that often involved force applied to the throat area; no use of alcohol by the offender; the words "Shut up, Shut up" used repeatedly; gloves worn; no weapon was used; evidence of planning and pre-meditation; the offender often wore a balaclava; he often carried a torch that he would shine on the victim's genitalia (scopophilia); the offender often bound his victims; he suffered from erectile dysfunction and would self-masturbate; the victim would usually be undressed from the waist down but left dressed from the waist up; he would walk around the house when the victim was bound searching the house; and

there was no sign of any involvement on the offender's part, he used the victims simply as objects. Therefore, the police used many of the variables subject to analysis in the consistency analysis to link the offences together.

Limitations

One possible limitation to this study is that Offender X may have committed more sexual offences than the 27 offences he was convicted of that have been referred to in this case study. During the course of the investigations into Offender X's offences, the police also identified five further probable and five possible sexual assaults that may have been committed by Offender X from 1989 to 1994. Due to lack of information and the fact that Offender X never co-operated in interviews with the police, none of these offences have been successfully attributed to him. However, there is the possibility that several of these offences were committed by Offender X during the timeline of the offence series covered by this case study. This means that the consistency analysis which compares behaviours in consecutive offences may actually be compromised by additional offences during this series. In addition, as reported earlier in the chapter, there is also the period in the early 1980's when the police have no information on Offender X's sexual assault activity.

Also, as reported above these consistency analyses were conducted on the offence series of just one offender. These results need to be replicated on a larger sample of offenders before any firm conclusions can be reached. However, the initial results are interesting and worth taking into consideration when analysing the main consistency results.

Conclusion

The three consistency analyses conducted on Offender X's offences series have illustrated some of the problems involved in using behavioural similarity for case linkage. Nonetheless, Offender X is an example of a successful case linkage exercise where 27 cases were linked together by an examination of the crime scene behaviours. Both the results of the main consistency analysis and this case study as well as the efforts of the police investigation ultimately support the assumption that behavioural consistency does exist for serial sex offenders. It also provides support for the profiling process and its utility to police investigations of this kind in New Zealand.

CHAPTER EIGHT

Discussion

The current research examined the degree to which serial sexual offenders in New Zealand display behavioural consistency across their offence series. This chapter will discuss the results of this study as it relates to previous research as well as the original research aims of the study. The chapter will begin with a summary of the research findings together with a consideration of whether the research aims were met. This will be followed by a discussion of the theoretical and practical implications of the research findings, and an assessment of the possible limitations of the research methodology. Finally, the potential avenues for future directions of study in this area will be addressed.

Were the Research Aims Met?

The aim of this research was to test the assumption of behavioural consistency that underlies offender profiling. This study was prompted by the detailed theoretical analysis of the process of profiling in Alison et al. (2002). The authors of this review concluded that the theory underpinning much of profiling relied on a simplistic personality trait theory; the belief that offenders' behaviour is influenced in a general and predictable fashion; and that offenders' behaviour is also stable despite a multitude of potential environmental factors. In other words profiling rests on the premise that behaviour is consistent and stable over both time and situations, an assumption that has not been adequately empirically tested to date.

This study therefore set out to test this assumption of behavioural consistency on a sample of serial rapists. In particular the aims of this research were: first, to test the behavioural consistency of individual behaviours. It was hypothesised that the research would find behavioural consistency in the offence behaviour of the sample. In particular, it was hypothesised that higher consistency would be found for behaviours that reflected a degree of planning or that prioritised control of the victim and the offence environment. This was because these behaviours might be less affected by environmental factors. For example, whether an offender wore a disguise was most likely a decision made by the offender outside of the offence environment. In addition, with many of these behaviours the offender had the choice to bring with him suitable items with him to the crime scene to facilitate the performance of these behaviours e.g. material to bind or gag the victim, condoms for forensic purposes or a weapon to force the victim to co-operate. In contrast many of the sexual and verbal behaviours arise directly out of offender-victim interactions and therefore are most affected by environmental factors such as victim resistance. It was therefore also hypothesised that the sexual and verbal behaviours would have lower consistency.

The second research aim was that if behavioural consistency was found in the results of the consistency analysis, to explore whether there were any underlying patterns to the consistency of offending behaviour. That is to say, whether offenders were simply consistent with their individual behaviours or whether they were also consistent with groups of behaviours across their offences. I had already hypothesised that the control type behaviours would

exhibit some of the highest consistency. Therefore in line with that previous hypothesis it was also predicted that offenders would be consistent with groupings of control and escape behaviours, not just the individual behaviours.

In order to test this assumption of behavioural consistency, a consistency measure was developed. For this measure, consistency of a behaviour was operationally defined as the occurrence or non-occurrence of that behaviour in consecutive offences. That is to say that behaviour that is consistent will be demonstrated by offenders who perform or do not perform that behaviour in subsequent offences. This consistency measure therefore compared each offence to the previous offence to develop an overall consistency score for each variable that was derived from a comparison of successive offences.

The results of the consistency analysis largely confirmed the predictions made for this research. The highest consistency was found for behaviours that reflected concern about controlling the victim; preventing identification of the offender and allowing the offender to make a successful escape from the crime scene. In contrast, the behaviours with the lowest consistency were sexual or verbal behaviours that arose directly from offender – victim interactions. For the most part these results were confirmed by the results of the chi-square analysis; all the control type behaviours received significant chi-square values indicating that their occurrence or co-occurrence over the first two offences were not the result of chance alone. Of the non-significant results for the chi-square analysis, all but two of these variables were the sexual behaviours.

The question remains whether the main research aims were met; first, did the results of the consistency analysis confirm the existence of behavioural

consistency for serial rapists? The answer can be given in the affirmative; the results of the consistency analysis provided empirical evidence for the existence of behavioural consistency in serial sexual assault behaviour.

The second research aim was to explore the nature of consistent offence behaviour. Again this aim was realised. Using factor analysis I was able to identify three key concepts that were important to the sample's behavioural consistency. These concepts or themes were control, hostility and involvement. Overall, offenders were influenced by these themes to the extent that offenders tended to perform or not to perform groups of behaviours consistently that were conceptually linked together by either the theme of control, hostility or involvement. In other words these were the concepts that appeared to be motivating offenders' consistency in behaviour. These concepts were not mutually exclusive; low to moderate inter-factor correlations indicated that to an extent offenders would perform or not perform behaviours consistently from all three factors. This is likely exacerbated by the high levels of non-occurrence of most behaviour throughout the sample; for example, offenders who consistently do not perform any control behaviours may also be consistently performing behaviours from one of the other two factors. I also found that the consistency of the control type behaviours changed over time; while the consistency of these behaviours initially increased as the number of offences per offence series increased but then actually began to decrease again when offenders reached around the five offence mark.

A second consistency analysis was conducted on one serial rapist as a case study to illustrate the results of the main consistency analysis with

additional qualitative information obtained from the offence files. This case study also addressed the issue of the impact of a change in environment on behavioural consistency. This was accomplished by conducting two additional consistency analyses on Offender X's offences, one just on the home invasion offences and one on the offences committed outdoors. It was hypothesised that the consistency of the behaviours would increase or decrease when these follow-up consistency analyses were run. In fact the results of the follow-up analyses did find empirical evidence for the impact of a change in environment on the consistency of offenders' behaviour; the offender had to adapt his behaviour to the change in environment. In addition, Offender X was unable to carry out all the behaviours outside that he would have in a Home Invasion because he had less control over the victim and less access to suitable items to steal or use as bindings, a blindfold or a gag. Although these results are preliminary at best having been conducted on only one offender, they raise interesting possibilities for future research that will be discussed in more detail below.

Therefore, overall the intended aims of the study were realised. Empirical support was found for the existence of behavioural consistency in serial sexual assault behaviour; and further exploratory analysis identified three key concepts that appeared to motivate and influence the offenders' behavioural consistency.

As advised in the earlier discussion of the consistency analysis results, a note of warning must be sounded here about the high consistency for the control behaviours. When looking at the average frequency occurrence of these behaviours across the sample, it is clear that a large part of this high

consistency comes from offenders who consistently do not perform these behaviours across their offences. Therefore a degree of caution must be exercised when considering these results. This issue will be discussed in more detail in the section on the limitations of the research below.

Theoretical Implications

This section will consider the theoretical implications of the findings of this study. It will begin by discussing the general implications of the research, and then consider the implications with regard to the two main studies conducted on behavioural consistency of serial rapists to date. Following this is a discussion on the implications for certain aspects of social psychology research into the effect of factors such as type of behaviour, expertise and time on behavioural consistency. Next is a consideration of the implications for research on modus operandi and signature, and the organised/disorganised typology. Finally, I will consider the implications of this research for the theoretical premises that underlie profiling.

Implications for Consistency Research

The findings of this study have implication for research into behavioural consistency generally. Only a few studies have been conducted in this area to date, and none have adequately examined the extent to which individual criminal behaviours are performed consistently over offences series. The research conducted by Grubin and his colleagues (2001), Salfati and Bateman (2005) and Bennell and his colleagues (Bennell & Canter, 2002, and Bennell &

Jones, 2005) all focussed only on the consistency of groups or domains of behaviour. This study has provided empirical evidence for the behavioural consistency of serial rapists, and has gone on to demonstrate which specific behaviours are performed and/or not performed most consistently as compared to those behaviours that are performed and/or not performed less consistently across offence series. Although this study is exploratory in nature, it has established a useful base from which further research can be conducted. The study also went on to examine whether there were any groups of behaviours that tended to occur or not occur together across offences. The results of the research found empirical support for the influence of psychological themes of behaviour that affected the consistency of behaviour; in that there were three clear groups of behaviours that occurred or did not occur together across the offence series, and these groups of behaviours were all conceptually linked together by an underlying psychological theme.

The themes of hostility, control and involvement are all consistent with previous research on offender typologies and sexual offending (Canter, 1994; Canter et al., 2003; Canter & Heritage; Groth et al., 1977; Hakkanen et al., 2004; Knight et al., 1998; Knight & Prentky, 1990, 1991; Polaschek et al., 2001; Douglas et al., 1992). There is empirical evidence for the salience of the themes of hostility and involvement in sexual offending from two different research methodologies: research conducted at the MTC in the United States using offender interviews and assessment to develop detailed and specific clinical typologies (Knight et al., 1998; Knight & Prentky, 1990, 1991), and more recent research into sexual offending that utilised police files to examine patterns in

offence behaviour (Canter, 1994; Canter et al., 2003; Canter & Heritage; Hakkanen et al., 2004). The second set of researchers also found empirical support for the themes of control and theft in sexual offending.

The following two sections will consider the results of this study in light of the two main studies constructed to date on behavioural consistency in serial rape behaviour (Grubin et al., 2001; and Knight et al., 1998).

The Home Office Study

The current study supported the findings of the research conducted by Grubin and his colleagues for the Home Office in the United Kingdom (2001) on the consistency of behaviour in sexual offending. Grubin et al.'s study found the highest single domain consistency existed for the control and escape domains, and that lower single domain consistency was found for the sexual behaviours domain. This is consistent with the results of this study whereby the highest levels of consistency were found for behaviours that were later identified during the factor analysis as belonging to a control theme or domain. While the sexual behaviours did not belong to any one factor in the factor analysis, many of the sexual behaviours in this study were found to have lower levels of consistency across the offence series; a finding also consistent with Grubin et al.'s research.

In considering why the control and escape type behaviours were found to have the highest levels of consistency and sexual behaviours the lowest, it can not be concluded that offenders chose to prioritise certain behaviours consistently over others. It is possible that environmental factors influenced certain behaviours more than others. Grubin et al. (2001) theorised that their

similar results may have been due to the control and escape domains being less affected by these environmental factors than the sexual and personal style domains. They argued that the behaviours that comprise the control and escape domains formed part of what they labelled the “supporting structure” (Grubin et al., at p. 48) that makes a sexual assault possible in the first place, and will often involve pre-meditation and planning. They also speculated that these behaviours (eg. Bindings, Gag, Weapon) may be more reliably recalled by victims than other behaviours.

Grubin et al. (2001) did not establish a hostility or involvement domain and therefore it was not possible to compare the results of this study with the Grubin et al. study in this regard. It must be noted here that one limitation to the Grubin et al. research was their use of theoretical concepts to determine the domains to be used for their consistency analysis. In other words, the domains control, escape, sexual behaviours and personal style were selected by the researchers in advance and not derived from analysis of their data. This is in contrast to this study: although theoretical concepts from past research were used to establish the appropriate variables for the study, the psychological themes were identified through factor analysis and came directly from the data. Therefore, although the themes of hostility and involvement were not salient in Grubin et al.’s research, this is possibly just an artefact of their methodology.

There were two further differences between this study and the work carried out by Grubin et al. (2001): this study examined the consistency of individual behaviours as well as groups of behaviour; and in investigating individual behaviours this study used a measure of consistency that reflected the

consistent occurrence and non-occurrence of behaviours. True consistency consists of not only the behaviours that are consistently committed, but also those that offenders consistently do not commit. The findings from Grubin et al. provided empirical support for the consistency of control type behaviours *occurring* across offence series. This study supports those findings and also provides empirical evidence that these groups of behaviours are consistently *not* occurring together across offences series.

Knight et al. (1998)

The study by Knight et al. (1998) did consider whether certain individual behaviours were consistent across their last five known offences of serial rapists from both the MTC and archival data held by the BSU, but this study was limited by its methodological weaknesses. The authors used three different samples for their coding. The first two samples were used to identify variables that had high consistency across the offences series, and then the third sample was used to test the consistency of these variables. The methodology therefore artificially increased the probability that consistency would be found in this study. For their cross-crime consistency scores, the individual behaviours 'victim bound' and 'nature of binding material' showed the highest consistency. In this research, the variable Bindings also scored one of the highest consistency across offences. It must be noted that this study also considered both the occurrence and non-occurrence of the behaviours when measuring consistency. However, the majority of the variables used were very different to those used in the present research; consequently it is difficult to make many comparisons between the

studies. Variables that were similar included Hostility, Sexual Comments, Compliments, Reassures and Apologetic. These all received low consistency scores in Knight et al.'s research, and achieved low to moderate consistency in this study, providing a degree of consensus.

In the literature review, I reviewed some aspects of social psychological research that may impact the degree of consistency in behaviour. The following two sections will consider the implications of the present findings to the research on the effect of expertise and time on behavioural consistency.

Expertise

Hettema and Van Bakel (1997) have researched the impact of a person's expertise, finding that such expertise does increase behavioural consistency. Woodhill et al. (2007) theorised that in criminal behaviour consistency may actually increase as an offender becomes more experienced. Therefore serial rapists would exhibit higher consistency in their behaviour further along in their offence series, i.e. that there may be more consistency between later offences than between earlier offences. The theory was tested in this study, but mainly rebutted by the evidence reported in Chapter Six. First, there was no association between the consistency of the offenders and the number of offences they committed. Second, there was a quadratic rather than linear relationship between the number of offences and the degree of consistency of the variables included in the control factor. In other words, offenders exhibited higher consistency for these behaviours as the number of offences committed increased from offence one through four when this effect stabilised, and then

reversed with offenders exhibiting gradually lower consistency as the number of offences continued from five through to eight. Therefore, although initially it appeared that Woodhill et al.'s theory was being confirmed for control type behaviours, ultimately offenders with the most experience actually decreased in consistency for these behaviours. There was no association between the number of offences in a series and the behaviours related to the hostility and involvement factors.

Time

Pervin (2002) argued that when behaviour is observed over shorter time periods, there are greater levels of behavioural consistency. Woodhill et al. (2007) theorised that serial offenders that commit crimes over a shorter time period may show greater consistency than offenders who spread their offending out over a longer period (Woodhill et al). In the present findings there was no support for this theory: there was no association between the length of an offender's offence series (between first and last offence) and the degree of consistency revealed by offenders.

Signature and Modus Operandi

This section will discuss the implications of the present findings for the concepts of MO and signature commonly used in profiling. The MO refers to the practical aspects of the offence; the methods employed by the offender to successfully carry out his crime. The authors who have reported on MO have predominantly focussed on the views of the FBI that these behaviours are

changeable depending on the offender's past experiences and the specific situation in which he finds himself (Douglas & Munn, 1992; Hazelwood & Warren, 2003; Turvey, 2000, 2002). The signature in contrast, has been named the "calling card" of the offender (Douglas & Munn, at p.4); an inimitable collection of behaviours that are apparent over an offence series that reflect the unique personality of the offender (Hazelwood & Warren). The FBI has argued that it is these distinctive signature behaviours that are most important for profiling and for linking offences together because they are the most stable and consistent aspects of offence behaviour (Homant & Kennedy, 1998). This study has analysed the consistency of behaviour and thus has implications for this subject.

Before the results of this study are considered in light of the above literature, it must first be noted that MO behaviours are not necessarily organised or planned behaviours (organised behaviours will be discussed in the following section). MO can be very simple or sophisticated depending on the offender in question, reflecting the skill, experience and priorities of the offender (Hazelwood & Warren, 2003).

Davies (1992) provided examples of behaviours used as MO: a surprise or con approach, the use of a weapon, bindings or a gag, steps taken to prevent identification such as a blindfold or disguise, taking forensic precautions, theft of valuables, and any action taken to attempt a safe exit. These behaviours were all included in this study, so the results of the research have implications for the consistency of MO and signature behaviours. The variables Phone, Disguise, Forensic, Gag, Bindings, Blindfold and Demands received the highest

consistency scores and all also had received significant chi-square values indicating that each variable's occurrence or non-occurrence over the first two offences were significantly beyond chance levels. The high consistency for these variables provide empirical evidence that MO behaviours are very consistent in their presence or absence across offence series. In addition, the existence of a control factor that includes the majority of the variables just listed indicates that these behaviours are conceptually linked together by an underlying psychological theme: this provides empirical support for the existence of the discrete construct of MO. Finally, the finding that there is a quadratic relationship between the consistency levels of the behaviours in the control factor and the number of offences in a series suggests that the consistency for these MO behaviours does decrease towards the end of a long series.

The finding that MO behaviours are highly consistent is contrary to much of the literature on MO and signature. However, there are a few factors that might explain this discrepancy. First, the literature does suggest that early in a criminal's offence series, MO may evolve quite rapidly over the first few offences as an offender establishes what behaviours help him succeed and which are less successful. Following this the behaviours may remain stable once the offender has found a MO that suits his particular goals (Hazelwood & Warren, 2003). It is possible that the CPU has no knowledge of the offenders' earliest offences before they came to the attention of the police and were first caught. For example, the police are certain that Offender X committed earlier offences than they are currently aware of. Should this be a common problem across the sample, the analysis may be distorted by the omission of these early cases.

Second, there are recent studies that concur with my finding that MO behaviours are consistent. Bennell and Canter (2002) and Bennell and Jones (2005) found in their research on the linkage of cases by groups of MO behaviours that MO is a useful tool to successfully link offences committed by the same offender. Woodhams and Toye (2007) found that planning and control behaviours showed greater cross crime consistency in linked offences than in unlinked offences. The FBI's theories on MO and signature evolved initially from their research into serial homicide cases and has received little empirical validation (Homant & Kennedy, 1998), whereas Bennell and his colleagues' work was conducted on serial rapists. It is possible that the MO of a serial murderer is a distinct construct from the MO of a serial rapist.

There are no variables included in this study that can be considered examples of signature behaviour, so I have been unable to test the consistency of these behaviours. Signature behaviours are often low frequency behaviours that can differentiate well between offenders. A signature also often contains a mix of ritualistic and MO behaviours (Hazelwood & Warren, 2003). For example, in the Offender X case study he often brought a torch with him to the crime scene. This behaviour functioned as both MO and part of Offender X's signature as the torch was used both as a light source during his home invasion, and as a means to carry out the ritualistic behaviour of scopophilia (the shining of a torch on a victim's genital area). It is difficult to determine if any of the variables in this study can be considered signature behaviours outside of the context of an actual offence series, as a signature is unique to the offender.

Organised/ Disorganised Typology

The results of this study also have implications for the FBI's organised/disorganised typology. Canter et al. (2004) have criticised this typology as no more than conjecture. Their study tested the typology to determine if the two categories were truly distinct from each other, and found no clear elements able to differentiate the two types from one another. After conducting multi-dimensional scaling on 39 different variables common to the disorganised and organised categories, the authors found that the organised behaviours were actually common across most offences, and it was the disorganised features that distinguished offences from each other. There was no evidence to support the FBI's contention that organised and disorganised offenders form two discrete types.

Canter et al.'s (2004) study was conducted on serial murderers; no study to date has tested the concept of organised/disorganised offenders on serial rapists. Arguably the variables Phone, Disguise, Forensic, Gag, Bindings and Blindfold from the current research are variables associated with an organised offender as they reflect a concern about controlling the victim and the environment, and assuring a safe escape. These variables received six of the highest consistency scores. From these results it can be inferred that organised behaviour is consistent in its presence or absence across offences, providing preliminary evidence for the existence of distinct groups of organised and disorganised serial rapists. The finding that these variables all belonged to the control factor also provides support for this argument. However, these results must be interpreted with caution when considering the implications for this

typology, as only two of these variables (Gag and Bindings) were included in Canter et al.'s study. This is predominantly due to the differences in the nature of the crimes examined, but no true comparisons can be made between the studies due to the inclusion of different variables and the use of different methodologies. In addition, while the variables are all capable of interpretation as organised behaviour, this does not preclude an otherwise disorganised offender from engaging or attempting to engage in similar behaviours to control his victim as a reaction to environmental factors such as victim resistance. The difference may lie in the execution: an organised offender may bring bindings with him to the scene and secure control of the victim immediately, where a disorganised offender may not initially consider bindings until motivated to find a suitable object to bind the victim when she begins to physically struggle. As the variables for this study were coded as dichotomous, it is not possible to discern the difference; they reflect only the presence or absence of each behaviour.

Implications for Profiling

This section will discuss the implications of the present findings for the theoretical understanding of the profiling process. Alison et al.'s (2002) review of profiling highlighted the two assumptions that underlie the profiling process. The first assumption is the behavioural consistency assumption: that offenders will exhibit similar behaviour across their offences as a reflection of their personality and preferences. The second assumption was the homology assumption: that there is a positive linear association between the similarities of the behaviour committed during an offence with the corresponding similarities of offender

characteristics (Mokros & Alison, 2002). From these two assumptions rises the possibility of the profiling methodology; that a key personality trait such as organisation can be inferred from a particular combination of crime scene behaviours, and which then allows a particular combination of offender characteristics to be inferred (Alison et al).

The first assumption of behavioural consistency has received some empirical validation to date (Canter, 1995; Craik & Patrick, 1994; Grubin et al., 2001; Knight et al., 1998). The results of this study provide further empirical support for the existence of moderate to high levels of consistency in serial sexual assault behaviour. In particular it provides evidence for the consistency of individual behaviours across offence series, and additional evidence for the consistency of psychological themes or domains of behaviour such as hostility, involvement and control. These findings confirm the first of the two assumptions described above, and thereby provide empirical support for the profiling process.

However, the results of this study can be taken no further than empirical support for the behavioural consistency assumption; the findings do not provide any insight into why this consistency occurred or the particular personality traits related to the behaviour. The results of the factor analysis of the consistency scores do provide evidence of the influence of general psychological themes on consistent behaviour; but even as discussed above in the previous section, there is no direct evidence of the existence of an organised trait affecting behavioural choices across offences. Similar behaviour by offenders may have varying causes and motivations for different offenders; it is not possible to

assume a degree of homology from a degree of consistency in behaviour (Mokros & Alison, 2002).

The current study was not able to consider the second assumption of homology, and can provide no support for the inference of offender characteristics from presumed personality traits. Alison et al. (2002) described the lack of empirical validation for this second assumption in the research to date. Studies by Davies et al. (1997) and House (1997) have failed to find any significant predictive power from crime scene behaviours for offender characteristics. These studies only attempted to validate relatively simple behaviour-characteristic relationships such as violent behaviour predicting a previous assault conviction, and yet had limited success with their research (Alison et al). The predictions made by profilers in the field are far more complicated and ambitious, involving multiple offender demographic characteristics (Alison et al). However, the studies that have reviewed the efficacy of profiling have concluded that profilers do not show significantly higher accuracy in their profiles over investigators, psychologists or students. Also, although many investigators report highly of the profiling advice provided, when asked to specify exactly how aspects of a profile assisted the investigation in any particular direction, the feedback was less positive (Copson, 1995; Jackson et al., 1993; Pinizzotta, 1984; Wilson and Soothill, 1996).

Mokros and Alison (2002) tested the homology assumption in their study of 100 serial rapists in the United Kingdom. They found no evidence of a positive linear relationship between the similarity of offence behaviour and offender characteristics. Offenders who committed similar actions during their offences

did not have correspondingly similar demographic characteristics or criminal histories. The researchers concluded that there is no evidence to continue to assume that homology of behaviour and characteristics exists without further elucidation of exactly why this homology should exist (Mokros & Alison).

Woodhams and Toye (2007) also found no support for the homology assumption in their research on serial burglars.

Therefore, while this study provides empirical support for the existence of behavioural consistency and therefore for profiling, it is only one preliminary step in the scientific validation of the predictive power of the profiling process. Mokros and Alison (2002) advise that given the state of development of this validation process, profilers should admit the complexity of the profiling methodology and limit their advice to the prioritisation of suspects for investigations until further research has established the theoretical bases and processes of profiling.

Practical Implications

The results of this study also have practical implications. The empirical support for the behavioural consistency of serial rapists on a New Zealand sample of offenders has implications for the practice of profiling in this country. The case study reported in Chapter Seven on Offender X provided a good example of the profiling and case linkage work conducted by the police in New Zealand. The findings from this research provide some validation for the use of these profiling and case linkage techniques in police investigations into potential serial rapists. The follow-up consistency analyses in the case study provided preliminary evidence for the effect of environment on offender consistency.

As discussed in the previous section, there are still limitations to the theoretical understanding of how or even if profiling actually works. Profiling needs to be used with caution in any investigation; any specific profile of demographic characteristics may blind police officers to other avenues of investigation if the profile is inaccurate or misleading. However, the finding that serial rapists do tend to exhibit behavioural consistency across their offences provides support for the case linkage process whereby investigators analyse offence behaviour across different offences to determine if the offences were likely to have been committed by the same offender. Although signature behaviours were not able to be adequately tested for consistency in this study, the finding that the MO behaviours were highly consistent in their presence or absence across offences provides investigators with a valid starting point for case linkage. This finding was supported by the inclusion of the majority of the MO behaviours in one factor in the factor analysis of the consistency scores. The case study of Offender X details just such a case linkage exercise; although the police prioritised distinctive signature behaviours such as the scopophilia in their linkage analysis, they also used MO behaviours to some effect.

In addition the finding from this research that the sexual behaviours received the lowest consistency scores coupled with the fact that only one sexual behaviour had a significant chi-square value in the consistency analysis (indicating above chance occurrence across the first two offences), indicates that the sexual behaviours were inconsistent in their presence or absence over the offence series. Police should therefore exercise caution in utilising sexual behaviours in case linkage attempts.

The results of the current study also have implications for the use of expert evidence in court in New Zealand. In this country, evidence of past acts of the accused can only be introduced into evidence to support the current accusations against the accused, if the judge is satisfied on the balance of probabilities that the probative value of the evidence outweighs its prejudicial effect. With case linkage cases, this is accomplished through similar fact evidence: if the evidence establishes that the past acts are sufficiently similar to the criminal acts alleged against him in the court proceedings, the evidence may be introduced into court (Clarkson, Keating & Cunningham, 2007). This evidence is often past convictions for similar offences: if an offender has an existing conviction for similar behaviour then this past behaviour can be used to assist in the prosecution's case against the offender for a current case, if the behaviour is sufficiently similar. In New Zealand, police officers from the CPU give evidence to the court setting out the basis for their expert opinion that the behaviour exhibited is sufficiently similar. The findings of this research will assist the CPU in establishing to the court's satisfaction that serial rapists in New Zealand do exhibit behavioural consistency across their offences.

The follow-up consistency analyses in the Offender X case study also have implications for the use of linkage analysis procedures. As discussed in Chapter Seven, these follow-up consistency analyses were only conducted on one offender, so the results are only preliminary at this stage. When the two different environments used in the Offender X offences were separated out into home invasion and outdoors assaults and tested for behavioural consistency separately, the consistency of the offender either increased or decreased. It can

be more difficult to successfully link offences to one offender when the offences occur in different contexts. The Outdoors variable only received a moderate consistency score in the consistency analysis, indicating that many offenders do commit a mix of indoors and outdoors offences in their offence series. The Home Invasion variable received a higher consistency score, indicating that offenders are more likely to be consistent in their decisions to commit or not to commit home invasion offences. Nonetheless, even specialist intruder rapists like Offender X may commit offences in a different context on occasion. Two offences from different contexts that have been committed by the same offender may not initially appear so to the investigators because the change in environment is adversely affecting the apparent consistency of the offender. Investigators therefore need to be aware that offenders do commit offences in different environments, and to be cautious in linking or not linking offences from different environments to one offender.

Limitations of Research

There are several limitations to the methodology and data collection of this study.

Data Collection

The data collection process was subject to certain biases that may have introduced error into the data analysis. The first problem was the lack of representation of the offending sample to the whole of New Zealand. The majority of offences included were from the greater Auckland region, with very

few offences from the lower North Island or South Island. One possible consequence of this was the over-representation of Māori offenders in the sample. It is possible that the inclusion of more Caucasian offenders or more offenders from outside of the Auckland region would have made the sample more representative of all serial rapists in New Zealand. However, this was not possible as the author was limited to the police files held by the CPU for this research. The cost and time involved in travelling over the country to collect data from all police districts would have been prohibitive as well as intrusive to the work of the police districts.

The second problem was the use of police files for the data collection, many of which were archival files that had not been compiled for research purposes. Many of the files were incomplete and contained missing data. Although every effort was made to minimise the effect of missing data by not including any offence with more than 25% of the information missing, many offences were coded that had variables missing. In the consistency analysis, these variables were treated as absent data. This may have distorted the analysis. However, this is a common problem with research in this area: Czarnomski (2003), Grubin et al. (2001) and Knight et al. (1998) also had problems with missing data in their research. The police files may also have been inaccurate in some aspects. The bulk of the data collection was coded from victim statements, but these are also prone to include errors. Victims' memory recall of all aspects of the offence will never be perfect, and substantial error may have been introduced to the analysis because of this reason.

In addition, the data was all collected by the author of the study. Although the reliability analysis has provided empirical support for the reliability of the coding scheme used in the data collection, biases may have crept into the analysis through the use of only one coder.

Another limitation is that as data was only collected on offences held by the CPU, it is possible that offence series had additional offences that were not included in the analysis, either because the offences had never come to the attention of the police or because the offences had not been linked to the offender because of differences to the offence behaviour. This would have the effect of artificially increasing the consistency of the offenders in the analysis, if offences containing dissimilar behaviour were excluded. Cases that have identified as linked by police may actually have been linked to the same offender because they contained similar behaviour. Offences that belonged to the series but that contained dissimilar behaviour may not have been identified as committed by this offender. This would artificially increase the behavioural similarity and therefore consistency of the offences that were included in the offences series (Bennell & Canter, 2002; Woodhams, & Toye, 2007). Also, as in the Offender X case study, if offences are missing from offences series, this could distort the results of the consistency analysis that examined the presence or absence of behaviour in consecutive offences. In particular, if offences are missing from the beginning of the series, then important information may be missing about the early development of offenders' behaviour.

Another limitation to the data collection process is that due to limited information in the police files, very little data was collected on environmental

factors. The information that was in the files was inconsistently recorded and often inaccurate due to poor victim recall. For example, victims were often unable to determine if offenders were under the influence of alcohol or drugs, or if the offender experienced any sexual dysfunction during the offence. Victims' recall of the nature and extent of their resistance to the offender as set out in the victim statements was sometimes detailed and clearly stated, but in other cases there was very little information provided. There was also often limited information on the offenders' response to the resistance. In many of the earlier offences, there was almost no reference to victim resistance. This lack of consistent recording of environmental factors in the police files prevented any reliable coding of these variables, and prevented their use in the data analysis.

Methodological Limitation

There was also a methodological limitation to the research. First, the measure used in the consistency analysis included both the occurrence and non-occurrence of behaviour in consecutive offences. This, combined with the fact that the majority of the variables had only low frequency occurrence across the sample meant that for many of the variables a large extent of the consistency measured was the absence of that behaviour. One problem with the inclusion of non-occurrences of data was that the absence of a behaviour may simply be a reflection of the victim not reporting or recalling that behaviour (Woodhams & Toye, 2007).

There is precedent for the inclusion of the non-occurrence of behaviour: Knight et al. (1998) and Santtila et al. (2005) also used the presence-presence

and absence-absence of behaviour in matched offence as a measure of consistency. Like the present study, this was necessary because their analysis included an assessment of the consistency of individual as well as groups of behaviours.

Directions for Future Research

There are many avenues for future research in the field of behavioural consistency. First, the follow-up consistency analyses conducted in the Offender X case study should be replicated on a much larger sample to determine if the results can be generalised to a wider sample of serial rapists. Mokros and Alison (2002) recommended that future research into behavioural consistency should strive to control for environmental conditions as far as possible. The results of the Offender X case study support this contention with the demonstration of the impact that environmental factors can have on the consistency of offenders. If the results of the case study can be generalised to a wider population of offenders, then future research into behavioural consistency should be kept context specific, (i.e. outdoors offences compared to outdoors offences, night-time offences compared to night-time offences, home invasion offences compared to home invasion offences).

Future research also needs to find a balance between police file data and qualitative data gathered from in depth interviews. Although offenders are not always truthful in their accounts of their offending and often do not demonstrate great self-awareness (Polaschek et al., 2001), they are a source of much more detailed information than police files which are also prone to contain error. The

research conducted by Polaschek et al. in New Zealand demonstrated how interviewing offenders can provide valuable information on offenders' motivations and cognitions while offending. This qualitative information can then be used to illuminate the large sample quantitative data collected from police files. To date, research into sexual offending in general has differentiated between studies that research offenders using interviews in clinical settings and those who study offending by coding data from police files (Canter et al., 2003; Canter & Heritage, 1990; Groth et al., 1977; Hakkanen et al., Knight & Prentky, 1990, 1991; Polaschek et al., 2001). Future research can take advantage of both methodologies and collect data from more than one source. A recent study by Youngs (2004) used a self-report questionnaire that was given to young male offenders at probation centres. The offenders were asked whether they had committed a range of actions related to offence behaviour. Although statistics for the validity and reliability of the questionnaire were not provided in the report, the possibility of utilising such a self-report measure raises possibilities for future study.

In addition, the use of VICLAS in future rather than individual police files may assist in the reliable collection of data. The police services in many countries including New Zealand are in the process of uploading the demographic and behavioural details of both solved and unsolved sexual assault and homicide cases. In the future, research can even be conducted across international boundaries using the VICLAS resource.

Finally, future research into behavioural consistency needs to take into consideration a full range of environmental factors including but not limited to the

nature and type of victim resistance, any sexual dysfunction suffered by the offender, the use of drugs or alcohol by the offender, and the nature and type of any offence interruption. Researchers will have to access detailed information about these variables to adequately examine the effect of environmental factors on the consistency of different behaviours, and different domains of offending. One potential paradigm for future study is the study conducted by Mischel et al. (1994) that researched the psychological meaning of context for participants. The authors first determined the psychological meaning for participants in different contexts and then measured the consistency of behaviour in the various contexts. They found that the behaviour was consistent and stable depending on the particular context the participants were in, and that changes in behaviour were due to changes in the psychological meaning of the contexts, rather than just the change in context of itself. This paradigm of research into 'if...then' contingencies could be adapted for research into offender consistency by using a combination of offender interviews and police file data.

Conclusion

The present research found empirical support for both individual behaviours' consistency across consecutive offences as well as the consistency of psychological themes or domains of behaviour. The aims of the study were therefore met. The psychological themes to behaviour were consistent with previous research into sexual offending. The results provided support for the first assumption that underlies the profiling process, that offender exhibit consistency in their behaviour across offences. The findings had theoretical implications for

consistency research, MO and signature behaviours, the organised/disorganised offender typology, and research into profiling. The results of this study also had practical implications for profiling and case linkage during police investigations as well as the use of similar fact evidence in court proceedings. Finally, the study had limitations stemming from both the data collection process and the methodology; and the research offered up new directions for exploration in the future.

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APPENDIX A

Offender Code	
Victim Code	
Offence details	
Place	
Date of offence	
Time of offence	
DOB	
Previous offences	
Demographic Variables	
Age at first offence	
Offender's age at offence	
Offender's race	
Offender's employment status	
Offender's relationship status	
Victim's age	
Victim's race	
Victim's sex	
Relationship of offender to victim	
Drugs	
Alcohol	

Approach and context variables	
Con/deceptive approach	
Surprise approach	
Blitz (sudden incapacitating force)	
Offence of opportunity	
Followed victim	
Transportation of victim (state if abduction)	
Indoors assault	
Outdoors assault	
Home invasion	
Watched house prior to offence	
Forced entry (breaking and entering)	
Entry through open window (i.e. non-forced)	
Method of initial control	
- verbal threat	
- violence	
- manual hold	
- weapon	
- other	

Sexual Variables	
Vaginal intercourse	
Front entry	
Rear entry	
Attempt only (provide details)	
Anal	
Digital	
Use of object in penetration	
Degree of foreplay prior to penetration	
Degree of kissing	
Degree of nuzzling/lip contact on body	
Degree of fondling	
Degree of cunnilingus	
Degree of masturbation by offender	
Degree of fellatio	
Forced victim sexual participation (besides fellatio)	
More than one sexual position	
Other (provide details)	

Sexual Dysfunction	
Unable to form an erection	
Offender's response	
Unable to maintain an erection	
Offender's response	
Premature ejaculation	
Offender's response	
Retarded ejaculation	
Offender's response	
Conditional ejaculation	
Offender's response	

Physical variables	
Victim's clothing ripped/torn	
Degree offender removes clothes	
Extension of time with victim post-intercourse (why?)	
Theft items of value	
Theft personal items or mementoes	
Intention to steal (but not follow through)	
Property demanded with menace	
Other (provide details)	

MO	
Disguise	
Disguise of opportunity	
Disguise brought to Scene	
Bindings	
Bindings of opportunity	
Bindings brought to scene	
Blindfold	
Blindfold of opportunity	
Blindfold brought to scene	

Gag	
Gag of opportunity	
Gag brought to scene	
Forensic awareness	
Weapon brought to scene	
Threaten not to tell	
Attempt to protect identity (using false name etc.)	
Attempt to avoid capture (threats not to report, binding, cut telephone wire, cleaning forensic evidence etc.)	
Other (provide details)	

Violence	
Single act of violence	
Multiple acts of violence (provide number of acts, eg. punch 3 times, stab once)	
Type of violence (punch, weapon, slam to floor etc.)	
Level of force (eg. minimal, moderate, severe, brutal, fatal, excessive)	
Injury type to victim	
Instrumental violence only	
Expressive violence	

Weapon of opportunity	
Weapon brought to scene	
Weapon used to threaten or control	
Weapon threatened but not present	
Weapon used (include how many times)	
Weapon type	

Evidence of Signature (provide details)	
Control Variables	
Violence	
Threats	
Weapon	
Bindings	
Manual	
Other	

Victim Resistance	
Degree of victim resistance (low, medium, high)	
Victim resistance (provide details)	
Offender's response	
Victim resistance	
Offender's response	
Victim resistance	
Offender's response	
Victim resistance	
Offender's response	
Victim resistance	
Offender's response	
Victim resistance	
Offender's response	
Victim resistance	
Offender's response	

Verbal variables	
Any act or speech intended to humiliate, degrade or demean	
Reveals personal information (low, medium, high)	
Inquisitive (low, medium, high)	
Makes excuses	
Complimentary	
Hostility to victim in particular	
Hostility to women in general	
Reassuring	
Apologetic	
Makes threats (general)	
Makes sexual comments	
Verbal scripting	
Behavioural scripting	
Interest or demand for victim enjoyment	

APPENDIX B

Con approach

Where the style of approach used by the offender is deceptive in nature and generally involves some verbal contact – questions asked, false introductions, knocking on the victim's front door with a request to enter the home. This is contrast to a surprise attack on the victim where the victim is immediately subdued. A surprise assault often but not always involves violence, threats, or a weapon to subdue the victim.

Outdoors

Where the offender's initial approach to the victim is made outside. If the assault should be moved inside at some stage the assault will be deemed an outdoors assault if it is initiated outdoors. This is in contrast to where an initial approach is made inside, i.e. during a home invasion.

Transportation

Where the offender transports the victim in a vehicle at some stage during the assault.

Home Invasion

Where the offender enters the victim's home to commit the assault either by illegal means or by deception. The exception is where the victim invites the

offender into her home, and after that the offender decides to assault the victim in her home.

Theft

Where the offender steals any item of the victim's belongings, even if the theft is unintentional, i.e. the offender transports the victim in his car and then throws her out, leaving a piece of the victim's clothing behind.

Demands

Where the offender demands by threat of violence or with a weapon that the victim give him any of her possessions. This includes when the offender forces the victim to go with him to an Automated Teller Machine and take money out using her bankcard.

Weapon

Where an offender displays or uses a weapon to control the victim and force her to do as he says.

Violence

Where more than one act of violence is carried out against the victim . This excludes general physical behaviour by the offender involved in moving the victim around. The violent acts must be deliberate physical acts. It is not required that any victim injury be sustained.

Binding

The use at any time during the assault of any articles to bind the victim (other than the offender's hands).

Blindfold

The use at any time during the assault of any attempt to restrict the victim's sight (other than by using the offender's hands). This can include placing part of the bedding over the victim's eyes without actually securing it. It does not include simply turning the victim over onto her front – it requires the use of an external object.

Disguise

Where the offender wore any form of covering over his face, (e.g. a scarf or balaclava) even just a jumper pulled up over his head. This excludes a hood that only hangs partially down over the face.

Gag

The use at any time during the assault of any articles to gag the victim's mouth (other than the offender's hands). This can include the placement of a pillow or duvet without securing it.

Forensic

The offender takes certain steps before, during or after the assault to ensure that no evidence can be obtained, (e.g., making the victim wash herself, using a condom, using gloves).

Phone

The offender disconnects either the power or the telephone before, during or after the sexual assault.

Anal

Where the offender penetrates or attempts to penetrate the victim's anus with his genitalia or a foreign object.

Digital

Where the offender penetrates or attempts to penetrate the victim digitally.

Fellatio

Where the victim is forced to perform an oral sexual act on the offender's genitalia.

Cunnilingus

Where the offender performs an oral sexual act on the victim's genitalia.

Kisses

Where the offender kisses the victim.

Fondling

Where the offender fondles any part of the victim's body.

Licking

Where the offender licks any part of the victim's body except the vaginal area.

Biting

Where the offender bites any part of the victim's body.

Victim Participation (Physical)

Where the offender forces the victim to physically participate in the sexual assault. The acts demanded may be in association to specific sexual acts demanded of her, but are in addition to those sexual acts. This variable excludes the act of fellatio which is covered separately.

Victim Participation (Verbal)

Where the offender makes comments urging the victim to verbally, sexually, or otherwise behaviourally participate in the assault. This excludes urging the act of fellatio. This variable is coded separately from Victim Participation

(Physical); the offender can physically force the victim to participate physically without corresponding verbal statements.

Offender sex comments

Where the offender makes sexual comments to or about the victim of a derogatory nature.

Complimentary

Where the offender compliments the victim in any way.

Apologises

Where the offender apologises to the victim.

Reassures

Where the offender makes verbal comments during the assault in an attempt to reassure the victim. This may include an attempt by the offender to persuade the victim that he does not intend to do a specific act, such as violence.

Threatens

Where the offender threatens the victim verbally: this is distinct from making threatening gestures but may occur at the same time.

Hostility

Where the offender exhibits hostility to the victim verbally. This includes demeaning statements or verbal violence aimed specifically at the victim, but not general verbal violence or swearing uttered during the course of the assault.

Victim enjoyment

Where the offender specifies to the victim that she enjoy the sexual acts or evidence enjoyment, (e.g., specific comments to the offender about the sexual acts).