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Sexual offences and risk:

Offender behaviour and investigator decision-making in

sexual offences

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By

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# ABSTRACT

This thesis has explored the sexual offence crime investigation and risk management domains from two interacting perspectives. It considered both the role and behaviour of the offender and the role and decision making of the investigator. The common theme was how can policing create a more balanced view of risk using evidenced based decisions. From a data set of 154 serial sexual offenders three questions were asked: what are the pathways of offending? Do sexual offenders escalate? Do they specialise? Four pathways were derived as escalation, oscillation, maintenance and de-escalation; escalation was found in 13% of the offenders. The second part of the thesis then tested the decisions investigators made in a serial sexual offence scenario with an added stressor of time pressure. The results suggested that investigators did not make bad decision but omitted to make some important decisions. Furthermore, experience and intelligence acted as moderators of time pressure. The next part of the thesis considered a contemporary policing issue in terms of sexual offenders and resource decisions. What is the likelihood of an offender possessing indecent images of children (IIOC) being a contact child sexual offender. The chapter compared a group of child sexual offenders who possessed IIOC and a group of non-contact IIOC possessing offenders. Contact and non-contact offenders could be discriminated by criminal convictions, access to children and the severity level of IIOC possessed. More sadistic contact offenders possessed higher levels of IIOC. The applications to policing knowledge bases were outlined. The findings were considered in terms of the contributions to psychological and criminological literature with two new models of decision making and sexual offending presented.

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# PREFACE

This thesis concludes with a theoretical model for decision-making and a proposed revision of the Integrated Theory of Sexual Offending ITSO (Beech & Ward, 2006). It also identifies pragmatic and usable findings which are directly applicable in the police decision environment. The combination of theory and practice can be seen as symptomatic of the author being a police detective and a researcher.

In terms of how to present this thesis, two perspectives were explored. The first was to follow the theoretical themes; it could have described the changing of theory throughout the thesis. However, in doing that, it would have detracted from the journey of the thesis itself and the learning that evolved throughout. The thesis has been a gradual cross-pollination of two research domains. Decision-making research has primarily been a micro; individual decision-maker focused area of study. Sexual offender research has only recently considered as having both macro and micro approaches. This thesis is therefore chronologically structured taking the reader through each study in the order they were conducted and encapsulating changing literature over the seven year period. Furthermore, in the chronological order, it can be seen how the pathways concept influences the decision-making experiment. It can then be seen what is learnt from the pathways data and the decision-making data is used in the indecent images research. These three pieces of research have also been instrumental in the development of the Kent Internet Risk Assessment Tool (KIRAT, 2008), a pragmatic decision-making tool to identity those offenders at highest risk of contact offending. This continues as a standalone piece of research and is now the United Kingdom's Association of Chief Police Officer's endorsed tool for indecent images of children intelligence risk assessment.

# Chapter 1

## Introduction

"The modern policing situation is one of almost constant adaptation to pressures both internal and external. These pressures include complexity in policing and the performance culture, managing internal risk, the demand gap, limitations of the standard model of policing, organised and transnational crime, and changes in technology" (Ratcliffe, 2008, p. 31).

The notion of risk is a thread within policing be it terrorism (M15, 2010), public order (HMIC, 2009a) or sexual offender management (MAPPA, 2009). Indeed, policing now has a tighter focus on risky offenders (Kemshall & Wood, 2008). From a governmental perspective, the modern police service is a varied, multi-layered, responsive institution working to ensure the safety of the public (Home Office, 2010). However, how the police *ensure* the protection of the public has been questioned in terms of risk management. Carson and Clift (2010) draw attention to the 2009 UK government's white paper on protecting the public and the recommendations for the National Policing Improvement Agency (NPIA). They are tasked with considering whether training programmes are "required to emphasise the importance of taking a balanced view of risk and building confidence to respond in a proportionate and professional manner" (Home Office, 2009, p. 73). They question what a balanced view of risk is and they reflect that Her Majesty's Inspectorate of Constabulary (HMIC) (2008) has termed the police 'risk-averse'. One possible reason for risk aversion is scrutiny. Indeed, one perspective on the concept of risk management states that senior police officers and executives are now under far more scrutiny than before (Flood, 2004); as a result of these high levels of both internal and external accountability pressures, their professional judgements and decisions are tempered by risk (Cronin & Reicher, 2006). Carson and Clift (2010) write that risk-aversion may be understandable but it is also inefficient, unprofessional and unnecessary. This need to manage risk may be one of the most significant changes in policing and law enforcement generally in recent years (Ericson & Haggerty, 1997).

Consult a dictionary on the meaning of 'risk' and you are likely to be given a definition that highlights three concepts: harm, likelihood and uncertainty (Carson & Bain, 2008). Whilst there is considerable debate on the meaning of 'risk', it is generally referred to as "occasions when uncertain outcomes, good or bad, or both, could occur to an unknown degree of likelihood" (Carson & Bain, 2008, p. 45). In a criminal justice setting, there tends to be a focus on the adversity of the outcome, or as Blackburn (2000) writes: "Risk generally refers to the possibility of loss or costs when an outcome is uncertain, but in clinical and criminal justice settings, it means the chance of *an adverse outcome*" (Blackburn, 2000, p.177, emphasis in original). Accepting Carson and Bain's definition of risk, it logically follows that *risk assessment* is the collation and evaluation of information about those possible outcomes and their likelihood. "Thus, as 'risk' is about possible benefits as well as harms, 'risk assessment' must involve collecting information about potential successes as much as about potential failures" (Carson & Bain, 2008, p. 45). It is generally accepted in the literature that a risk assessment can only identify the probability of harm, assess its impact on individuals, and pose intervention strategies that may diminish the risk or reduce the harm but a risk assessment cannot prevent risk (Hope & Sparks, 2000). Once a risk is identified via a risk assessment, the risk can be managed (Carson & Clift, 2010). This risk management includes using resources be it people, their knowledge and skills, premises, equipment, or other means to make risk-taking safer. It is a legal obligation that resources should be deployed in a way that best protects the public from harm (MAPPA, 2009). In the last two decades, the concept of risk has moved from the periphery of criminal theory and crime control practice to the core (Williamson, 2008). It has been suggested that policing needs to make a transition towards a risk-based and knowledge-focused paradigm (Williamson, 2008). In other words, police decisions should be justified and accountable based on reliable information with thorough analysis, therefore creating accountability (Smith & Flanagan, 2000).

*Legal Obligation to Risk Assess*

The police have legal obligations to assess risk in ways that other sectors do - such as health and safety (Health and Safety at Work Act, 1974; Police (Health and Safety) Act, 1997). However, some of the obligations are more specific to the service. The requirement to manage sexual offenders is one such risk. The Criminal Justice Act 2003 and Part 2 of the Sexual Offences Act 2003 set the legal basis for the management of offenders that fall within the Multi-Agency Public Protection Arrangements (MAPPA). The purpose of those arrangements is to help to reduce the re-offending behaviour of sexual and violent offenders thereby protecting the public from serious harm. It aims to do this by ensuring agencies work together effectively to: identify relevant offenders; complete comprehensive risk assessments; devise, implement and review robust risk management plans; and "focus the available resources in a way which best protects the public from serious harm" (MAPPA, 2009, p. 32). In order to understand how the public should be protected from serious harm, it is useful to define this harm. "Serious harm can be defined as an event, which is life threatening and/or traumatic, from which recovery, whether physical or psychological, can be expected to be difficult or impossible. Risk of serious harm is the likelihood of this event happening. It should be recognised that the risk of serious harm is a dynamic concept and should be kept under regular review" (MAPPA, 2009, p. 79). To prevent serious harm, professionals need assistance in predicting who will cause such harm; therefore actuarial or statistically grounded risk assessments are used to approach that task. These formal risk assessments inform professional judgements and underpin defensible decision-making. The key principle for MAPPA is that risk assessments should be based on tools and procedures currently approved for use (MAPPA, 2009).

*Approved Risk Assessment Tools*

In order to make a decision of risk, the police should take into account the risk assessment and likelihood of re-offending, and any relevant intelligence and previous convictions (MAPPA, 2009). Within the United Kingdom, the actuarial risk assessment tool Risk Matrix 2000 (RM 2000: Thornton, Mann, Webster, Blud, Travers, Friendship & Erikson, 2003) is used by the police as well as the probation

service, prison service and in mental health settings; it is seen as being a well validated static risk assessment for sex offenders (Harkins & Beech, 2007). Thornton et al.'s (2003) most recent version of RM2000 has separate indicators for risk of sexual recidivism (RM2000-S), and overall violence (RM2000-V), which can be combined to give a composite risk of reconviction for sexual or non-sexual assaults, Risk Matrix 2000/Combined (RM2000/C). An individual's level of sexual violence risk is ascertained by a two-stage process with a final determination of risk (Low, Medium, High, and Very High). The first stage of RM2000 involves scoring individuals on three easily obtainable items: age at commencement of risk, sexual appearances, and total criminal appearances. The second stage contains four aggravating factors: male victim, stranger victim, non-contact sexual offences, and lack of a long-term intimate relationship. The presence of one of these factors will raise the risk category by one level.

In terms of other risk assessments the police may consider when making their assessment is the Probation Offender Assessment System (OASys) risk assessment (MAPPA, 2009). OASys is designed for offenders over 18 and includes an offender's assessment of themselves. It informs an assessment of reconviction, case management, targeting of treatment programmes, referrals to partnerships, resource allocation and risk management. It is used to identify the offender's needs and assess the risk of serious harm to the public (MAPPA 2009). The likelihood of re-offending is reviewed by systematically examining up to thirteen offending related factors, for example: offending history; accommodation; education, training and employment; drug and alcohol misuse; cognitive thinking and relationships. At the end of the assessment, offenders are deemed low, medium, high, or very high risk of serious harm. Very high risk means there is an imminent risk of serious harm, the potential event is more likely than not to happen imminently, and the impact of occurrence would be serious. There is significant guidance and training on how to administer these risk assessments from within the police (CEOP, 2010) and probation service; however, best practice has also been defined with the academic literature (Craig & Beech, 2010).

Craig and Beech (2010), in their guide to best practice in conducting actuarial risk assessments with sex offenders, identify that actuarial risk assessment consistently performs better than clinical judgements. They agree with Borum (1996) who posits that prediction in general, and specifically sexual aggression, is challenging when considering the complex and multi-factorial nature of sexual offending. When reviewing such multi-factorial issues, how a risk assessment is validated and tested is extremely important. Indeed, Kemshall (2003) writes that a risk assessment tool should be validated against a relevant offender group and be empirically grounded in the risk factors with a proven track record in the research literature. They should also differentiate risk categories, have inter-rater reliability established and be validated using a UK population.

In order to validate against a relevant UK population, a method of comparison is required. The simplest measure is comparing the risk prediction with actual outcome of reconviction (Craig & Beech, 2010). There are four possible outcomes when predicting risk: a true positive (TP) where risk is predicted and is found; a true negative (TN) where risk is not predicted and not found; a false positive (FP) where risk is predicted and not found and a true negative (TN) where is not predicted but found (Swets, Dawes & Monhan, 2000). In a cross validation study, the RM2000-S obtained moderate (AUC 0.68) accuracy in predicting sexual reconviction whereas the RM2000-V obtained good accuracy in predicting violent and sexual/violent (combined) (AUC 0.87 and 0.76) reconviction (Craig, Beech & Browne, 2006). Where the probability of dangerousness is over-estimated (FP) low-risk offenders may be placed in treatment or overly monitored which is unnecessary expense. Where risk is under-estimated (FN), dangerous offenders may be released where there is a high probability that a new sexual offence will be committed, potentially insufficient monitoring will be in place, and the obvious possibility of another victim (Epperson, Kaul, & Hesselton, 1998). Whilst this approach of measuring the predictive impact has been criticised for over-simplification and failing to consider qualifying statements (Hart, Webster, & Menzies, 1993), this method of testing risk assessment is generally accepted to be valid (Swets et al., 2000). When a risk level is determined

it is subsequently the role of the police, with their partners, to manage that risk, be it through MAPPA or another risk management regime.

*Police Approach to Risk*

As described earlier, it has been acknowledged that policing needs to make a transition towards a risk-based and knowledge-focused paradigm (Williamson, 2008). For crime investigation and risk management, knowledge-based policing uses a broad interpretation of intelligence, utilises analyses (such as strategic intelligence analyses) and crime mapping (Ratcliffe, 2010). Knowledge-based policing allows decisions to be made for optimal use of scarce resources. Kent Police policy on the management of sexual offenders clearly identifies that "it is the responsibility of the police, as part of the responsible authority, to assess and manage risk in order to prevent harm where possible, reduce the likelihood of harm and the impact of any harm. This involves proactively identifying, assessing and managing the risk of serious harm, and taking action to reduce that risk through information sharing, multi-agency responses and, if necessary, by police action as a single agency," (Kent Police, 2010a, 6.1). The process to achieve this is by adopting an 'investigative approach;' this includes questioning the content of all information, analysing gaps in information and using the product of criminal investigations to inform any risk of serious harm. This process of assessment includes information on patterns of offending, the modus operandi of the crimes, and other relevant behaviour and associations. By reviewing all of this information, the central tenet is that investigators can justify the decisions that have been made (Kent Police, 2010a). Decisions made by the police should be justifiable, appropriate, proportionate, auditable and necessary, which is often referred to by the mnemonic JAPAN. Guidance is also given on what is considered justifiable and defensible if all of the following elements exist: "All available information has been collected, recorded and thoroughly evaluated; policies and procedures have been followed; reliable assessment methods have been used where available; all reasonable steps have been taken and any information acted upon; practitioners and their managers have communicated with each other and with other agencies, been effective and proactive, have adopted an investigative approach and decisions have been recorded (and subsequently carried out)" (Kent Police, 2010a, 6.7).

When an offender is identified as being released into the community, the MAPPA process provides a framework for managing any risk posed (MAPPA, 2009). When any offender commits an offence in the community, especially a serious stranger attack, there is considerable pressure to apprehend the offender (Cook & Tattersall, 2008). The ultimate outcome to prevent a serial offender repeat offending is identification, prosecution and imprisonment. However, there is often a period of time between report and apprehension when the investigation, specifically the Senior Investigating Officer (SIO), has to manage that risk. Thus, there are two stages of the criminal justice process that police are heavily involved in. The first is the investigation and conviction, the second is the community management. In some cases, there is considerable time between conviction and release; in others, none at all.

The investigation teams and the risk management teams have different tasks and objectives (Kent Police, 2010a); however, increasingly with the most serious offenders, they have a common thread between them. This is the need to make decisions, often on resourcing to prioritise the offenders that pose the greatest risk. This process of assessment includes information on patterns of offending, the modus operandi of the crimes and other relevant behaviour and associations (Kent Police, 2010a). Stern (2010) supports this concept in advocating prevention work should be undertaken such as mapping exercises of where rapes are starting or where predatory offenders are targeting. It should be remembered that any risk factors should be based upon quality empirical research, wherever that has been undertaken. But where that is not available, risk factors may be based upon practitioners' experience, (Carson & Bain, 2008).

This thesis aims to explore two aspects of sexual offending. First, which offender behaviours related to more serious offending was investigated. Second, what factors affecting investigator decision-making was explored. For both perspectives, the question to be considered is: what can an individual's behaviour tell us in terms of a likely outcome and associated risk? The response to this question consists of three parts:

- The first part of this thesis aims to review the literature and establish the theories of sexual offending, criminal careers and offence specialisation. It will specifically consider the notion of escalation, and the debate as to whether

sexual offenders specialise in their offending behaviour. It will then test those theories against a UK investigatory relevant data set. It will present the offenders' behaviour both descriptively and in terms of their pathways. The psychological, criminological and practical risk considerations will then be reviewed.

- Having reviewed the behaviour of the offender, the thesis will then explore the behaviour of the decision makers in serial sexual offence investigations. It will begin by describing best practice in sexual offences investigations. It will then test the decision-making of 76 investigators in their ability to identify important decisions previously identified by a set of subject matter experts. This will include an assessment of the stressor of time pressure and measures of individual differences such as intelligence and experience on decision-making ability. The notion of decision omission and potential risk thereby created will be reviewed. The theoretical implications and psychological explanation of decision-making will then be presented.

- The third part of this thesis will explore an emerging debate within sexual offending literature and law enforcement in terms of the role of indecent images of children (IIOC) and the likelihood of contact sexual offending against a child. It will then test those theories against a UK investigatory relevant data set. It will consider the findings in terms of prioritising IIOC cases, the risk presented and the theoretical implications.

In summary, this thesis aims to provide a pragmatic yet theoretically driven, investigatory relevant contribution that can assist the creation of knowledge bases to inform decision-making and the understanding of how decisions are made.

In line with this, the chapter structure of the thesis is as follows:

Chapter Two will describe the criminal careers of serial sexual offenders in terms of escalation, de-escalation, oscillation and maintenance. It will draw on the theories of

sexual offending that explain the onset of behaviour and the current understanding of how and why criminal careers evolve for sexual offenders.

Chapter Three will describe 154 offenders and their descriptive factors; this chapter tests the descriptive data known on serial sexual offenders and provides the practitioner with information to assist with justification in decision-making. It will compare current documented risk factors from the literature with the findings from a UK data set from the Serious Crime Analysis Section.

Chapter Four, building on Chapters Two and Three, will use sequential analysis to map out the pathways serial offenders take in their offending and test the four pathway model. It will challenge and review the notion of escalation and provide insight into how offenders' pathways evolve. It will consider criminological and psychological explanations for pathways of offending and how Chapters Three and Four can add to this debate.

Chapter Five will describe sexual offences investigation and best practice. It will include legal definitions and some of the current issues for sexual offence investigation in modern policing. It will describe a recent case where there was learning and the specifics of best practice. Theories of police decision-making and how those decisions are made will be outlined.

Chapter Six will then describe the methodology employed to test decisions made by investigators in a serial sexual assault scenario. It will review the question of fidelity of scenario and proposes a simulated scenario to test decision-making. The quandary of how to ensure quality of decision-making in assessing decisions will be discussed with the Delphi technique of expert consensus being presented. The scenario, which is used in the following chapter, will be described in detail.

Chapter Seven will be an experiment where investigators are tested on their investigative ability in a serial sexual assault scenario. One factor that can affect decision-making, time pressure is incorporated into the scenario and two main findings will be discussed. First, under time pressure investigators generated fewer alternative hypotheses and prioritised decisions directly after receiving the time

pressure. Second, experience of policing and criminal investigation acted as a moderator of time pressure. Experience of police management and the effect of those who scored highly on Raven's progressive matrices will be explored. The role of experience and the congruence between these findings and existing naturalistic decision-making theories is discussed.

Chapter Eight will then take a specific type of escalation in terms of offenders possessing indecent images of children and the likelihood of child contact sexual offending. It will explore between and within group differences, specifically considering level of image[1] possession and a potential homology between indecent images of children (IIOC) possession and contact offending behaviour. It will provide likelihood factors that can then be used during intelligence assessment and risk assessment and discuss the current theoretical perspectives.

Chapter Nine will then discuss the findings and concepts throughout the thesis. It will present what this thesis adds to the existing escalation, pathways and specialisation debates. In terms of sexual offence investigators, how experience and intelligence may moderate time pressure will be considered. Finally, theoretical interaction between criminal careers, risk and decision-making research will be discussed with implications for evidence-based police decision-making. Potential models which incorporate neuropsychological, biological and ecological factors will then be proposed.

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[1] There are five levels of IIOC increasing in severity from level 1 as erotic posing to level 5 including sadism and bestiality

# Chapter 2

# Literature Review

In terms of sexual offenders, the ultimate aim for the police and their multi-agency colleagues is to reduce and manage re-offending risk within the community (MAPPA, 2009). The police are the responsible authority for sexual offenders in the community (MAPPA, 2009); therefore this thesis will concentrate on that offender group. However, to identify which offenders should be the focus of this thesis requires explanation. The theme of risk of serious harm suggests that those offenders who inflict the most serious harm warrant study if the aim is to reduce risk. In terms of assessing risk, as described in the previous chapter, a key element of both OASys and RM2000S (Thornton et al., 2003), is the offending history. In terms of harm, there is no doubt that for the victim, a sexual offence is harmful, with both physical and psychological injury a possibility (Horvath & Brown, 2009; Stern, 2010). It could therefore be suggested that those offenders who serially offend cause more harm with more victims. Farrington (2002) explains the importance of investigating offending history or sequences over time as those behaviours act as stepping stones to following offending behaviours. He describes the understanding of onset, persistence, escalation and desistence of offending as being crucial. Where an offender is known, greater understanding of their criminal career can assist to manage risk and assist to focus resources on the critical few. Where the offender is not known and an investigation is underway to apprehend them, understanding from criminal careers can assist police analysts (Ratciffe, 2008), investigative strategies, (Cook & Tattersall, 2008) and behavioural investigative advice (NPIA, 2010). Finally, by exploring the most serious offenders, insight can be gained from a theoretical perspective which can assist in the understanding and rehabilitation of offending. This literature review will therefore begin with an explanation of what a criminal career is and the theoretical perspective for career evolvement. It will then propose a combined model of the four pathways of offending following onset of offending: escalation, maintenance, oscillation and de-escalation. As Chapters Three to Nine discuss adult and child sexual offenders, the

theories of onset of offending, escalation, maintenance, oscillation and de-escalation will be presented for both.

*Criminal Careers*

From a criminological perspective, the study of criminal careers has recently re-gained momentum; what is interesting however, is that there has been acknowledgement of the need to embrace individual factors – particularly genetics (Soothill, Fitzpatrick & Francis, 2009). It could be argued similar progression has developed with the psychological theory of sexual offending with the integrated theory of sexual offending (Ward & Beech, 2006). It has also been acknowledged by criminologists that the methodology of longitudinal study used in criminal careers research may result in out-of-date obsolete findings by the time the study comes to an end (Soothill et al., 2009); therefore, re-focusing the research is of extreme importance. The assumption of escalation in offending seriousness underlies much criminal justice policy (Liu, Francis, & Soothill, 2010). This is supported by Lulham and Ringland (2010) who describe crime seriousness as a fundamental consideration in policing and the court system and offence severity being central to the criminal justice system response to offenders. Therefore, as Sullivan, McGloin, Pratt, and Iquero (2006) note, investigations into whether offenders specialise in their criminal behaviour carry implications for both criminological theory and public policy. However, these investigations should remain cognisant of research suggesting offenders' risk changes over time (Hanson & Harris, 2001). As Liu et al. (2010) write, "Recent acknowledgment that escalation in crime seriousness over the criminal life course continues to be an important issue to study in criminal careers. Quantitative research in this area has not yet been well developed owing to the difficulty of measuring crime seriousness and the complexity of escalation trajectories," (2010, p1).

The most significant criminal career research is acknowledged as beginning with Farrington (Holin, 2011). In 1997, Farrington provided a significant review of criminal career research from the criminological perspective and presented his own theory. He describes a criminal career as "The longitudinal sequence of offences committed by an individual offender" (1997, p.361). A criminal career has a

beginning (onset), an end (desistence), and a career length in between (duration). The criminal career is essentially concerned with human development over time. According to Farrington, the concept of anti-social behaviour is central to the criminal career which provides a testing ground for criminological theory. Farrington's theory of male offending and anti-social behaviour (Farrington, 1992, 1996) suggests a four stage process: energising, directing, inhibiting and decision-making. The energising stage refers to short term factors such as boredom, frustration, anger, and alcohol consumption. The following directing stage is characterised by motivations producing increases in anti-social tendency if socially disapproving methods are habitually chosen. Next, the inhibiting stage describes how anti-social tendencies can be inhibited by internalised attitudes and beliefs built up using a learning process of reward and punishment. The final decision-making stage specifies the interaction with the environment and the degree of anti-social behaviour depends on the relative opportunities, costs, and the subjective views by the offender of the outcomes. In terms of what predicts offending, Farrington cites low intelligence, lack of supervision, presence of child abuse, social deprivation, broken homes and family conflict all as contributing factors to criminal careers. He also points out impulsivity and situational factors also contribute – in terms of situational factors, he writes, "It is plausible to suggest that criminal behaviour results from interaction between an individual (with a certain degree of anti-social tendency) and the environment (which provides criminal opportunity)" (1997, p.394). Farrington (1997) noted that the understanding of onset, persistence, escalation and desistence is crucial; therefore, current perspectives on these concepts will now be considered.

*Onset, Persistence, and Desistence*

The majority of the criminological research suggests the onset of criminality begins as a youth. Farrington (1992) showed the median onset age for most types of offences (generally theft offences) was 17 years while the age for violence was 20. In his review of youth offending, the Cambridge study, the peak of prevalence of offending was 14 years and the peak age of decrease was 23. The onset of the offending is accepted to begin between 13 and 16 years old; however, sex offences have an average onset between 17 and 19. The persistence or desistence of careers was reviewed by Rankin and Wells (1985). They state that age is an important factor;

offenders may de-escalate so that their behaviour decreases in seriousness as well as frequency. As they grow older they may persist, that is, only become involved in one type of behaviour. They also state that offenders may be classified as 'offence heterogeneous' committing a variety of delinquent acts or they may escalate to more serious delinquency. The average age of offenders who generally desisted offending was found to be 23.3 years old. Several reasons were given for this desistence: getting married and relationships with 'significant other' partners, the cost of the crime (longer prison terms) and job satisfaction were among those given. There were those who are less likely to desist and are seen as chronic. Wolfgang, Figlio and Sellen (1972) found 18% of offenders were responsible for 52% of crime in their study and those same offenders accounted for a large proportion of the serious crime. They evidenced 69% of aggravated assaults, 71% of homicides, 73% of forcible rapes and 82% of robberies were committed by those offenders.

*Escalation*

Farrington (1997) suggests further research on escalation is needed. Research which has been conducted investigating escalation has approached the concept from different aspects including: amount of force used, amount of blunt physical trauma, type of crime committed, and likelihood of offending resulting in murder. One study that reviewed force used was Hazelwood and Warren (2001). They examined 41 incarcerated serial rapists who had committed a total of 837 sexual assaults and 400 attempted rapes. The minimum number of offences any offender had committed was 10 offences. The study found the offenders were unusually intelligent with 88% scoring better than average. Their arrest histories were diverse including a variety of property offences, nuisance sex offences (window peeping, obscene phone calls, exhibitionism) and other sexual assaults. One offender had no previous convictions; of the other offenders, 58% had been institutionalised in either correctional centres (46%) or mental facilities (12%). The respondents had been convicted for a mean of 7.6 sexual assaults although they admitted being responsible for a mean of 27.8 assaults. Prior sexual offences committed by 38 of the respondents included rape only (37%), nuisance sexual offences (8%), and a combination of nuisance and rape (42%) and other offences (13%). The study reviewed the offenders' first, middle and last rapes and provided several insights. The first was that the likelihood to attack a

stranger increased over the three offences. In terms of use of force, 84% used minimal or no physical force across all rapes. Force resulting in bruises and lacerations, and trauma including up to death increased from the first to last rape with 5%, 8% and 10% respectively. Two victims (5%) were murdered in the middle offence and two were killed during the last offence. Hazelwood and Warren stated, "There appears to be a trend wherein the rapist's interest in fellatio increases while his interest in vaginal intercourse decreases" (2001, p. 458).

Further studies into serial rapists such as Warren, Reboussin, Hazelwood, Gibbs, Trumbetta and Cummings (1999) have specifically considered escalation within offences committed by serial rapists. They reviewed the amount of blunt physical trauma caused to the victim over a series. The study divided 108 serial rapists into increaser and non-increasers. This was examined using regression analysis of the blunt force scale from first to last rape. Those with a positive slope were designated increasers; those with zero or a negative slope were non-increasers. Twenty seven (25%) of the rapists were designated as increasers and 81 (75%) non-increasers. Significant results were found for several factors; increasers conveyed more personal information about themselves to the victim, tended to make more excuses, expressed more hostility in general and toward women in particular. They used more blunt force (at the time of the first rape), inflicted more injuries on the victim and used more force than necessary to complete the rape. These offences were also perpetrated for longer, involved more planning, exhibited behaviour in ways that appeared to be designed to humiliate the victim and demonstrated a preference for penetration with a foreign object. These differences were apparent at the time of the first rape, suggesting that these differences in behaviour or motivation actually preceded the escalation of violence, which subsequently led to a rapist being designated an increaser. The actual proportion of increasers found in the Hazelwood, Reboussin, and Warren (1989) analysis and the Warren et al. (1999) are exactly the same, that is, 25%. This finding was seen as remarkable given the earlier study was made up of 41 unique serial offenders responsible for 10 or more rapes, and the latter study, 108 more generic serial rapists responsible for between two to seventeen rapes. Warren et al. wrote, "These findings suggest that there is no consistent escalation in the amount of physical force used by the majority of serial rapists... increasers rape more victims and generally tend to have a less extensive criminal history ... increasers are not

generic criminals per se, but offenders who are particularly interested in various forms of sexual violence. In contrast, the non-increasers appear to be more diversified and manifest their sexual offending in the context of the full spectrum of criminal offending" (1999, p.55). Clearly, this study has reviewed the behaviour within a series and a possible criticism is it has not considered the offender actually progresses to more serious offences.

One study that did examine the escalation over a series was Stermac and Hall (1989). They reviewed the criminal histories of 50 sexual offenders admitted to a psychiatric institute and rated their criminal history. They classified 32% as escalators, 32% as non-escalators and 36% were first time offenders. Escalators were significantly younger than non-escalators (24.81 years versus 31.31). Escalators had fewer previous convictions than non-escalators and had more frequent histories of exhibiting (exposure) or obscene phone calls. Stermac and Hall (1989) concluded that sexual offenders who escalated in the seriousness of their crime were younger men and more likely to have histories of psychiatric treatment. They described that sexual offenders who had escalated in the seriousness of their offences had previously committed 'hands off' offences such as exhibiting and obscene telephone calling which draws into question the role of exhibitionism in the criminal career. In terms of the progression from lesser sexual offences, little research has actually reviewed the progression from one offence to another.

A further study that investigated the progression to the most serious offence of murder was Francis and Soothill (2000). They reviewed 7442 offenders convicted with a sexual offence in the UK and reported that approximately one in 400 of those convicted of a sexual offence were convicted of a murder in a 21 year follow up. This represented an increased risk of over sevenfold against males in the general population. Those convicted of child sex offences were no more likely than other sex offenders to murder. Child sex offenders were more likely to kill an adult stranger and general sex offenders were more likely to kill in a domestic situation. Other research has supported links between previous criminal convictions and future offending; Davies, Wittebrood, and Jackson (1998) found stranger rapists were likely to have conviction for theft related offences. The links between previous criminal convictions

of a sexual or general nature has been debated in a wider context questioning whether sexual offenders are generalists of specialists.

*Sexual Criminal Careers: Generalists or Specialists?*

Whilst the majority of criminologists have considered offending in a general sense, few have specifically examined sexual criminal careers. Soothill, Francis, Sanderson and Ackerley (2000) write that the "consideration of the similarities and differences in the criminal histories of persons committing very different kinds of sex offences has been curiously neglected" (p.57). The general notion of how sex offending fits into the criminal career research is presented by Simon (1997) who wrote that "offenders who commit sex crime are .... treated as specialists by the legal and mental health system (1997, p.41); he continues, "Many studies unwittingly find that offenders who commit sex crimes are not specialists" (1997, p.43). Farrington explains that there is little evidence that offenders specialise in general offending; however, Farrington, Snyder and Finnegan (1988) found that sex offenders were the most specialised. Soothill et al. (2000) propose a contrary view to Simon (1997) when they presented a 32 year criminological study of whether offenders are specialists, generalists or both. They explain that reconviction rates for sex offenders are low and present a danger of highlighting sex offenders as a distinct group from the offending population. They describe that criminological studies often ask whether people are specialise or are versatile but they note that it is possible to be both. Their studies concentrate on the profiles of offenders committing four offences: indecent assault on a female, indecent assault on a male, indecency between males and unlawful sexual intercourse with a girl under 16 (USI). It reviewed those convicted in 1973 of those offences and reviewed their subsequent criminal career. The study reported those convicted with indecent assault on a female had a significantly higher proportion of convictions for violence while those convicted of indecency between males had a significantly lower proportion of violence offences. They reported that, of those convicted of indecent assault on a female, 24% were reconvicted with a sexual offence; for indecent assault on a male it was 41%, indecency between males, 22% and USI was 19%. When breaking down those offenders who did re-offend with a sexual offence they write, "The outcome is remarkably clear cut; the members of each group are, when they are convicted of another sex offence, most likely to be convicted of the same kind of sex

offence as the target offence ... This consistent pattern for each group produces the general sense that sex offenders are fairly 'specialised' within the range of sex offending categories" (2000, p.62). They also highlight the offence of indecent assault on males as containing the most serious sexual predators with a greater rate of committing all sexual offences. The paper concludes with four findings in terms of sexual offenders' criminal careers – criminality, heterogeneity, dangerousness and specialisation which will now be briefly described. For criminality, it was found sex offenders differ in their likelihood of being convicted on another occasion with a wide range of reconvictions. For heterogeneity, sex offenders differ in terms of general offending behaviour; heterosexual offenders tend to be convicted for violence against the person and property crime but a lower proportion commits sexual offences. Homosexual offences were reported with a higher likelihood of conviction of similar sex offences and less other crime. Dangerousness – a significant minority of offenders are convicted for another dangerous offence against the person (sexual or violence) and those convicted of indecent assault on a male are much more likely to be involved with other sexual offences. Specialisation – sex offenders are much more specialised in their sexual offending than originally thought. They are likely to be convicted of the same sexual offence as their index offence. They state the indecent assault on a male group contains a sub-group of sexual predators who "care little about the gender or age of their victim and display a wider variety of sexual offending behaviour than most" (2000 p.65). They conclude that sexual offenders may be specialists; they may be generalists or both.

In summary, the criminological perspective on criminal careers can be combined into four pathways of offending which will be tested within this thesis: first, the de-escalator, an offender who commits less serious offences over time; second, the maintainer, an offender who commits the same offence repeatedly over time; third, the oscillator, an offender who moves between serious and lesser offences over time and finally, the escalator, an offender who commits progressively more serious offences over time. Whilst the criminological theories provide considerable insight into offending they have been criticised for lack of insight to the internal thought processes of the offender, especially in term of what creates the psychological onset of sexual offending. Considerable research has addressed the internal processes of offending within the psychological theories of offending.

*Psychological Theories of Sexual Offending*

Recent evaluations of why sexual offenders commit the offences have provided a number of causes that may explain offending (Ward & Beech, 2006). Theories and classifications have evolved and provided interpretation frameworks for understanding, treatment and investigation. However, although it may be disputed, some authors suggest, "No one theory is capable of explaining the etiology of deviant sexual behaviour for such a heterogeneous group of individuals" (Terry, 2005, p.37). Theories have drawn clear divisions between 'types' of offenders, for example, those whose victims are children versus those whose victims are adults are typically divided into different groups. Ward and Beech (2006) provide a comprehensive review of the theories of sexual offending. They describe three levels of theory ranging from level one which is the comprehensive theories of offending, to level two which concentrates on single factor of sexual offending to level three which refers to the process of offending. The main level one and two theories will now be presented in terms of offending against children, the same theories for offending against adults will then be presented and finally the universal level three theory.

*Psychological Theories of Offenders Against Children – Onset*

One theory that specifically deals with the concept of onset of offending is proposed by Marshall and Barbaree (1990) and Marshall and Marshall (2000). They present an integrated theory of sexual offending whereby significant emphasis is put on the development of the adolescent. One of the critical developmental tasks for adolescent males is to differentiate between sexual and aggressive impulses. They propose becoming capable of controlling aggressive tendencies during sexual experiences is an extremely important developmental factor. Those individuals who are insecurely attached may have more difficultly achieving this task as they may have low self-esteem, inadequate interpersonal skills and poor coping styles. They argue that basic skills needed for the transition from childhood to adulthood can be adversely affected if the child is neglected or abused. The result of this negative experience manifests in the child viewing parents and significant others as emotionally unavailable and thus loneliness is more likely to manifest. This loneliness contributes to them having difficulty in social interactions. The transition of puberty is a critical period as adverse

experiences in early youth then pose difficulties in maintenance and formation of relationships. As the individual has to deal with the sexual urges and feelings associated with that time of development, those who have poorer self-regulation and interpersonal skills are more likely to be troubled by these changes. This can mean they meet their emotional and sexual needs in socially unacceptable manners. This intimacy deficit then manifests, due to rejection or similar emotions, into deviant sexual fantasies that may be reinforced with masturbation. This mindset will also provide a fertile ground for cultural messages of negative affect towards women which will further reinforce behaviour associated with sexual violence. With this perspective on the world in place Marshall and Barbaree (1990) describe, with the assistance of situational disinhibitors such as poor emotional states or substance abuse, offending can occur. This is predicated on an available victim and the required opportunity, the offending takes place. They describe this as the onset of offending and explain that the offending behaviour continues because of the positive and negative reinforcement of the sexual abuse.

Ward, Polaschek and Beech (2005) reviewed this theory and comment on its outstanding achievement but raise some criticisms. They highlight that the theory does not account for development of adult offending and recent research has illustrated that only a small number of sex offenders have problems with self-regulation (Proulx, Perreault, & Ouimet, 1999). Ward et al. (2005) also highlight that the theory needs elaborating to explain how psychological characteristics such as hostility and distrust are expressed sexually, specifically in terms of the underpinnings of their theory. Finally, Ward et al. (2005) highlight the notion of 'fused' sex and aggression is ambiguous to interpretation. In terms of onset theories there is agreement between intimacy deficit theories (Marshall & Marshall, 2000) and process theories (Finklehor, 1984, Sullivan & Beech, 2003) that fantasy and conditioning contribute to the commencement of offending.

*Process Theories of Onset and Maintenance*

Most cognitive process theories of child sexual offending began from the work of Finklehor (1984) with his proposal of a four factor model of child abuse and the four preconditions that need to be satisfied in order to abuse a child. He began by drawing

on several theories of the time and proposed that there were "four components that contribute, in different degrees and forms, to the making of a child molester ... these factors are 'emotional congruence,' 'sexual arousal,' 'blockage' and 'disinhibition'" (1984, p.37). The first three components help to explain why an offender develops a sexual interest in children, the last factor explain the transition to actual behaviour. The concept of emotional congruence "conveys the idea of a 'fit' between the adult's emotional needs and the child characteristics" (1984, p.38). He describes what are essentially psychologically vulnerabilities which need to be satisfied, and suggests that relationships with children achieve this goal. A need for a sexual arousal to children is relatively simply conveyed as a physiological response to a child. He describes the possible origins of these behaviours as primarily based in a social learning theory approach where the child has had maladaptive experiences. The blockage factor essentially explains why individuals are blocked from having their needs met in adult relationships. He draws the blockages concepts into two distinct groups - the first refers to developmental blockages, which includes theories such as oedipal conflicts, where the offender is seen as being prevented from moving into the final stage of sexual development. The second refers more to incest relation theory where normal sexual outlets are blocked due to the loss of a relationship or some other transitory crisis. The final factor of disinhibition relates to why child molesters do not adhere to convention inhibitions against child sexual abuse. He draws on individual psychological factors such as poor impulse control and more sociological concepts resulting to social and cultural factors. His model of offending draws on the four factors and presents four preconditions that, if all of them are satisfied, will lead to child sexual abuse.

The four preconditions are: motivation to sexually abuse, overcoming internal inhibitors, overcoming external inhibitors and, finally, overcoming the resistance of the child. The motivation to sexually offend requires the offender having some need to sexually abuse a child. He suggests that the three sources to motivation are the first three factors as described earlier – emotional congruence, sexual arousal and blockage. The second precondition requires the sexual offender to overcome internal inhibitors, this is essentially the fourth factor disinhibition and this is the "reason why the motivation is unleashed" (Finklehor, 1984, p.57). He gives examples of individual explanations for overcoming internal inhibitors such as alcohol, psychosis and

senility. He also gives social explanations such as social toleration of sexual interests in children and weak criminal sanctions against offenders. The third pre-condition is overcoming external inhibitors: this refers to the environment outside the offender and the child. He explains that family members, neighbours and peers exert a restraint of the actions of the offender. The final precondition to overcome is the resistance of the child. Children play an important role as to whether they are abused or not and their capacity to resist or avoid is very real. He describes various factors that assist the offender to overcome the resistance of the child including the child feeling emotionally insecure, lacking family affection and naivety. When the four conditions are fulfilled then abuse can occur. He posits that this theory is sufficiently general for there to be no distinction between intra and extra-familial abuse. The strengths and weaknesses of this theory were reviewed in Ward et al. (2005). They identified that it has a number of virtues as it provides a useful framework for assessment and describes problems evident in these individuals. It outlines offenders' thoughts, feelings and behaviour interacting to create the desire to commit the offence and it provides justification for different treatment strategies. Ward et al. (2005) comment that the theory has "serious problems relating to its lack of internal coherence, explanatory depth and unifying power" (2005, p.26). They raise concerns about the theory drawing from different traditions which may result in a set of conflicting and mutually exclusive ideas. They highlight that the model lacks detail over how the motives emerge and develop over time. Other criticisms identified refer to an overlap between emotional congruence and blockage (for a full critique, refer to Ward et al., 2005). Later process theories have overcome some of these criticisms.

*Process Theories – Maintenance and Escalation*

One theory that has advanced the criticism of how to explain onset and development over time is Sullivan and Beech (2003). This theory gives an understanding of how offending is also maintained and escalated. The work of Finkelhor (1984) was one of the foundations of Sullivan and Beech (2003) as was the work of Wolf (1994) and Eldridge (1998). Sullivan and Beech (2003) have accounted for the development of offending and explaining the move from non-contact offending to contact offending. They see fantasy and masturbation playing a key role. Eldridge (1998) has proposed three cycles of offending (developing Wolf, 1984): the continuous, inhibited and short

circuit cycles. Each cycle goes through some of the stages identified: fantasy re-enforcement, fear of detection and guilt, illegal fantasies, masturbation/orgasm, target victim, fantasy rehearsal, grooming and then abuse. In the continuous cycle the sexual abuser will activate a new cycle each time with a new victim starting with fantasy reinforcement and working their way to abuse. The inhibited cycle sees the offender becoming blocked or inhibited and following an offence the offender may stop for a period of time. The offender will retreat to sexual fantasy-masturbation-orgasm cycle fuelled by child pornography eventually overcoming their inhibition and re-entering the cycle (see Chapter Eight). This is more likely to project a period of low tariff sex crime building to a serious sexual assault. This concept is one explanation for how escalation occurs. Furthermore, the short circuit cycle does not become inhibited following the commission of an offence but retuned to the fantasy stage of the cycle thus effectively bypassing earlier stages. In this case the likely target is a child known to the offender but this is not a requirement. For greater understanding Sullivan (2002) has developed the spiral of sexual abuse, which is effectively the cycles of abuse continuing in a spiral. This conceptual framework lends itself to illustrating how abuse maintains or escalates. The spiral illustrates a process for the offenders, moving through motivation, into illegal fantasy to follow a path overcoming obstacles of guilt and fear encompassing cognitive distortions to offence preparation that ends in the sexual offending. He notes, "The spiral can be used effectively in illustrating the evolution of most forms of sexually abusive behaviour, from the opportunistic stranger attack to the intricately planned inter-familial abuse" (2002, p.20). He explains that the spiral allows explanation for different types of offending such as the indecent exposer who graduates to 'hands on' sexual offending. While process theories explain the cognitive processes and some of the environmental factors, typologies also refine some of the offenders who may escalate.

*Typologies of Offending and Escalation*

Early typology classifications were generally proposed by clinicians who were interpreting and explaining what they saw in a therapeutic environment. Several different subtypes were proposed (e.g., Cohen, Seghorn & Calmas, 1969; Fitch, 1962; Gebhard & Gagnon, 1964; Groth & Birnbaum, 1979; Kopp, 1962; McCaghy, 1967; and Swanson, 1971). One of the earliest theories that dealt with escalation is Cohen et

al. (1969). They described three types of paedophilia: fixated, regressed and aggressive. The fixated type has difficultly with the adult world and has a preference for children as both general and sexual companions. Their offences are typified by minimal force and more likely to be non-penetrative acts such as fondling and sucking. The offender is described as the least dangerous but most likely to be recidivistic. The regressed type's primary aim is sex; however, this offender is typically more accomplished within the social world. They are likely to have established adult relationships and be adequately achieving in life. The regression into offending where they revert to inappropriate behaviour is likely to be triggered by stress where the offender's adequacy or competence is questioned. Recidivism is therefore linked to the stress management and not the relationship concept found within the fixated type. This typology could therefore explain why offenders maintain their offending or escalate. The next type described is the aggressive type, the difference with this type and the others to so far being that the primary aim is the aggression rather than the sex. This is typified by poor adult adaptation in both sexual and non-sexual life. The fuse of the aggressive and sexual components means this offender is considered quite dangerous. This typology may explain escalation in terms of blunt trauma as proposed by Warren et al. (1999). The fourth type is the exploitative type. This form of exploitation of the child identifies and uses inherent weaknesses of a child for gratification of sexual needs. Genital sex is common but the aggression used is instrumental rather than primary. This type is typified by a narcissist with no regard for the well being of the child.

The notion of exploiting the child's weaknesses is evident in many typologies such as Groth, Burgess, Holmstrom, and Sgroi (1978) and their concept of sex-pressure. They distinguished two fixated or regressed patterns of offending and three motivations of sex-force, sex-pressure and incest. The sex-pressure cares for the child in some way and uses methods of enticement to gain compliance; if the child actively refuses they may desist. In terms of the criminological literature, this theory offers an explanation for why desistence may occur. Continuing their model, the sex force type has two subtypes – the exploitative and the sadistic. The exploitative is characterised by using force or threats to overcome resistance and has little interest in the child's welfare. The sadist is manifested in aggressive acts where the aggression has become eroticised and therefore likely to exhibit cruelty, degradation, and rage. These

categories were later refined into child molester and child rapists whereby the child molesters were either fixated or regressed and the child rapists were typed by anger, power or sadism. Groth et al.'s (1987) notions of anger, power and sadism will be discussed later when outlining adult rape offending. More recent works have seen the early classifications and themes being reviewed and bringing forward earlier concepts. Indeed, in terms of child molesters, Prentky and Burgess (2000) identified three common subtypes of child molesters; they were described as the fixated type, regressed type and exploitative type. The fixated type has an exclusive and longstanding sexual and social preference for children; the regressed type offences represent a regression from an adult level of psychosocial adaptation in response to stress; the exploitative (or sociopath) child molester has very poor social skills and turns to children as they are easy prey. The approach of Prentky and Burgess developed out of the research by Prentky and Knight in the 1980s where they conducted empirical research at the Massachusetts Treatment Centre (MTC) to enhance their theoretical framework.

Prentky, Knight, Rosenburg, and Lee (1989) provided the MTC classification system for child molesters distinguishing offenders on a number of factors. They proposed two axes: the first is the degree of sexual preoccupation (fixation) with children and the second is the social competence of the offender. They are both graded as low and high providing four combinations. They defined high level of fixation as meeting any of three criteria; in essence those three criteria are: 1) three or more sexual contacts with children and the time between the first and last contact is greater than six months; 2) evidence of an enduring relationship with a child; and 3) the offender has initiated contact with children on numerous occasions throughout their life. Lower fixation effectively referred to all offending being within six months (for a full review, see Prentky et al., 1989). This classification, by its very nature, describes serial offenders due to the number of sexual contacts with children. From the pathways perspective, this model concentrates on maintenance and escalation. The classification continues that in order to be deemed high in social competence, an offender needed to meet one of five criteria: 1) had a job lasting three years or more; 2) had a sexual relationship with an adult for a year or more; 3) had significant parenting responsibility for a child for three years or more; 4) had been an active member of an adult-orientated organisation for one year or more; 5) had friendship

with an adult (not relationship) lasting over a year. The second axis refers to the amount of contact the offender has with a child. In summary, high contact is deemed to be where the offender has both sexual and non-sexual relations with children and is in a position where access to children is possible through work or social activity. As a result, six types of offender are identified: those in the high contact group are differentiated by way of interpersonal contact or narcissistic contact; those with low contact are first differentiated in terms of physical injury caused and then into high and low sadism creating six subtypes.

In summary, the theories and perspectives of child sexual offending have been presented. The work of Marshall and Marshall (2000) gives an understanding of the onset and maintenance of offending behaviour. The earlier process theories describe onset and maintenance as a primarily cognitive concept and later process theories expand to include the maintenance and escalation of offending behaviour. The psychological typologies then specifically link into escalation with different types exhibiting more severe aggressive behaviour. Whilst there are similarities between those who offend against children and those who offend against adults (and sometimes cross over), these two groups have been theorised separately. As this thesis includes those who offend against both victim types, the pathways of offending against adults will now be presented.

*Psychological Theories of Offenders Against Adults – Onset and Escalation*

The literature on motivation to offend against children presents intimacy deficits as a key theme; this notion is also seen with the theories of offending against adults. However, there is also a theme of sexual offending as demonstrating hostility against women. As with the classifications of child sex offenders, Cohen et al. (1969) proposed classifications to describe four types of rapist; these concentrated on the degrees of aggression in the offence. The four types of rapist they propose are the compensatory, displaced aggression, sex-aggression-diffusion, and impulse. The compensatory rapist uses aggression to gain compliance and is highly aroused by the rape – this offender is preoccupied with rape fantasy. It is proposed that the rape compensates for feelings of inadequacy. This is similar to the concepts of intimacy deficit raised by Marshall and Barbaree (1990). The displaced aggression rapist uses

rape as an expression of anger with a view to humiliation and degradation. It is hypothesised the offender acts on impulse as the result of a preceding significant event with a woman in his life. Thus, the displacement is away from the relationship he maintains to another exterior victim. The sex-aggression-diffusion type is a sadist, this is the combining of sexual arousal and anger, and either sexual arousal or aggression will increase co-dependently with the other. The final typology is the impulse rapist, being more of a generalist where the rape is fuelled by a wide ranging pattern of anti-social behaviour and neither aggressive nor sexual elements are central. Contrasting the concept that sex and aggression fuel the offence, Groth, Burgess and Holmstrom (1977) argue rape is a pseudo-sexual act emphasising motives of anger and power. They identified three components present in all forcible rape: power, anger, and sexuality. They divide the offences into these motivations and comment on each. The power rape sees the offender "seek power and control over his victim though intimidation by means of a weapon, physical force, or threat of bodily harm ... [He] shows little skill in negotiating interpersonal relationships and feels inadequate in both sexual and nonsexual areas of his life" (Groth et al., 1977, p.1240). The power rape is divided into two types of offender: the power reassurance rapist and the power assertive rapist. The power reassurance rapist uses the rape to alleviate feelings of sexual inadequacy and verify his masculinity. The power assertive rape is an expression of dominance satisfying more generic feelings of inadequacy and effectiveness. The anger rape aims to "vent his rage on his victim and to retaliate for perceived wrongs or rejection he has suffered at the hands of women. Sex becomes a weapon, and rape is the means by which he can use this weapon to hurt and degrade his victim" (Groth et al. 1977, p.1241). Once again the anger rapist is divided into two categories: the anger retaliation rapist and the anger excitation rapist. The anger relation rapist uses the rape to express rage towards women with degradation and humiliation featuring as key. The anger excitation rapist is a sadist who obtains gratification by the infliction of physical or mental pain on the victim.

These classifications give a framework in which behaviour can be interpreted. As with child sex offenders, practitioners have then taken these classifications and tested them empirically. The MTC Classification system for rapists described by Prentky and Burgess (2000) with reference to Prentky and Knight (1990) is a motivation driven system relying on four presumptive motivations to rape: opportunity, pervasive

anger, sexual gratification and vindictiveness. Within these motivations are sub types dependent on certain criteria. Reviewing each in turn, the opportunist motivation is "hypothesized to be impulsive exploitation. That is, the offences are typically unplanned predatory acts, driven more by situational and immediately antecedent factors than by any obvious protracted or stylized sexual fantasy" (Prentky & Burgess, 2000, p.63). These offenders are divided into two classifications, those of high and low social competence. They are unlikely to include gratuitous sexual violence and may hold macho attitudes. Increased physical force is most probable if the victim offers resistance. This is particularly relevant to the theories of escalation presented earlier; conceptually the victim can have an influence on the amount of blunt trauma used against them. Continuing the typologies, the pervasively angry motivation is hypothesised to be undifferentiated anger with little demarcation as to their targets which may be either sex. They are gratuitous in their violence and there is no evidence of pre-existing rape fantasies. In summary, these are angry opportunistic men. The sexual gratification motivation is defined with a preoccupation to meet sexual needs and is accompanied by highly intrusive rape fantasies. In this motivation it is more common for other outlets (sex clubs, massage parlours) to be used and deviant sexual behaviour such as voyeurism, exhibitionism and fetishism to be evident. This is particularly relevant to the oscillating pathway proposed earlier in the chapter. If the offender is committing acts of exhibitionism and then more serious offences, this manifests as oscillations. Depending on where the offences are discovered, this could also present as escalation. Prentky and Burgess (2000) note these offenders are well planned and more like to possess assault related paraphernalia. Within this group two major sub groups emerge: sadists and non-sadists. Sadists are divided into "overt sadistic ... aggression is manifested directly in physically injurious behaviour in their sexual acts. For the muted sadistic type, the aggression is expressed either symbolically or through covert fantasy that is not acted out behaviourally" (Prentky & Burgess, 2000, p.63). The non-sadistic type will only use the required level of force and is more likely to flee if confronted. This could give some explanation to offender desistence from a criminological perspective. With this type there is not a fusion of aggression and sexual urges as with other types. The final motive is defined as vindictive, the cynosure being anger at women. Their offences are gratuitous in violence, with humiliation and degradation a key feature. While these theories explain the motivations underlying rape, how useful they are can be

questioned in the investigative arena. Two main methods of interpretation have been provided to advance the study of rape from a police investigators perspective: the criminal profiling approach of the FBI and the thematic approach in the UK. Each will now be briefly described.

*The Federal Bureau of Investigation (FBI) Classification System*

The FBI's National Centre for the Analysis of Violent Crime has developed their own classification system of rapists for use within investigations. Agents such as Hazelwood (1987) have proposed different classification systems and provide insight into sexual offenders. Several distinctions are drawn between sexual offenders. Hazelwood and Burgess (2001) provide a comprehensive explanation of their input to rape investigations. They comment on the division of offenders into impulsive and ritualistic, the selfish aspects of the offence, and typologies for criminal investigation. Each of these will now be outlined. Hazelwood and Warren write, "The impulsive offender is described as being criminally unsophisticated, and largely reactive in terms of his victim selection and crime-scene behaviour. It is observed that this type of offender is often characterized by a diverse criminal history, rather generic sexual interests, and significant levels of physical violence. The ritualistic offender, in contrast, is characterized by diverse paraphilic interests, a pervasive and defining fantasy life, and a carefully developed and executed set of crime-scene behaviours" (2000, p.267). The nature of offending is further explained by Hazelwood (1987, 2001), dividing behaviour into pseudo-unselfish and selfish behaviour. The pseudo-unselfish offender indicates a belief that the offender will win the victim over with comfort and welfare and she will come to believe the offender is not a bad person. This is typified by attempting to involve the victim in the assault both physically and verbally. This offender is likely to reassure, be complimentary, self-demeaning, ego-building and disclose personal information. He is likely to bring a fantasy of a willing partner to the offence and may engage in criminal foreplay such as kissing and fondling. In terms of criminal careers, this is particularly relevant as the preceding acts of kissing etc. are lower tariff offences under the Sexual Offences Act (2003). Therefore for some offenders lesser offences may be composite within the main offences and where this main offence is not committed for any reason this may still be committed.

The selfish rapist is characterised by verbally and sexually selfish behaviour along with physically abuse. The offender has no concern for the victim's comfort, welfare or feelings, (Hazelwood, 2001). This offence is offensive, abusive, threatening and likely to be evidenced with humiliating and demanding sexually orientated behaviour. Hazelwood develops categories proposed by Groth et al. (1977) into four rapists' styles: power reassurance, power assertive, anger retaliatory and anger excitation. Groth et al. (1977) also comment on the opportunistic rapists. The power re-assurance rapist is driven by the relational component of the attack and is proving his power over women with forced sexual activity. He is pseudo-unselfish and if an offence fails he will attack again to satisfy himself. The power assertive rapist is low to moderate impulsivity and is expressing his virility and dominance over women – the victim is an object for his gratification. He is selfish and uses low levels of force. The anger retaliatory rapist is violent and wishes to punish and degrade. This offender is selfish and motivated by anger more likely to be an emotional outburst and symbolic of women in his life. The anger excitation rapist is a sadist with high use of fantasy. This offender is stimulated by the victim's response to pain and is methodical. This offender may assault men as well as women, he is selfish and paraphilic behaviours such as voyeurism, bondage, sadism and fetishism are to be expected. The opportunist rapist tends to commit the rape during the commission of another offence, for example, robbery or burglary. The primary motive is sexual as this is an impulsive extra added onto top of the initial crime. This classification is relevant to the criminal career research in terms of suggesting offenders will have convictions for more general offending. These investigative tools put the early classifications, such as Groth et al. (1977) into a investigative arena; however, they have been criticised for lacking scientific rigour (Wilson, Goodwill, & Alison, 2006) and when tested have not provided the dichotomies they rely on (Canter, Alison, Alison, & Wentink, 2004). More recently in the United Kingdom (UK), the analysis of the offenders' behaviours for investigatory purposes has provided different methods of exploring offenders' behaviour.

*The Investigative Psychological Approach to Child and Adult Offenders*

Thus, in the UK, investigative approaches have used the thematic approach to interpret and inform crime investigation. Thematic behavioural analysis involves the

examination and classification of offence behaviour into broad psychological themes to assist with predictions of general information about the background of an offender (Alison, Bennell, Mokros, & Ormerod, 2002). Early studies using this approach such as Canter and Heritage (1990) conducted multivariate analysis of 33 variables for 66 offences committed by 27 offenders. They reported the existence of behavioural themes within core behaviours in rape of: intimacy, sexuality, violence, impersonal and criminality. The intimacy region was typified by the offender trying to establish intimacy with the victim; compliments and verbal participation were examples of behaviours in this region. The sexuality region included the sexual behaviours. The violence region included insulting the victim and physical abuse. The impersonal region was characterised by objectification of the victim and acts such as tearing of clothing. The final criminality region included more criminal behaviour such as stealing or blindfolding. More recent studies such as Canter, Bennell, Alison, and Reddy (2003) use the same techniques and investigated a scale of differing levels of violation of the victim by the offender. They reported a scale of violation of the victim ranging from personal, through to physical and finally sexual. Within these levels they identified themes of: hostile, controlling, stealing and involving. A further study by Canter, Hughes, and Kirby (1998) also used multi-dimensional scaling and investigated 97 paedophiles with the aim of establishing whether sex offending against children is a pathology (deviant and stable sexual disposition) or a form of criminality (an anti-social exploitative style of interaction). They were able to show the presence of three themes within the offending: criminal-opportunist, aggressive and intimate. They concluded child sex offending exists as both pathology and a form of criminality. They noted that "the aggressive child sex offences are likely to have been committed by offenders with an aggressive interpersonal style, criminal-opportunist offences by offenders with an established criminal history, and intimate offences by offenders whom conventional adult relationships are problematic" (1998, p.551). This thematic approach, as with other approaches helps to inform the investigator; however, this too has had the underlying assumptions questioned. Alison, Bennell, Mokros, and Ormerod (2003) question the homology assumption that similar types of offender will commit offences in similar ways. They cited Mokros and Alison's (2002) study where increased similarity in offence characteristics did not correlate with an increase in the offenders' age, criminal record or socio-demographic

features. It is generally accepted that the investigative approach provides insight into the offender from their behaviour in the offence.

In summary, the classifications and theories for both sex offenders against children and adults have been described. There is little doubt that motivation influences behaviour and a multitude of factors contribute to the offending behaviour. The theories of offending against children and adults also have aspects of similarity, particularly in terms of themes of aggression and anger. The role of fantasy and emphasis on cognitive processes is also a theme; however, this appears more grounded in child sexual offender theories. More recent reviews have considered a more holistic approach to offending providing a framework for interpreting sexual offending per se.

*The Integrated Theory of Sexual Offending*

Ward and Beech (2006) have developed their integrated theory of sexual offending (ITSO). They draw on a variety of modern theories and note there are a number of types of causes plausibly linked with sexual crimes; they include genetic predispositions, adverse developmental experiences, psychological dispositions/trait factors and social and cultural structures and processes. Their main criticism of theories to date is that the generally fail to see the causal mechanism that results in sexual offending. They describe three levels of theory ranging from level one which is the comprehensive theory of offending, to level two which concentrates on single factor of sexual offending to level three which refers to the process of offending. They explain that a good theory of sexual offending needs to achieve all three levels described. They propose that "there are three sets of factors which interact continuously, these are: *biological* factors (influenced by genetic inheritance and brain development), *ecological* niche factors, i.e., social, cultural, and personal circumstances, and *neuropsychological* factors ... sexual offending occurs through the ongoing confluence of *distal* and *proximal* factors that interact in a dynamic way" (2006, p50). They argue that genes, social learning, and neuropsychological systems interact generating clinical problems evident in offenders, such as deviant arousal, offence related thoughts and fantasies, negative/positive emotional states, and social difficulties. These state factors lead to sexually abusive actions and the consequences

of sexually abusive behaviour then functions to maintain a positive feedback loop that entrenches the offender's vulnerabilities through their impact on the environment, and psychological functioning. In short, "The consequences of sexual offending will function to maintain and/or escalate further sexually deviant actions" (2000, p.50). Ward and Beech (2006) then explain each of the contributing factors in relation to maintenance and escalation. They write that it is ecological variables which contribute to shaping neuropsychological systems generating human behaviour and in certain situations these variables function to trigger the offending behaviour. The theory explains maintenance and escalation by virtue of its impact on the ecology of the offender and on their psychological functioning. Child abuse may result in the offender becoming more socially isolated and lessen the chance of them forming legitimate appropriate relations. If such a scenario arises and the offender has a problem with their mood then the abuse may be a way of regulating problematic emotional states. Thus, the consequences of the offender's actions can worsen, depending on the circumstances, therefore maintaining or escalating the offending. Alternatively cultural factors interacting with biological and an individual's learning may create supporting or discouraging ecologies. In summary, from Ward and Beech's (2006) perspective, all theories of sex offending need to consider the levels of a theory to offer a complete representation. This theory of sexual offending provides a composite explanation for sexual offending. In order to understand serial offenders and how they evolve over time will now be reviewed.

This chapter has described the criminal careers of sexual offenders in terms of escalation, de-escalation, oscillation and maintenance. It has drawn on the theories of sexual offending that explain the onset of behaviour and the current understanding of how and why criminal careers evolve for sexual offenders. The next chapter will begin to test some of those theories and will describe 154 offenders and their descriptive factors. Furthermore, it will compare current documented risk factors from the literature with the findings from a UK data set from the Serious Crime Analysis Section.

# Chapter 3

# Examining Serial Sexual Offenders

This chapter is the first of two connected chapters that will present 154 serial offenders from a UK data set. This chapter has two purposes; the first is to act as a review with a similar approach to Carter and Hollin (2010) and the second to follow the principles described in Beek, Eshof, and Mali (2010) by investigating factors that are available to the police. In their review, Carter and Hollin (2010) systematically presented the literature for non-serial homicide offenders considering factors that have been reported about offenders, for example, age, childhood, relationships, drug use, psychopathy and method of offence. This chapter will take that principle but focus on factors which are available to the police that can be used to create 'knowledge rules' and therefore assist in investigations (as with Beek et al., 2010). The concept of knowledge rules is providing information that can be used by investigators and profilers in profiling equations (Canter & Youngs, 2009). This suggests that by examining relationships between single crime scene variables and offender characteristics, useful information can be gleaned (Eshof & Nierop, 2007; Jackson, Eshof, & Kleuver, 1997). However, as Beek et al. (2010) accept, this does not provide a classification model but aims to provide a pragmatic method that can be used to prioritise lines of enquiry in an investigation. Therefore, this chapter will conclude by considering the findings in terms of sexual offending theories.

*Offenders, Victims and the Offences*

In order to conduct the review, this chapter will outline the main factors for serial sexual offenders in terms of what is known about the offender, the victim and the interaction between the two. This chapter presents the literature specific to the offender, for example, age, ethnicity and relationship status. It will then review the features specific to the victim and finally the interaction in the assault itself with regards to behaviour and violence. Where possible, factors that are reported on VICLAS (the Violent Crime Linkage Analysis System used by the police service; see

method Section and Beek et. al, 2010) will be described to allow maximum comparison for practitioners.

*Series*

The number of offences in a series tends to be relatively low, for example Beek et al. (2010) found each series consisted on average of three rapes. They noted serial offenders did not significantly differ from the 'one-off' rapists in the selected offender characteristics.

*Offenders' Age*

Recent research has questioned how clear the position is on the onset and ages of offending (Blonigen, 2010). The age at which offenders are recorded to commit sexual offences appears to vary dependent on crime type and situation. Offenders at the beginning of their sexual offending career tend to be younger whereas more serious stranger or multiple offence offenders tend to be slightly older. Victim based data such as Myhill and Allen (2002) state in their analysis of the British Crime Survey, 70% of offenders committing rapes and 62% of offenders committing sexual assaults were between the ages of 20 and 39 years.  This is supported by similar research by Feist, Ashe, Lawrence, McPhee, and Wilson (2007) who found almost all (99%) rapes involving a victim aged between 16 and 25 years old were committed by suspects in the same age group or older. Offender focused studies, such as Soothill, Francis, Ackerley, and Fligelstone (2002) reported in their study of serious sexual assaults a mean age of 23.1 years for 1057 males under 45 years who were convicted for the first time between 1995 and 1997. Where studies have focused on aggravating factors such as stranger attacks or serial offending, the offenders are reported to be older. Indeed, Warren, Reboussin, Hazelwood, Gibbs, Trumbetta, and Cummings (1999) reported 57% of a total of 108 serial rapists to be over 26 years old and the remaining to be under 26. Considering stranger rapists, Goodwill and Alison (2007) reported a mean age of 27.94 years for 85 stranger rapists and approximately 50% of offenders were adults between 26-35 years old. Similarly, Beauregard, Rebocho, and Rossmo (2010) and Davies (1997) reported an average age of 27.5 years and 27 years

respectively for stranger rapists. For convicted serial rapists, Hazelwood and Warren (2001) reported an age range of 23 to 55 with a mean age of 35.2 years old.

From the previous chapter there is an argument that criminal careers progress linearly with some offenders escalating while other desist (Farrington, 1992). While stranger offences are rarer (Myhill & Allen, 2002) it appears these offenders are generally older. Furthermore, serial offenders seem to be older still. In terms of the initial consideration of escalation and criminal careers few measures have been proposed to measure escalation. Two measures that have been used are blunt force trauma and committing more serious offences. Therefore, in preparation for the next chapter, the relationship between age of offenders and the offence committed considering the level of injury and seriousness of offence will be explored.

*Offenders' Ethnicity*

Ethnicity is seldom reported and when it is reported the distinction seems to be drawn between black and white offenders. In a recent study of young offender sexual murderers Myers, Chan, Vo and Lazarou (2010) reported of 22 offenders, 13 were white (59%) and nine (41%) were black. Warren et al. (1999), in their study of serial rapists, reported 42 (49%) as white and 44 (51%) were described as black. In that study, being a white offender was a predicator of increasing violence. Finally, Stevens (1994) noted 56% of 61 incarcerated sexual offenders were black, 42% were white, and 2% were Hispanic.

*The Offence*

Sexual offending in the UK ranges from murder and rape, to crimes which are perceived as more minor such as indecent exposure. Riordan (1999) reported from a sample of 72 women, 48.6% had been victims of indecent exposure and of these 17.1% had been victims twice. Of that sample, 63.9% had a fear of a sexual attack. Scully (1990) in her study of convicted rapists reported 32% of rapists had also committed the offence of voyeurism, 25% were frotteurs, 14% had been involved in prostitution or pimping and less than 10% admitted to exhibitionism. Considering the nature of serial offending, such studies are rare. However, in a study of 41 convicted

serial rapists who had committed a minimum of 10 offences, Hazelwood and Warren (2001) reported prior sexual offending included: rape (37%), nuisance sexual offences (e.g., window peeping, obscene phone calls and exhibitionism) only 8%, and a combination of rape and nuisance sexual offences reported at 42%. With these numbers of sexual offences being committed, it is even more concerning that Myhill and Allen (2002) note that nearly one-fifth (18%) of sexual victimisations reported to the British Crime Survey (BCS) came to the attention of the police. The proportions of rapes and sexual assaults the police came to know about were quite similar, so according to this evidence, the police never come to know about approximately four-fifths of adult sexual victimisations. Interestingly, stranger attacks are far more likely to come to the attention of the police than attacks involving any other perpetrator. Myhill and Allen (2002) also noted that just over two fifths (41%) of women who reported sexual victimisation experienced multiple (two or more) incidents. The authors note that whether the perpetrator was the same person or different perpetrators could not be determined.

*Custodial Sentences and Previous Convictions*

Studies of sexual offenders have shown that the majority have a previous criminal history (Davies, Wittebrood, & Jackson, 1998; Eshof, Kleuver, Ho Tham, & Zwiers, 1995, cited in Frenken, Gijs, & Beek, 1996; Soothill, Francis, Ackerley, & Fligelstone, 2002). However, convictions for sexual offences are less common. Beek et al. (2010) reported 29% of offenders had previous sex crime convictions and in 26% of cases previous rape convictions. Early studies such as Scully (1990) described the typical rapist as not having a history of arrests for rape. Only 25% of rapists had been arrested for a sexual offence prior to the current convictions. Thirty-seven percent of rapists had been in prison previously and 13% of rapists had multiple convictions for rape. Some men volunteered information to Scully about other rapes they had committed where they had eluded prosecution or detection. Among those who admitted rape, 26 involved stranger rapes involving a lone assailant. Hazelwood and Warren (2001) noted the majority of rapists (58%) had been institutionalised either in correctional centres (46%) or mental facilities (12%). Few studies have looked at the effect of prison on behaviour characteristics exhibited during the sexual offence; one exception is Scott, Lambie, Henwood, and Lamb (2006). They

hypothesised stranger rapists who use minimal violence would be less likely to have assault convictions or prison experience than extremely violent stranger rapists. They found no correlation with violence convictions but did find prior prison experience was correlated. They concluded degrees of violence during a rape were not indicative of distinct criminal histories; this was seen as contradicting the findings from previous research by Davies et al. (1998). The role of prison justifies further examination as it is a checkable fact that can lead to detection. Whether this environment correlates with more serious offending and links to more criminal type behaviours for serial offenders will be explored in terms of level of injury, use of precautions and collection of victim property.

*Relationship Status and Living Status*

The living situation of an offender is an offender characteristic that can be useful when applied to directing a criminal investigation. This is mainly because the police normally have access to the details of occupants within addresses and therefore a potential line of enquiry that may lead to the detection of a crime (Beek et al., 2010). This is particularly relevant as certain UK laws (e.g., the Sexual Offenders Act, 2003) require offenders, when living in the community, to register their home address with the police. Furthermore, multi-agency management of offenders in the community (MAPPA) and multi-agency risk assessment conferences managing victims (MARAC) (MAPPA, 2009) will discuss who lives in an address and risk posed to them or by them. This information is recorded on police systems and can assist in the detection of crime. However, while there is considerable information available, Beek at al. (2010) conclude their study by stating that further exploration of correlations of crime scene characteristics with offenders' living situations would be of significant value to criminal investigations. In terms of what is already known about offender living status, there are mixed findings from research. Perhaps surprisingly, studies have found rapists are often married or in a relationship with a woman. Stevens (1994) noted 53% of the participants were single yet two-thirds of these had regular sexual relationships with females, while 32% of the others were married before their convictions. Hazelwood and Warren (2001) reported 29 (71%) of 41 respondents had been married at least once, 14 (34%) had been married more than once. Eshof and de Kleuver (2000) showed that cohabitation with a partner is reasonably equally divided.

They found that in a sample of stranger rapists, 43% were co-habiting with their wife or girlfriend (cited in Eshof & Nierop, 2007). In terms of studies that have attempted to understand the role of relationships, Kocsis (2006) reported a relationship between different criminal behaviour patterns and the likelihood of the offender being in a marital relationship. The most recent figures in a large sample were presented by Beek et al. (2010). They noted that, of 271 stranger rape offences, 26% were living alone, 28% were living with parents or caretakers, 28% were cohabiting with a partner (and their children), and 18% were living together with someone other than the above-mentioned groups.

*Lifestyle Characteristics*

Lifestyle characteristics are terms from VICLAS and tend to focus on mental illness and substance abuse (Beek et al., 2010). The full list of variables is presented in Table 3. In terms of studies that have reported issues such as mental illness, Beauregard, Rebocho, and Rossmo (2010) in their study of stranger rapes commented only 21.8% ($n = 17$) had a previous psychological and/or psychiatric problem. Myers, Chan, Vo, and Lazarou (2010) reported that when assessed with DSM–IV young offenders who had committed sexual murders evidenced substance use disorders (9/22; 41%) which were typically marijuana or alcohol abuse. Martin and Bachman (1998) found drinking by the perpetrator of a rape increased the likelihood of victim injury. Logically, more serious injury may then relate to substance misuse. Exploring the role of drugs and alcohol, Lovett and Horvath (2009) report alcohol was the most frequently consumed substance by victims and perpetrators and perpetrators tended to have consumed more alcohol in more cases. The role of alcohol in the offending is particularly relevant as it is suggested alcohol can be used to overcome internal inhibitors towards offending, (Finklehor, 1984). The role of substance misuse is unclear in offending, particularly serial offending; therefore whether there is a relationship to aggravating or personal factors will be investigated.

*Offender Relationship to the Victim*

Overall, women were more likely to be sexually victimised by a partner than by any other perpetrator. Myhill and Allen (2002) described 45% of rapes being committed

by current partners of the victims; of the remainder, 16% were by acquaintances, 11% by ex-partners, 11% by dates, 10% by other intimates and only 8% of rapes were committed by strangers. Relationship to the perpetrator has a major effect on whether or not the police come to know about an incident. Stranger attacks are far more likely to come to the attention of the police than attacks involving any other perpetrator (36% of reported cases are stranger). The least likely incidents to come to the attention of the police are those taking place in 'date' scenarios, (Myhill & Allen, 2002). Just over two fifths (41%) of women who reported sexual victimisation experienced multiple (two or more) incidents. Relationship to the perpetrator has an impact on the number of times women are sexually victimised. Repeat victimisation was higher for women who said their last incident involved a partner (62%), ex-partner (52%) or other intimate (48%). Women who were last victimised by a stranger were the least likely to report multiple victimisation (20%) (Myhill & Allen, 2002).

*Victims*

As highlighted in the previous Section some victims are selected as they are partners of the offender. For other offences, however, Scully (1990) provides an insight to the offender victim selection. She found 58% stated their original intent had been to rape and in most cases had a plan, looking for a specific victim. In American research, Holmes and Holmes (2002) report from Schwendinger and Schwendinger, (1983) that the majority of rape victims are young and those 16 to 24 years old being two to three times more likely to be raped than those in other groups. Most rape victims are white, but black females are disproportionately represented among victims in comparison with their numbers in the general population. Rape victims also tend to be single and from lower socio-economic class. Feist et al. (2007) reported 30% ($n$ = 139) of rape victims were unemployed and the next most likely victim type was school pupil (26%, $n$ = 124). Research across a range of sexual offenders has consistently demonstrated evidence of a negative linear correlation between the age of the victim and the age of the offender (Gebhard et al., 1965; Grubin & Kennedy, 1991; Harry, Pierson, & Kuznetsov, 1993; Kuznetsov, Pierson, & Harry, 1992) which will be explored in this chapter.

*Victim Age*

Victims of rape are generally young women (Feist et al., 2007). Myhill and Allen (2002) considered victim age and found young women aged 16 to 19 years are most likely to be victimised. Women aged 20 to 24 years old have an almost equally high risk of experiencing some form of sexual victimisation. With regard to rape, 16 to 19-year old women were over four times as likely to have reported being raped in the last year as women from any other age group. In terms of the actual victim age, Warren et al. (1999) stated a mean of 29.46 years with 49% aged between 0 and 16. Beauregard, Rebocho, and Rossmo (2010) found a similar mean age within stranger rapes with the average age of victims being 31.6 years. For the most serious offenders, Shackelford (2002) reported victims of rape–murder peaked in the age group twenty to twenty-four years and then generally decreased thereafter.

*Lifestyle Behaviours*

Women presently living in inner-city or urban areas were fractionally more likely to report an incident of sexual victimisation to the survey than women living in rural areas (Myhill & Allen, 2002). Beek et al. (2010) noted the crime scene characteristics 'the victim is a prostitute' and 'the crime scene is a public place' strongly and negatively correlated to the likelihood of the offender living within 3 km of the first encounter site. Considerable caution should be taken when any links are drawn between rape victims and prostitution as, of 854 women in prostitution in nine separate countries, 63% reported they had been raped since entering prostitution (Farley et al., 2003).

Other factors that relate to lifestyle behaviours are the use of drink or drugs. Lovett and Horvath (2009) report this links between alcohol, drugs and rape. Alcohol was the most frequently consumed by victims and perpetrators. Perpetrators tended to have consumed more alcohol in more cases. Instances of use of Rohypnol were less frequent than media portrayal, less than one third of cases.

Considerable time has been invested into the research of the type of approach used by the offender and how it can be interpreted both theoretically and practically. Hazelwood and Warren (2001) researched the type of approach used by assessing serial offenders looking at the first, middle and last rapes in a series. Three methods of approach by the offender were identified, the confidence (con) approach, the blitz approach and the surprise approach. The con approach was characterised by subterfuge and involves an open approach often requesting or offering some form of assistance or direction. The blitz approach is the use of immediate and direct application of injurious force. The surprise approach is manifested by the offender waiting for the victim or approaching whilst sleeping; in this approach threat or use of a weapon are often associated. For first rapes, the approach used was 54% surprise; 24% con; and 23% blitz. For the middle rapes: 56% surprise, 35% con, and 20% blitz. For the last rapes, 44% surprise, 41% con and 17% blitz. Interestingly, Hazelwood and Warren made little observation of the increasing over series of the con approach and decrease in the other approaches. In terms of how the con approach is used, Beek et al. (2010) reported the con approach also reduced the chance that the offender lived within three km. In a UK study, Davies (1997) looked at a sample of 210 convicted rapists and reported 48% of them used a confidence approach. She wrote that rapists using the confidence approach were approximately two and a half times more likely to be a one-off sexual offender. From this she wrote this suggested, "Serial rapists are more likely to use the surprise approach," (Davies, 1997, p. 201). The findings of Ullman and Knight (1991) whose finding that 67% of offenders were blitz style by sample of 147 offenders of which 84% were strangers. Perhaps the approach taken relates to the relationships an offender is in, as described earlier; where an offender exhibits displaced aggression against the victim, more could be learned from the offender's relationship status. There are also other situational factors that could be of use such as substance misuse. Therefore, this chapter will explore the relationship between the type of approach used in offending and situational factors such as living circumstances, marital status, weapon use and substance abuse.

*Assault Site*

As reported above, women presently living in inner-city or urban areas were fractionally more likely to report an incident of sexual victimisation to the survey than women living in rural areas (Myhill & Allen, 2002). The location of the rape is of extreme importance for determination of scenes (Cook & Tattersall, 2008). Where the offences occur is also of obvious investigative significance. American studies have reported that attempted but uncompleted stranger rape typically occurs on the street, in a park or play ground, or in a parking lot or parking garage during the daylight hours. Complete stranger rapes most often occurs in the victim's home in the period from 6pm to midnight (Holmes & Holmes, 2002). Meanwhile, Hazelwood and Warren (2001) reported 50% of the offences occurred within the victim's home. They recorded 6% of offences occurred in streets or alleyways and the same amount occurred on a parking lot or highway. Myhill and Allen (2002) also confirm victims are likely to be sexually victimised in their own home more than any other location. Attacks by 'dates' occurred in a variety of locations, but were most likely to take place within the home of the offender. For stranger offenders of sexual victimisation, 8% were in the offender's home, 9% were in the victim's own home, 59% were in a public place and 23% were elsewhere. Sexual assaults are almost three times as likely to occur in a public place as rapes.

*Vehicle Use*

Hazelwood and Warren (2001) reported serial rapists often use a vehicle when offending. In 62% of cases the offender used their own vehicle, never a stolen one. In only 8% of the rapes, the offenders used the victim's vehicle and in 7% of instances a borrowed vehicle was used.

*Sexual Behaviours During the Attacks*

Hazelwood and Warren (2001) reported the sexual interactions during the offences: most common acts were vaginal intercourse (54 to 67%), fellatio (29 to 44%), kissing, (8 to 13%) and fondling (10 to 18%). Less common was anal intercourse (5 to 10%) with the rare act of foreign object penetration (3 to 8% of cases). Beek et al. (2010)

found that those who performed cunnilingus on the victim were more likely to have prior convictions for violence. They also reported that if the offender displayed 'gentle' sexual behaviours such as fondling, kissing, and hugging, and/or if he exhibited a sexual dysfunction, then there was a negative correlation with the probability of the offender having a previous rape conviction. Therefore, the relationship between the sexual behaviour exhibited during the offence and whether the offender has served a prison sentence will be investigated.

*Violence and Force Used*

It is difficult to determine the role of violence in rape, whether it is to perpetrate the crime or something more sadistic. Whether the violence is part of controlling the rape of something more sadistic has been investigated by Hazelwood and Warren (2001), in their study of 41 convicted serial rapists who had committed a minimum of 10 offences. They reported methods of controlling the victim as predominantly threatening physical presence (82 to 92%), or verbal threats (65 to 80%) or both to control their victim. The majority of serial rapists (75 to 84%) used minimal or no physical force and use of bindings was rare. In her study of stranger rapists, Davies (1997) reported extreme violence in 20% of cases. Recent studies have investigated whether violence during a sexual offence is connected to previous conviction for violence. Beek et al. (2010), researching male on female attacks, found if the offender strangled and/or demeaned the victim or if he forced the victim to disrobe herself, the probability that the offender had prior convictions for violence increased. Other characteristics that have been related to injury are whether the offender is in a conjugal relationship. Kocsis (2006) divided offenders into four offence styles; within the brutality type offenders were older and in some form of conjugal relationship.

From victim based research, Myhill and Allen (2002) stated that just under half of sexual assaults (46%) involved the use of physical force, 14% resulting in physical injury. Severity of injury among victims in the last incident of rape experienced since age 16 was recorded as: slightly injured (e.g., bruising or black eye), 52%; moderately injured (e.g., extensive bruising), 30%; severely injured (e.g., cuts or broken bones), 10%; other injury, 9%. As with general reporting of sexual offences, research suggests injury level is likely to be under reported. Kimerling, Rellini, Kelly, Judson,

and Learman (2002) have noted 60.5% of sexual assault victims having an injury. Further studies analysing injuries report average violence against rape victims as between a hold/push and a squeeze/slap (Ullman & Knight, 1991). Scully (1990) also reported that the majority of rape victims had escaped with minor injuries beyond the rape, such as shallow cuts, bruises and scratches, and torn clothing. Whether or not an injury is more likely to occur if the victim resists, and the role of method of attack and resistance, has been debated heavily due to its important role in crime prevention and self-defence. Indeed, Finklehor (1984) hypothesises that the victim can play an active role in whether they are abused or not. As his theory relates to children being abused, the age of the victim versus their injury may warrant investigation. In terms of resistance, Hazelwood and Warren described how victims of serial rapists verbally resist; over the series, they found 53% of cases in the first attack, 54% in the middle attacks and 43% in the final rape. Physical resistance was reported in 19%, 32% and 28% respectively over the series.

The age of the victim also has an effect on whether they received an injury. According to Sugar, Fine and Eckert (2004) injuries are more common in adolescents and women over 49 years. Similar findings were reported by Jones, Rossman, Wynn, Dunnuck, and Schwartz (2003). Sugar et al. (2004) also noted that if a weapon was present there was a higher likelihood or injury.

*Weapons*

The use of weapons as a form of violence has been reported by studies in varying degrees from 30 % to 52% (Davies, 1997; Hazelwood & Warren, 2001; Ullman & Knight, 1991). Hazelwood and Warren (2001) found in 44 to 49% of cases, offenders displayed a weapon or physically assaulted the victim (27 to 32%). Scully (1990) reported in 62% of rapes a weapon was present, most frequently a knife. In the majority of cases the weapon was used primarily to terrorise and subdue the victim, but not to inflict serious injury. Quincy and Upford (1985) found that unlike acquaintance rapes, in stranger rapes, injury is associated with the absence of a weapon (cited in Scully, 1990). Threats were more common in relation to rape incidents than in relation to sexual assault. Also looking at the nature of verbal threats Myhill and Allen (2002) noted that victims were asked whether they were 'verbally

threatened, intimidated or blackmailed' or similar of someone close to them. Violent threats were present in almost three-quarters (75%) of rape incidents that involved threats, as opposed to under a half (46%) of sexual assaults.

*Property in Possession of the Offender*

There is little written on the property found in the possession of the offender. The concept of the offender stealing from the victim has been recently been subject to study. Beek et al. (2010) found if an offender stole an item from the victim the probability that the offender had prior convictions for violence increased.

*Precautions taken by Offender*

Offenders taking precautions may be connected to the criminality of the offender (Davies et al., 1997). In general and perhaps surprisingly, offenders do not take many precautions to avoid capture. For example, if DNA was found at the crime scene (which is one of the most straightforward ways to identify an offender) the probability that the offender had a previous rape conviction was significantly higher (Beek et al., 2010). Lack of precautions has been found in both US and UK studies. Hazelwood and Warren (2001) found once the offence was complete very few rapists employed specific behaviours designed to preclude identification. Specifically, 61 to 68% of rapists did not alter the way they dressed to disguise themselves and disguises were only reported in 7 to 12% of the offences. Methods to preclude identification and precautions taken by the offender to avoid detection indicate a more planned approach. Jackson and colleagues (1997) postulated that experienced criminals could learn to thwart criminal investigations and those who took evidentiary precautions during the offence would be more likely to have criminal histories. A more in-depth study of precautions was conducted by Davies (1997) who identified precautions in a sample of 210 rapists. In her study 15% took fingerprint precautions, 5% semen destruction, 28% sighting precautions, 20% made lies to mislead, 32% took departure precautions, 13% made reference to the police and 30% displayed a weapon of some sort. Davies et al. (1998) also found those who took precautions against leaving fingerprints were more likely to have prior burglary and robbery convictions and prior

prison experience. Similarly, this chapter will explore the relationship between offence committed and use of precautions.

This chapter will explore the behaviours used during the offence including the actual sexual behaviours, any associated violence or injury and if a weapon was used. Furthermore it will consider items taken from the victim, how the offender travelled and where the offence took place.

## Method

*Sample Cases and Data Coding*

Details of sexual offences were collated from 1966 and 2004 from the Serious Crime Analysis Section (SCAS) data base based at the National Crime and Operations Faculty (NCOF) now the National Police Improvement Agency (NPIA). SCAS has a national remit from the Association of Chief Police Officers (ACPO) and its Scottish counterpart Association of Chief Police Officers of Scotland (ACPOS) to carry out analytical work on behalf of the police service. It conducts comparative case analysis (CCA) on cases falling within the following in three circumstances:

1. Cases where the relationship between the offender and victim is unknown, or a stranger. The following cases are sent to SCAS by police services: all stranger murders with a sexual motive; murders with an unknown motive; all rapes (as defined by Sexual Offences Act 2003 and predating legislation); all sexual offences that are perceived to be lesser, with aggravating factors such as weapon use, excessive violence, penetration by foreign object, burglary and multiple offenders – other factors are considered on a case by case basis. For the lesser sexual offences to be submitted there needs to be a level of sexual activity within the offence that is indicative of an attempt to commit a serious sexual assault;

2. Sexual offences which are considered less serious that are part of a series where there is evidence of progression, or a series where there is evidence of progression or a serious attempt is made at penetration;

3. Abduction or attempted abductions where any part of the offence is of a sexual nature.

SCAS is notified of such offences by investigators and recorded the details on its principal database, VICLAS - the Violent Crime Linkage Analysis System. To do this SCAS collates and analyses information from several UK and overseas databases. The purpose of this process is fourfold: comparative case analysis, lines of enquiry and investigative priorities based upon statistical probabilities, geographical profiles and to identify possible suspect populations. SCAS provides various other methods of assisting investigations.[2]

If more than one type of offence has occurred, the crime classified is the most serious offence committed. On the 9th of February 2005 the database contained approximately 8600 fully completed entries and 7900 entries with partial notification. The current study is drawn from the fully completed entries that are 'series.' For the purposes of this study a series is defined as linked by conviction with two or more offences. When an offence is entered onto the VICLAS database it is given a unique identifying reference referred to as VICLAS reference and a series master VICLAS reference which is the earliest recorded VICLAS reference. The unique VICLAS reference can contain both multiple victims and offenders. Equally where a weapon is used it may have more than one entry as each weapon will be entered and from both the suspect's and victim's perspective[3].

*Advantages of SCAS Database*

There are several advantages to using such a database, the main advantage being the number of cases on the same database using the same coding structure. The notification requirement for police services thus means SCAS provides a national sample of sexual offences. The database also codes the crimes using a well established Quality Control Guide that provides integrity to the coding. A further advantage is that the unit holds the case papers; thus facts can be checked relatively

[2] See www.centrex.org

[3] See SCAS VICLAS Quality Control Guide for further information

easily. Canter and Alison (2003) promote the positive outcomes that using such data can reap. They write that material which is collected as part of police investigations has the advantage of not being open to the bias of the researchers at the point that it is collected. It is therefore non-reactive and not distorted by respondents' reactions to the researchers' involvement. "Much of the material is also collected in an 'unobtrusive' way in the sense that the actions being recorded are carried out in ignorance of the fact that they are being recorded. Indeed some of the material is unobtrusive in the very strong sense that every attempt is made to ensure that there is no public knowledge that the information is being collected at all. The material therefore has potential for being the basis of a rather unusual form of data that can add fresh insights into crime and criminals as well as opening the way to other forms of research in related area" (Canter & Alison, 2003, p.155). There are, however, clear disadvantages to such data.

*Disadvantages of SCAS Data Base*

The use of conviction based data has inherent problems as identified by authors such as Lloyd and Walmsley (1989) who estimated that only about 10% of reported rapes lead to conviction. Indeed Myhill and Allen (2002) report that only 18% of sexual victimisations reported to the British Crime Survey came to the attention of the police. On the issue of unreported crimes, Grubin, Kelly and Brunsdon (2001) note careful consideration should be given to the extent the findings can be generalised. They state, "Offenders in the databases may have committed other sexual assaults that are not included. Thus, whilst offences are listed in chronological order for each offender, offenders may have committed other offences before, after, or in between those that are analysed in this study. This has clear implications in terms of understanding the evolution of behaviour over a series of offences" (Grubin et al., 2001, p. 21). They further identified the data for each attack is based on information originally collected by police officers in the course of a criminal investigation not for research. In addition the victim will have been frightened and under great stress at the time of the assault, and traumatised afterwards and their observations will not be those of a detached observer. They noted that the way the information was entered may vary over time and highlighted the limited nature of such database data.

In order to most accurately show the nature of serial offending certain functions within the data need to be understood. Within this Section different numbers of offender, victim and offences are reported. The reporting has been based on the most meaningful explanation; two examples are given below to illustrate where offenders changed over time. A full list of variables for this data set is available in the appendices.

*Example 1.*

The offender identified as UK-A had changes in:

- Marital status (e.g., he went from being married to divorced);
- Age (e.g., it ranged from 35 to 55 years);
- Living arrangements (e.g., he went from living with his spouse and minor children to living with his parents);
- Victims' age (e.g., they ranged from 11 to 13 years);
- Sexual behaviour (both in terms of what he did and what he made the victims do);
- Approach (e.g., ranged between surprise and confidence).

*Example 2.*

The offender identified as UK-B had changes in:

- Offence committed (e.g., it varied between assault, indecent assault and breach of the peace);
- Relationship with victim (e.g., sometimes the victims were known and sometimes they were strangers);
- Victims' age (e.g., they ranged from 16 to 51 years);
- Place where offence was committed (e.g., it ranged from residential to business areas);
- Precautions used;
- How he gained entry.

Where factors were more dynamic, that is, where significant changes were present, for example, age or marital status for offender A or type of offence, or victim type, the 520 offences were reported.

*Procedure*

All variables were assessed as a frequency (scale data) according to whether it was present or absent. Thus each variable is considered in turn; that is, although the approach style could be seen as one variable, each style of approach was measured as a single variable (blitz, surprise, con). Therefore, chi-square analyses were run for most analyses. As the data did not meet the assumptions of parametric tests, spearman's rho was used for any correlational analyses and a *p*-value smaller that .05 was considered statistically significant. Each variable is outlined within the analysis indicating the various coding for each variable.

Results

*Descriptive Frequencies in Serial Sex Offending*

The literature review for serial offenders was presented in three sections: offenders, victims and offence. This section will follow the same format.

*Offender demographics.*

One hundred and fifty-four male serial sexual offenders committed 520 offences between them. Of the 154 offenders, 77% (*n* = 119) were white, 12% (*n* = 18) were African Caribbean, 8% (*n* = 13) were Asian, 2% (*n* = 3) were dark European and 1 was Arabic. Data on the offender's age was available for all offenders. The mean age of the offenders was 30 years old. This was calculated by taking the mean age over the series and then the mean of that age. For the 520 offences the mean age was also 30 years old (range 13 – 61) although the median and mode age was 28 years old.

*Series.*

All cases on the SCAS database which contained a series where the offender was convicted were identified; they were then reviewed and any cases that were not true series were removed. For the purposes of this data set, a series was a minimum of two offences and the data involved 154 series with a range of two to 19 offences. The mean number of offences was 4.2 per offender with a mode of two offences (33% of sample). The time taken for each series ranged from all offences within twenty four hours to a series over a period of thirty three years. Approximately 10% of the series were committed in less than 24 hours, a quarter within two weeks, half within six months and three quarters within two years. The remaining quarter was over a period of two to thirty three years.

*Age.*

There was a significant difference between the ages of offenders and whether they had committed a stranger offence ($t$ (518) = 6.11, $p < .001$). This indicated that stranger offences were significantly more likely to be committed by younger offenders ($M = 28.36$, $SD = 9.04$) compared to those who did not commit stranger offences ($M = 34.24$, $SD = 11.51$). A significant effect was also found when examining the age of victims ($t$ (151) = 2.25, $p < .05$) with stranger victims significantly older ($M = 26.46$, $SD = 12.48$) than those not categorised as stranger victims ($M = 21.48$, $SD = 10.74$).

When examining the age of the offender against the various offences only 2 offences resulting in significant effects. Those who committed murder ($M = 35.19$, $SD = 9.65$) were significantly older ($t(518) = 2.43$, $p < .05$) than those who did not commit murder ($M = 29.75$, $SD = 10.08$). Similarly, those who committed abduction offences ($m = 40.25$, $SD = 10.25$) were significantly ($t(518) = 2.92$, $p < .01$) older than those who did not commit any abduction offences (29.81, $SD = 10.04$).

*Custodial sentence and previous convictions.*

The VICLAS database did not record previous convictions; therefore, this was not explored. This will be discussed in the limitations of this study. VICLAS did record whether the offender had served a custodial sentence and was available for the 520 offender records. For example, an offender may have been in prison but VICLAS would not say what for. At the time of each offence, 14% ($n = 75$) had served a custodial prison sentence, 18% ($n = 91$) had not served a custodial prison sentence and for 68% the information was unknown. Other lifestyle information was also available, 25% ($n = 128$) were categorised as committing frequent criminal acts.

There was a difference between injuries caused and whether the offender had served a prison sentence ($\chi^2$ (1) = 5.84, $p > .05$) with those who caused injuries, 81% had no previous prison experience, compared to only 19% who had served a prison sentence. However, when examining those who caused severe injury ($\chi^2$ (1) = 36.78, $p < .001$) it was those who had served a prison sentence that were more likely to inflict this (56%) compared to those with no prison experience (44%). There were differences between use of precautions and whether the offender had served a prison sentence ($\chi^2$ (1) = 4.40, $p < .05$). Those who used precautions 86% had previous prison experience, compared to 14% with no experience. In addition when examining weapon use and whether the offender had served time in prison there were significant differences ($\chi^2$ (1) = 5.142, $p < .05$). Those who used a weapon, 69% served previous prison sentence, with 31% no previous experience.

*Relationship status and living status.*

Their marital status was recorded but in some cases did change over time, thus the most frequent record of marital status is reported. Forty-six percent ($n = 72$) of the offenders' marital status was unknown, 28% ($n = 43$) were single, 13% were married ($n = 20$), 7% ($n = 10$) were divorced, 5% were separated ($n = 7$) and one offender was in a same sex relationship as was one offender widowed. The 520 offender records were also coded as to who they were living with at the time of the offence. Of the sample, 11% were living with their spouse and a similar percentage lived with their boyfriend of girlfriend, 15% ($n = 80$) were living with their parents. As shown in

Table 1 they could be coded in more than one category; for example, in the lived with their wife and children, this would be coded as spouse and minor kids.

Table 1

*Living Arrangements for the 520 Offences*

| Offender living with | Frequency | Percent (of 520) |
| --- | --- | --- |
| Unknown | 228 | 43.8% |
| Parents | 80 | 15.4% |
| Girl/Boyfriend | 57 | 11.0% |
| Spouse | 57 | 11.0% |
| Minor kids | 57 | 11.0% |
| Alone | 57 | 11.0% |
| Other | 32 | 6.2% |
| Relatives | 23 | 4.4% |
| Room-mate | 14 | 2.7% |
| Adult kids | 9 | 1.7% |

There was a significant difference regarding offences of indecent exposure and marital status ($\chi^2$ (3) = 32.67, $p < .001$). Results indicated that when the offence of indecent exposure was recorded 50% of offenders were single, with the same percent (17%) recorded as separated, married and divorced. For offences of murder significant differences were also found ($\chi^2$ (1) = 9.39, $p < .05$) as over half of offences were committed by single offenders (56%) with just under a third being separated (31%), rather than married (12%) or divorced (0%). In addition, when examining marital status and whether an offender had served a previous prison sentence a significant difference ($\chi^2$ (3) = 11.17, $p < .05$) indicated that around half of offenders were single (48%), under a third were married (31%) with lower percents recorded for separated (12%) and divorced (9%).

There are several significant differences in terms of the offence committed and the people with whom the offenders live. These are easier to interpret when presented in a table (Table 2) which indicates the offence type and proportion of living arrangements recorded.

Table 2

*Proportion of living arrangements across offences*

| | Live parents | Live spouse | Live girl/b oyfrie nd | Live minor childr en | Live adult childr en | Live relati ves | Live room mate | Live alone | Total |
|---|---|---|---|---|---|---|---|---|---|
| Indecent assault (*n* =208) | 31 | 21 | 32 | 29 | 0 | 2 | 1 | 18 | 134 |
| Rape (*n* = 166) | 25 | 22 | 10 | 15 | 7 | 12 | 3 | 22 | 116 |
| Attempted rape (*n* = 44) | 7 | 7 | 0 | 5 | 2 | 4 | 3 | 3 | 31 |
| Indecent exposure (*n* =28) | 8 | 3 | 11 | 4 | 0 | 0 | 0 | | 26 |
| Murder (*n* = 21) | 2 | 1 | 0 | 0 | 0 | 4 | 5 | 4 | 16 |
| Abduction (*n* = 8) | 1 | 0 | 2 | 0 | 0 | 0 | 1 | 2 | 6 |
| Assault (*n* = 8) | 2 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 8 |
| Total | 76 | 57 | 55 | 56 | 9 | 22 | 13 | 49 | 337 |

First, with regards to indecent assault, 15% were likely to live with their girl/boyfriends ($\chi^2$ (1) = 6.95, *p* < .01) with 85% living in other circumstances. Indecent assault offences also produced significant differences with those who live with relatives ($\chi^2$ (1) = 9.83, *p* < .01), roommate ($\chi^2$ (1) = 6.47, *p* < .05) and adult children ($\chi^2$ (1) = 6.11, *p* < .05). Results indicated that for indecent assault offences, less than 1% lived with a relative, less than .5% lived with a roommate and no indecent assault offences were recorded as living with adult children. Second, in terms of rape, there were associations regarding those who lived with relatives ($\chi^2$ (1) = 4.54, *p* < .05), adult children ($\chi^2$ (1) = 8.86, *p* < .01), and those who live with girl/boyfriend ($\chi^2$ (1) = 6.09, *p* < .05). Results indicated that of those who committed rape, 7.2% lived with a relative, 4% with their adult children and 6% with girl/boyfriend. Third, with regards to attempted rape, there was a significant association with those who lived with girl/boyfriend ($\chi^2$ (1) = 55.92, *exact p* = .019) with no offences recorded for this living arrangement. Fourth, in terms of indecent exposure, there were associations with those who lived with their parents ($\chi^2$ (1) =

3.95, $p < .05$) and those who lived with girl/boyfriend ($\chi^2$ (1) = 524.33, $p < .001$). Results indicated that 29% of indecent exposure offences live with parents and 39% live with girl/boyfriend. Fifth, with regards to murder, there were significant associations in regards to those who lived with relatives ($\chi^2$ (1) = 11.07, $p < .01$) and those who lived with a roommate ($\chi^2$ (1) = 537.25, $p < .001$). Results indicated that 19% of murder offences lived with relatives whereas 23.8% lived with a roommate.

*Lifestyle characteristics.*

Of the sample 7% ($n = 36$) were drug users, with 3% categorised as alcoholics. Other VICLAS lifestyle variables are shown in Table 3. It is of note that over half of the data for lifestyle was unknown; this is reflected in the limitations discussion later in this chapter.

Table 3

*Offender Lifestyle Characteristics for the 520 Offences*

| Lifestyle | Frequency | Percent (of 520) |
|---|---|---|
| Unknown | 292 | 56.2% |
| Frequent criminal act | 128 | 24.6% |
| Drug user | 36 | 6.9% |
| Other | 33 | 6.3% |
| Socialise | 33 | 6.3% |
| Transient | 15 | 2.9% |
| Drug dealer | 15 | 2.9% |
| Alcoholic | 15 | 2.9% |
| Mental disability | 14 | 2.7% |
| Reclusive | 9 | 1.7% |
| Pimp | 8 | 1.5% |
| Physical disability | 7 | 1.3% |
| Street person | 1 | .2% |

*Offenders' relationship to victims.*

Of the total 520 offences committed the vast majority were stranger attacks ($n = 378$, 73%). This is unsurprising due to the SCAS qualification criteria outlined within the methodology Section. Table 4 illustrates the relationships with the victims. Ten percent were committed by a known friend or associate. Of the 154 series, the predominant relationship to victim was calculated throughout the series; of the 154 series, 107 were predominantly stranger attacks accounting for 69% of the data set. Twelve percent were committed by a known friend or associate. The rest of the results are displayed in the table below.

Table 4

*The Relationship to the Victim for the 520 Offences and 154 Series*

| Relationship to victim | Of 520 Offences | | Of 154 Series[4] | |
|---|---|---|---|---|
| | Frequency | Percent | Frequency | Percent |
| Stranger | 378 | 72.7% | 107 | 69.5% |
| Known associate (friend/associate) | 54 | 10.4% | 19 | 12.3% |
| Client of prostitute | 45 | 8.7% | 15 | 9.7% |
| Unknown associate (peripheral contact) | 14 | 2.7% | 5 | 3.2% |
| Known – partner | 11 | 2.1% | 5 | 3.2% |
| Known – family | 10 | 1.9% | 1 | .6% |
| Known - ex-partner | 4 | .8% | 1 | .6% |
| Relationship not known | 4 | .8% | 1 | .6% |
| Total | 520 | 100% | 154 | 100% |

*Victims.*

The 520 offences involved a total of a total of 545 victims, 511 were female and 34 were male. Of the 545 victims recorded, 21 offences involved two victims in the same offence and two offences involved three victims.

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[4] The predominant relationship with victim was calculated by the most frequent of the relationships. Where there were equal numbers of relationships the first occurrence was taken unless the relation was unknown.

*Age.*

Of the 545 victims, 521 had an age recorded. The mean age of victims was 24 years old; the median age was 21 years old with a mode of 16 years old. The age range was 84 years from 3 to 87 years old. Of the victims, 6% ($n = 13$) were 10 or under; 36% ($n = 31$) were 17 or under, 1.5% ($n = 8$) were 70 or older. Thus, the main victim targeted was young women. The difference between the offenders' age and victims' age ranged from the offender being 61 years younger to 58 years older then them. The mean difference in age was 5.5 years with the median of 8 years and mode of 7 years. This shows the offender is more likely to be older than the victim.

The mean age of the offenders was negatively correlated with the mean age of the victims ($rho = -.16$, $p < .024$). This means that as the mean age of the offender's increases, the mean age of the victim's decreases. In terms of murder victims, there were 21 victims in the dataset. The age of the victims ranged from 5 to 87 years, with a mean of 28 ($SD = 17.97$) years.

*Lifestyle behaviours.*

For the majority of the victims, information about their lifestyle was missing (70.8%). However, of those for whom it was available, it is interesting that 10% of the victims attacked were prostitutes and 7% were drug users. In terms of identified vulnerability, five victims had a physical disability and five had a mental disability. Table 5 shows a breakdown of the VICLAS lifestyle variables.

Table 5

*Table Showing Victim Lifestyle Characteristics for the 520 Offences*

| Lifestyle | Frequency | Percent (of 520) |
|---|---|---|
| Unknown | 386 | 70.8% |
| Prostitute | 55 | 10.1% |
| Drug user | 38 | 7.0% |
| Likes to party | 24 | 4.4% |
| Other | 12 | 2.2% |
| Frequent criminal act | 8 | 1.5% |

| | | |
|---|---|---|
| Physical disability | 5 | .9% |
| Mental disability | 5 | .9% |
| Transient | 3 | .6% |
| Alcoholic | 3 | .6% |
| Homeless | 3 | .6% |

*The Offence.*

The section will describe the method used to get to the offence, the offence itself and factors following the offence. Firstly, where did the offence take place and whether a vehicle was used, then how did they engage the victim? Following this, what actually happened during the offence will be described. What happened during and after the offence to avoid detection and searches after the offence will then be reported.

There were 520 separate offences in total. The offences, as per the SCAS criteria, had to have a sexual element to them. The 154 series involved 520 separate offences. Table 6 shows that the most frequent offence in the sample was indecent assault accounting for 208 offences (40%) and almost a third of the sample were the offence of rape ($n = 166$, 32%). The remaining offences consisted of a variety of offences shown in Table 6 including 21 murders and 6 attempt murders.

Table 6

*Frequency of Offences for the 520 Offences*

| Offence | Frequency | Percent of 520 |
|---|---|---|
| Indecent assault | 208 | 40.0% |
| Rape | 166 | 31.9% |
| Attempt rape | 44 | 8.5% |
| Indecent exposure | 28 | 5.4% |
| Murder | 21 | 4.0% |
| Burglary | 9 | 1.7% |
| Abduction | 8 | 1.5% |
| Assault | 8 | 1.5% |
| Breach of the peace | 8 | 1.5% |
| Attempt murder | 6 | 1.2% |
| Robbery | 6 | 1.2% |
| Attempt abduction | 3 | .6% |
| GBH | 2 | .4% |
| Attempt theft | 1 | .2% |
| Gross indecency | 1 | .2% |
| Public nuisance | 1 | .2% |
| Total | 520 | 100% |

*Approach type.*

Of 553 separate offence interactions, 550 cases were discriminated in the initial approach to the victim. The three different styles of approach identified were: surprise attack, 52% (sudden attack on the victim); confidence approach, 47% (typically involves asking questions, false introductions etc.); and blitz attack, 1% (immediate use of violence to subdue the victim). Within the con approach, the most frequent method of contact was to ask for assistance 31% ($n$ = 81) which accounted for 14% of all approaches. A further 18% were solicited by the offender, 8% of the total data set. In the surprise approach, sneaking up was the most frequent method with 64% ($n$ = 183) accounting for 33% of all approaches. Fifteen percent of surprise attack cases involved the offender laying in wait outdoors. The blitz method of contact was rare with only five cases involving this approach. Tables showing the various approach

styles (Table 7: con approach; Table 8: surprise approach; Table 9: blitz approach) adopted within 550 cases and their coding for each are shown below.

Table 7

*Frequency and Breakdown for Confidence Approach Within 553 Cases*

| Con approach | Frequency | Percent |
|---|---|---|
| Asked assistance | 81 | 14.6% |
| Engaged conversation | 48 | 8.7% |
| Solicited | 47 | 8.5% |
| Befriended | 22 | 4.0% |
| Offered assistance | 14 | 2.5% |
| Inducement | 12 | 2.2% |
| Offered ride | 11 | 2.0% |
| Wanted show | 7 | 1.3% |
| Other | 4 | .7% |
| Arranged to meet | 3 | .5% |
| Posed authority | 2 | .4% |
| Posed business | 2 | .4% |
| Asked model | 2 | .4% |
| Third person lure | 2 | .4% |
| Posed client | 1 | .2% |

Table 8

*Frequency and Breakdown for Surprise Approach Within 553 Cases*

| Surprise approach | Frequency | Percent |
|---|---|---|
| Sneaked up | 183 | 33.1% |
| Lay in wait outdoors | 44 | 8.0% |
| Victim sleeping | 34 | 6.1% |
| Threatened victim | 22 | 4.0% |
| Lay in wait – building | 2 | .4% |
| Lay in wait - vehicle | 2 | .4% |

Table 9

*Frequency and Breakdown for Blitz Approach Within 553 Cases*

| Blitz approach | Frequency | Percent |
|---|---|---|
| Hit | 3 | .5% |
| Overpowered | 1 | .2% |
| Grabbed | 1 | .2% |

Stranger offences were significantly more likely to use a surprise approach (61.7%) compared to a confidence approach (38%, ($\chi^2$ (1) = 54.68, $p$ < .001). There was a significant difference in use of blitz approach and use of weapon ($\chi^2$ (1) = 20.06, $p$ < .001). When a blitz approach was used a weapon was used in 60% of offences, with 40% not using a weapon within a blitz approach. When a surprise approach was used 21% used a weapon, with 79% not using a weapon ($\chi^2$ (1) = 14.95, $p$ < .001) Moreover, 60.2% displayed a weapon but did not use it compared to 40% who did not display a weapon ($\chi^2$ (1) = 6.67, $p$ < .05). Similarly, those who used the surprise approach and threatened the use of weapon but did not display it resulted in significant differences ($\chi^2$ (1) = 7.84, $p$ < .01). Of those who threatened use of a weapon, but did not display, 69% used the surprise approach rather than other approaches (31%). There was a significant difference regarding weapon use with 73.3% of confidence approach offences not using a weapon, with 27% using a weapon ($\chi^2$ (1) = 6.28, $p$ < .05).

There was a significant difference in use of blitz approach and substance abuse ($\chi^2$ (1) = 6.93, $p$ < .01). Of those who utilised a blitz approach 40% also had substance abuse problems, with 60% not recording any substance misuse. Of those identified as substance misusers, 73% used a surprise approach compared to 27% who used a confidence approach ($\chi^2$ (1) = 5.33, $p$ < .05).

Significant differences were found when examining the living arrangements of offenders and what approach style was used. It is worth noting that only the surprise and confidence approach were used due to the low numbers recorded within the blitz approach (n = 5). When examining those who were living with a girl/boyfriend 71% of offences involved a surprise approach, compared to 29% who used a confidence approach ($\chi^2$ (1) = 7.76, $p$ < .01). For those who lived with adult children significant

chi-square ($\chi^2$ (1) = 4.75, $p$ < .05) indicated that they were more likely to use a surprise approach within their offence (89%) compared to 11% who used a confidence approach. However, those offenders who lived on their own were significantly ($\chi^2$ (1) = 7.41, $p$ < .01) more likely to use confidence approach within their offending (65%) rather than a surprise approach (35%).

*Assault site.*

In 65% ($n$ = 368) of the cases the assault took place in a residential location. 16% ($n$ = 87) of cases took place in a retail business area and 14% ($n$ = 77) took place in a park or recreational area. Table 10 illustrates the locations; as with records which indicated who the offender lived with, the location can have more than one entry, for example, a park in a residential area.

Table 10

*Frequency of Assault Site Locations for the 520 Offences*

| Location | Frequency | Percent |
|----------|-----------|---------|
| Residential | 358 | 65.4% |
| Retail business | 87 | 15.9% |
| Park / recreation | 77 | 14.1% |
| Unknown | 62 | 11.3% |
| Rural | 38 | 6.9% |
| Uninhabited | 17 | 3.1% |
| Other | 16 | 2.9% |
| Industrial | 11 | 2.0% |
| Farm | 9 | 1.6% |
| Red light | 1 | .2% |

*Vehicle use.*

Of the 520 offences, 22% ($n$ = 113) of offenders used a vehicle during the offence and 77% ($n$ = 400) did not use a vehicle. In 2 cases, a vehicle was used but no information was held. Of the 154 series, 36% of series ($n$ = 55) involved use of a vehicle in at least one offence.

*Sexual behaviours during the attacks.*

During the actual offence, as Table 11 demonstrates, nearly half of the cases (46%) involved fondling. Thirty two percent of cases involved penile vaginal penetration while 19% involved digital vaginal penetration, offender penetrating the victim from the rear was less common in 6% of cases and only 1% of cases involved vaginal penetration using a foreign object. An offender anally penetrating the victim using his penis was reported in 12% of cases; in 2% of cases the offender digitally penetrated the victim. Kissing the face was a relatively common occurrence with 26% of cases involving this act.

Table 11

*Sexual Behaviours Performed by the Offenders During the 520 Offences*

| Offender Sexual Behaviour | Frequency | Percent of 520 |
|---|---|---|
| Fondles | 254 | 45.9% |
| Vaginal penetration penile | 175 | 31.6% |
| Kisses face | 141 | 25.5% |
| Vaginal penetration digital | 105 | 19.0% |
| Masturbates self | 98 | 17.7% |
| Anal penetration penile | 66 | 11.9% |
| Oral | 50 | 9.0% |
| Other | 47 | 8.5% |
| Exposes | 38 | 6.9% |
| Kisses chest | 38 | 6.9% |
| Vaginal penetration rear | 33 | 6.0% |
| Hugs | 21 | 3.8% |
| Ejaculation body | 17 | 3.1% |
| Anal penetration digital | 12 | 2.2% |
| Masturbates other | 11 | 2.0% |
| Simulated sex | 11 | 2.0% |
| Kisses other | 9 | 1.6% |
| Vaginal penetration foreign | 6 | 1.1% |
| Urination defecation | 3 | .5% |

In terms of other sexual behaviours and offenders who had served a prison sentence, there were significant differences in terms of those with those who kissed the chest of the victim, 67% had served a prison sentence compared to 33% who had no previous prison ($\chi^2$ (1) = 6.67, $p < .05$)..  For those who had no previous prison experience, 5% had committed anal penile penetration, compared to 1% who had previous prison experience ($\chi^2$ (1) = 7.46, $p < .01$).

The sexual acts performed by the victim on the offenders were less frequent with a total of 265 acts; of these, almost half (48%) were performing oral sex on the offender which represented 23% of offences. The victim having to carry out the act of masturbating the offender occurred in 12% of cases. Table 12 demonstrates other acts performed by the victim.

Table 12

*Sexual Behaviours Performed by the Victim During the 553 Cases*

| Victim Sexual Behaviour | Frequency | Percent of 520 |
|---|---|---|
| Oral | 127 | 23.0% |
| Masturbates other | 64 | 11.6% |
| Fondles | 17 | 3.1% |
| Masturbates self | 12 | 2.2% |
| Kisses face | 10 | 1.8% |
| Anal penetration penile | 10 | 1.8% |
| Other | 6 | 1.1% |
| Urination defecation | 5 | .9% |
| Vaginal penetration penile | 4 | .7% |
| Kisses chest | 3 | .5% |
| Vaginal penetration digital | 3 | .5% |
| Anal penetration digital | 2 | .4% |
| Exposes | 1 | .2% |
| Vaginal penetration foreign | 1 | .2% |

*Violence and force used.*

Of the 553 offences committed, almost two thirds (64%, $n = 352$) had no physical injury. Twenty three percent were described as having minimal injury ($n = 126$) and

65

6% ($n = 32$) had moderate injury. The more serious injuries were less frequent with 5% ($n = 25$) having a severe injury and 4 cases (less than 1%) having an extreme injury. Fourteen cases had an unknown injury level.

The majority of cases (58%, $n = 322$) involved no violence. 8% ($n = 46$) of cases involved no contact between the offender and victim. Eleven percent ($n = 60$) contained some violence upon resistance by the victim, 15% ($n = 83$) some violence which was not only on resistance. The more extreme violence was considerably rarer; six cases (1%) used extreme violence upon resistance and the same number used extreme violence not only when the victim was resisting.

There were no differences in the age of the offender and whether any injuries were caused to the victim ($p > .05$). However, when examining the age of the victim and whether any injuries were caused there was a significant effect (t (507) = 3.33, p < .01). Results indicated that those victims with injuries were significantly older (M = 26.82, SD = 14.27) than those where no injuries were documented (M = 22.73, SD = 12.57). Furthermore, a significant difference was found regarding substance abuse and injuries ($\chi^2$ (1) = 6.65, $p < .05$). Where substance abuse was present 55% caused injury whereas 45% of substance misusers did not cause injury. There was also a significant difference in injuries caused and weapon use ($\chi^2$ (1) = 69.34, $p < .001$) when a weapon was used 97% resulted in injury, compared to 3% of weapon use offences with no injury documented.

In terms of the severity of injuries, there was a significant difference in whether a confidence approach was used ($\chi^2$ (1) = 5.44, $p < .05$). When severe injury was noted 20% had used a confidence approach, with 80% using an alternative approach. There was also a significant difference between the injuries caused and the use of a foreign object ($\chi^2$ (1) = 10.82, *exact p* = .002) which indicated that when a foreign object was used 100% resulted in injury. (*rho* = +.15, *p* < .001).

*Weapons.*

Of 530 entries for the presence of a weapon, two thirds (66%, $n = 350$) did not involve use of a weapon. In 7% of cases, a weapon was threatened but not displayed

and in 17% of cases a weapon was displayed but not used. There were 39 cases (7%) where a weapon was actually used. The use of a weapon was unknown for 3% ($n$ = 13) of cases. When examining those who had alcohol misuse, 66.7% had used a weapon within their offence, compared to 33% who did not use a weapon ($\chi^2$ (1) = 8.10, $p$ < .01).

*Property in possession of the offender.*

Following the offence, whether the offender had property in their possession is recorded but only if the suspect's home is searched and this information is passed to SCAS. It does not refer to the offence in question but to what is found. Of the 520 offender records, the offender had property belonging to someone else in their possession relating to other offences on 33 occasions (these could be by the same offender), 3% ($n$ = 16) had clothing, 1% ($n$ = 6) had credit cards, three offences involved taking cheques and one offence involved the taking of a body part. In 7 offences other items were taken.

*Precautions taken by offender.*

Finally, offenders' actions to avoid detection are reported. Of 553 offences, 272 offences (49%) involved no precautions being taken; Table 13 summarises the precautions taken. Seventeen percent of offences included the victim's mouth being covered and 9% involved the victims' eyes being covered. Nine percent of cases involved the offender telling the victim not to look at them and 5% of cases involved the victim being bound. Five percent of cases involved the offender wearing gloves or a disguise, or destroying forensics. During 4% of cases, the offender used a condom. Only 3% of cases involved the administration of a drug and in 1% of cases the offender wore a mask.

Table 13

*Precautions Taken by the Offender for 553 Cases*

| Method of Precaution | Frequency | Percent of 520 |
|---|---|---|
| None | 272 | 49.2% |
| Covered mouth | 94 | 17.0% |
| Covered eyes | 51 | 9.2% |
| Told not to look | 50 | 9.0% |
| Disguise | 29 | 5.2% |
| Bound victim | 29 | 5.2% |
| Gloves | 27 | 4.9% |
| Destroyed forensics | 26 | 4.7% |
| Blindfold | 23 | 4.2% |
| Other | 23 | 4.2% |
| Condom | 22 | 4.0% |
| False name | 20 | 3.6% |
| Blocked entry/exit | 18 | 3.3% |
| Unknown | 18 | 3.3% |
| Gagged | 15 | 2.7% |
| Administered drug | 14 | 2.5% |
| Bathe/douche | 9 | 1.6% |
| Lighting | 7 | 1.3% |
| Mask | 6 | 1.1% |
| Lookout | 2 | .4% |
| Disable phone | 2 | .4% |
| Disguise vehicle | 2 | .4% |

There was a significant effect regarding the age of the offender and whether the offender used precautions (t (500) = 3.42, p < .01). This indicated that those offenders who used precautions were significantly older (M = 31.36, SD = 9.17) than those who did not use precautions (M = 28.31, SD = 10.73). There were several significant relationships in terms of the offence committed and the offenders' use of precautions. For those who committed indecent assault offences 38% used precautions, with 62% not ($\chi^2$ (1) = 24.99, p < .001). Within rape offences 72% used precautions, 28% using no precautions ($\chi^2$ (1) = 43.89, p < .001). In 100% of murder offences precautions were used ($\chi^2$ (1) = 6.82, *exact p* = .015). Finally for indecent exposure 14% of these

offences involved use of precautions, compared to 86% that did not use precautions $(\chi^2 (1) = 6.82, p < .01)$.

*In summary.*

In this data set, serial sexual offenders are men about 30 years of age committing about four offences. The majority of offences are rapes and indecent assaults and half of the sample commits all their offences within a six month period and three quarters within two years. They usually attack one female victim with a mean age of 24 years and the majority (72%) do not know the victim. They are mostly white and more likely to be single than married but are most likely to live with a partner (married or not).

In their offences they attack in residential areas and will use a surprise or con approach on the victim and will hardly ever use a blitz approach. In the con approach they are most likely to ask for assistance and with the surprise attack will sneak up on the victim. They generally do not use a vehicle in their offence. In half of the cases they will fondle the victim and in half of the cases they will vaginally penetrate the victim either with a penis or digit. It is unusual for extreme violence to be used and two thirds of victims have no injuries. In a third of cases a weapon is used, threatened, or seen. Half of the offenders take no precautions to avoid being detected. When precautions were taken, this was most likely to occur within the offence or rape.

## Discussion

This chapter sought to act as a review with a similar approach to Carter and Hollin (2010) which outlined factors relating to sexual murderers and described the current research on them. It also aimed to follow the principles described in Beek et al. (2010) by investigating factors that can be known to the police allowing a number of 'knowledge rules' to be provided for use in investigations. This study described 154 serial sexual offenders and their offending behaviours exploring various relationships such as age, custodial sentences and offence behaviours. The study found that offenders generally commit relatively short series of offences over varying degrees of time with the offence of indecent assault being common. The age of the offender was

negatively correlated with the age of the victim which supported several previous studies including Goodwill and Alison (2007). Serial offenders did not routinely take precautions to avoid detection. However, some older offenders and those committing the most serious offences (rape and murder) were more cautious. Furthermore, there was a relationship between previous prison experiences and injurious offending. There were also several differences between the offenders' relationship status and their offending behaviour. Finally, substance abuse was also linked to more serious approach (surprise approach) and injurious offending. The discussion will therefore consider the key findings from the study and the theoretical implications. It will focus on how the current theories explain the role of relationships the offender has and will consider displaced aggression as a possible theoretical argument. It will also review the nature of escalation and whether the role of prison can be explained as a 'school of crime' or more integrally related to the seriousness of the offenders' behaviour. Finally, future research will be considered for exploration in the next chapter. The discussion will describe factors relating to the offender first, then the offender and victim interaction; it will then discuss those behaviours within the offences and finally review the issues relating to escalation and seriousness.

*Offender and Victim Interaction - Age*

Research across a range of sex offenders has consistently demonstrated evidence of a negative linear correlation between the age of the victim and the age of the offender (Gebhard et al., 1965; Goodwill & Alison, 2007; Grubin & Kennedy, 1991; Harry, Pierson, & Kuznetsov, 1993; Kuznetsov, Pierson, & Harry, 1992). This current study supported those findings with a negative correlation between the mean age of the victim and the mean age of the offender. There was a further finding relevant to the criminal careers and age of the offenders. Older offenders committed offences of murder and abduction. When taken together, it appears, in general, older offenders are committing more serious offences within the series. This supports studies where stranger rapists (deemed a more serious risk factor by Thornton et al., 2003) have been older (27-28 years old) than the general offending population (Beauregard et al., 2010; Davies et al., 1998; Goodwill & Alison, 2007). As the mean age of this data set is 30 years, this suggests serial offenders are older still. A potential explanation for serial offenders being older is they have not been apprehended so have grown older in

not being caught. This is particularly interesting as they do not seem to take any more precautions to avoid getting caught (which will be discussed later in this chapter). Therefore, in terms of the theoretical explanation as to why they are older perhaps as Rankin and Wells (1985) describe, as offenders grow older they may persist; that is, only become involved in one type of behaviour. This is an area for further research; therefore, the next chapter explores whether offenders do actually concentrate on one type of behaviour. An alternative explanation is Blonigen (2010) who suggested personality factors may contribute to the age-crime relationship; however, this would need further study.

*Relationship Status*

Beek et al. (2010) conclude their study stating that further exploration of correlations of crime scene characteristics with offenders' living situation would be of significant value to criminal investigations. The current study has highlighted some specific associations that may also be interpretable within the theoretical approaches. There is a tentative suggestion from this study that an offender's marital status can impact on their offending. In this study, those offenders who committed indecent exposure offences were more likely to be single whereas those who committed murder were more likely to be single or separated. Furthermore, when an offender was living with girl/boyfriend they were more likely to commit offences with aggressive approach style (e.g., surprise). In contrast, those who lived alone were more likely to use a confidence approach. It could be argued that these findings could be interpreted using the model proposed by Cohen et al. (1969). However, in order to do this, the logic must be explained. If relationships are seen as stage specific (accepting there is variance), that is, single, courting, boyfriend, married, separated and divorce, each stage is likely to dictate an amount of contact with a partner. From the findings of this study, it could be argued that *where* an offender is within the stages relates to the seriousness of the offender's actions with a cumulative negative effect. Thus, at the beginning of the process, with little experience of the relationship, an offender commits a lower non-contact offence (exposure). As the relationship evolves with the offender having a partner, they begin to displace aggression outside of the relationship. Finally once access is withdrawn (separated) the greatest cumulative aggression is evident. Thus those who commit the most serious offences such as

murder are more likely to be single or separated. As Cohen et al. (1969) note in their model, the displaced aggression rapist uses the rape as an expression of anger with a view to humiliate and degrade. It is suggested that the offender acts on impulse as the result of a preceding significant event with a woman in his life, for example, an argument with his wife at home. More recent theories on displaced aggression describe a definitive trigger (triggered displaced aggression, Miller, Pedersen, Earleywine, & Pollock, 2003). This could be applicable whereby the offender has a significant event where he is unable to retaliate and therefore displaces the aggression as part of a sexual offence. This could be a literal displacement within the relationship, for example, an argument with a partner or a less obvious displacement: a disappointment at work or disagreement with a solicitor over a divorce. Perhaps a more contemporary view of these issues would be the relationship status that is one of Ward and Beech's (2006) *ecological* niche factors, that is, social, cultural, and personal circumstances. The relationship can have positive or negative roles dependent on its functioning and interaction with other factors. As Rankin and Wells (1985) described, one reason for the desistance from criminal careers was given as relationships with women and getting married. Equally, Thornton et al. (2003) cite lack of a long-term intimate relationship as a risk factor that will raise the risk category. The current study supports the probation OASys evaluation of relationships and their role in relation to risk as there appears to be both risk and protective factors with relationships.

*Precautions and Behaviours*

This study supported Davies, Wittebrood and Jackson (1998) in that offenders took surprisingly few precautions. Importantly when precautions were taken it related to committing the most serious offences (murder and rape) and lower tariff offences such as indecent assault correlated with not taking precautions. Considering the most likely precaution, covering of the mouth, this still suggests a composite action during the offence to avoid detection as it takes place, rather than a premeditated action, for example, a disguise which was used in 1 in 20 offences. The lack of precautions can be hypothesised to mean one of two possibilities: firstly, the offender does not wish to avoid detection or secondly, they do not know how to avoid detection.

In terms of behaviours that may provide knowledge rules to assist with detection, this study sought to test whether cunnilingus differentiated those who had served a prison sentence (Beek, Eshof & Mali, 2010). It was not supported in this study. Behaviours which differentiated those who had served a prison sentence were kissing the victim's chest and causing severe injury. A behaviour that correlated with not having served a prison sentence was anal penile penetration. This is particularly interesting when considered with the findings of Hazelwood and Warren (2001). They noted a trend wherein the rapist's interest in fellatio increases while his interest in vaginal intercourse decreases. Taken together, these findings could suggest that offenders who have been to prison commit sexual assault (e.g., kissing the victims chest) offences whereas those without prison experience commit anal rape. One limitation of the study is the absence of some chronological details about the sequence of the offences, for example, it is not known where prison features in the series for those who went to prison. Perhaps offenders with more criminal experience of sexual offending are more confident in their approach to the crime. With this confidence comes a clearer notion of what they want from the crime; therefore, they carry out more pseudo-intimate behaviours. It seems reasonable to assert that an offender committing his first stranger offence may be more focused on the sexual act whereas one who has committed a longer series and maybe been to prison has more experience and confidence in offending. This highlights the need for further research to understand the sequence of the offending. Following these findings, and in order to understand this concept further, the pathways of offending will be explored in the next chapter.

*Escalation Factors: Injury, Seriousness of Offences and Use of Weapon*

As previously explained the current literature tends to concentrate offender escalation in two ways: the first is blunt force trauma (Hazelwood & Warren, 2001), the second is seriousness of offence (Soothill et al., 2002). Within the current study there were two measures that relate to these: level of injury to the victim and the different offences. Considering the level of injury first, 64% of the cases reported no injury. This must be interpreted carefully as Kimerling, Rellini, Kelly, Judson and Learman (2002) noted higher report of injuries from victims and questioned whether they are reported. The current study found that having served a custodial sentence was more

likely to result in severe injuries to the victim. Injuries were also associated with substance misuse and weapon use. Those offenders that used the con approach were less likely to inflict a severe injury. There are several possible explanations to these findings; custody and injury will be considered first. The relationship between custodial sentences and injury gives support to Scott et al. (2006) who hypothesised those stranger rapists who use minimal violence would be less likely to have assault convictions or prison experience than extremely violent stranger rapists. In their study they found no correlation with violence convictions but did find prior prison experience was correlated. This study replicates that finding but the obvious limitation of this data set is all previous convictions were not available. Considering the theoretical explanation for this finding, one explanation is the criminological perspective that prison is effectively a 'school of crime' (Lilly, Cullen, & Ball, 1995). In essence the schools of crime argument view prison as a breeding ground for criminality where offenders learn and trade criminal behaviour. One review of the roles of prisons (Bukstel & Kilmann, 1980) claimed there is significant positive reinforcement for anti-social behaviours by peers and staff that promotes a pro-criminal environment. Whilst this view is challenged by other schools of thought (see Gendreau, Goggin, & Cullen, 1999 for a review) this may give insight into the offending behaviour. The second inferential possibility is imprisonment is reserved for more serious offences or less serious offences with aggravating factors (Sentence Guideline Council, 2007) and therefore there is higher risk of serious offending per se. This finding supports Soothill et al. (2002) who found having served a custodial sentences increased risk of sexual murder. This is also supported by Douglas and Munn (1992) who found experience of prison had a very significant impact on the modus operandi of the crime. Perhaps, whilst previous criminality can influence the level of injury, the other findings of this study may indicate that interaction between the victim and the offender and other dynamic factors also relate to injury.

This study found that as victims get older they are more likely to have received injuries. Research by Sugar, Fine and Eckert (2004) noted injuries are more common in adolescents and women over the age of 49; therefore, this may need further investigation. The theoretical position is also unclear as there are differing views on the role of victim resistance within sexual offences, (Lawrence, Fossi, & Clarke, 2010) and differing views on the role of violence in the offences (Hazelwood &

Warren, 2001). From a theoretical position certain theories of child rape such as Finklehor (1984) advocate the child can have an active role as to whether they are abused. In terms of adults, authors such as Ullman, (1997, 1998) advocate victims should use physical and verbal active resistance to avoid serious injury and reduce the severity of sexual assaults. Contrarily, some adult rape theories note increased physical force is most probable if the victim offers resistance (Prentky & Burgess, 2000). Interestingly where studies have analysed the temporality of when the injuries occurred, most injuries occur prior to resistance and that victim resistance rarely results in further injury (Ullman, 1997, 1998; Tark & Kleck, 2004). Perhaps it can be hypothesised, as the current study includes a wide range of victims, that different methods and typologies of offending relate to different levels of injury. For example, child molesters would be more likely to deploy a grooming methodology within their offending (Eldridge, 1998) which could result in less injury and therefore younger victims have less injury. As the offender gets older, then the function of the offence becomes more important; more sadistic offenders will inflict more injury whereas offenders who see the sexual offence as pseudo-relationships (Canter, 1994) would be less likely to injure the victim as this does not fit with their relationship distortion. This concept is supported by this study as the approach most likely to fit with relationship building distortion is negatively correlated with causing an injury. This could also link to other factors discussed in the previous Section in terms of the role of relationships and displaced aggression.

Within the current study, two further factors related to whether a victim was injured or not: the first was weapon use and the second was substance misuse. This study found, similar to Sugar et al. (2004), that if a weapon was present there was a higher likelihood of injury. From a theoretical perspective this suggests that while weapons may be present to seek control by intimidation emphasising motives of anger and power (Groth, Burgess, & Holmstrom, 1977), the weapon actually means an increased likelihood of injury. Furthermore, use of a weapon was associated with use of alcohol. Alcohol can lead to increased risky decision-making (Lane, Cherek, Pietras, & Tcheremissine, 2004), and it is suggested alcohol can be used to overcome internal inhibitors towards sexual offending, (Finklehor, 1984). This study therefore supports that substance misuse can relate to increased behavioural risk.

*Limitations*

This study sought to review current serial offender factors and establish characteristics that can be used as 'knowledge rules.' There are several limitations to the study and there are also areas for future research. First, despite there being many advantages to using police data as outlined in the methodology, there was a lack of information regarding offenders' cognitive, emotional and other factors that may be available within a therapeutic setting and useful for explanation and inference. That information, combined with the findings of this chapter, would present an opportunity for further theoretical comment and is thus an area for further research. Second, whilst data were available for whether offenders had served a custodial sentence they were not available for all of the previous convictions of the offenders. This information would have allowed further comparison with several studies. Third, while the sample size is reasonable it is not sufficient to interpret factors such as the blitz method of approach and offences where the offender is known. In terms of further areas of research, the main observation is criminal careers, whether escalating or not, clearly have factors that contribute to their progression; however, one of the most important aspects of the progression still seems to be evasive. The actual sequence of the series from one offence to another requires further research.

*Implications and Direction of Further Research*

There is a paucity of research investigating UK serial sexual offending and specifically the crime scene characteristics. Therefore this study aims to contribute towards a greater understanding. As, McIvor and Kemshall (2002) note, to effectively devise a risk assessment for the UK, the sample should be validated on a relevant offender group with a UK population. This study takes initial steps towards that aim.

The main implication of this study is that research is needed to understand the sequence throughout serial offenders' offence behaviour. Several risk factors have been highlighted in this study. Some of these will be useful on a practical level while others may have implications for theory (discussed in Chapter 9). Recent studies have highlighted the utility of sequence analysis in sexual offender studies (Blonigen, 2010). In essence, this study is the first stage of a more in-depth analysis of serial sexual offending using sequence analysis.

This study provides a number of 'knowledge rules' (Beek et al., 2010) to assist with criminal investigations. It also highlights the importance of the police and their partners' correctly recording information such as relationship status as it may be searched at a later date for an investigation. In trying to explain some of the behaviours reported, a tentative proposition as to the role of an offender's relationship in their offending has been made. The police and multi-agency partners are often aware, or sometime even attend, relationship issues that may be triggers to sexual offending. By advocating increased use or propagation of help lines which allow offenders to telephone and discuss offending thoughts, such as the Lucy Faithful Stop it Now scheme (Lucy Faithful, 2010), there is the opportunity to support offenders when in crisis and potentially to reduce crime. Furthermore, if the role of relationships can be positive and negative in terms of consequences of offending, consideration could be given for programmes such as the Healthy Relationship Programme (MAPPA, 2009) to be included in treatment plans for sex offenders in custody or the community.

In terms of multi-agency working, the role of MAPPA and MARAC in managing risk will often include discussion of potential victims. Making sure support for relationships exist, whether they are a protective factor or a risk, should be considered. Within MAPPA there are also agencies that have a duty to co-operate to manage risk and have responsibility for the provision of care for substance misuse. This study proposes substance misuse as an increasing risk in some offences, and therefore supports such agencies being significantly involved as part of a risk management plans.

The finding that serial offenders seem to take little precaution in their offences is of investigative significance. Those offenders who have not been to prison may well be easier to detect by a medical examination of the victim (as they are likely to commit penile penetration); however, this study re-enforces the NPIA's advice on early evidence gathering (see Chapter 5). Furthermore, those offenders who have been imprisoned previously are more likely to kiss the victim's chest and therefore there is

an opportunity to swab for DNA. This is particularly relevant as the offender is very likely to be on the DNA database. This is especially useful where the victim is declining a medical examination but consents to this less invasive procedure. In terms of the weapon findings, when victims are injured, (especially if they are not conscious), search strategies should routinely include search for a weapon. If found there is once again, a potentially useful line of enquiry both with ownership and forensic value. The final issue is one that has already been highlighted in police culture when investigating rape. The majority of victims in this dataset did not reveal an injury (although there is no way of confirming whether an injury was present or not). Police culture of the 'real rape' should consider this finding as potentially some of the most dangerous offenders in the UK did not injure their victims during their offence. As Stern (2010) advocates, an open-minded non-judgemental approach by investigators will hopefully assist to protect and care for victims by conducting a diligent investigation without a prejudicial mindset (see Chapter 7 for an exploration of investigator decision-making in serial sexual offences).

*Conclusion*

Policing now has a tighter focus on risky offenders (Kemshall & Wood, 2008). This study describes 154 serial offenders and their offending behaviours. This chapter explored various relationships including age, custodial sentences and offence behaviours. The study found that offenders generally commit relatively short series over varying degrees of time. Indecent assault was common and the finding of age being negatively correlated with the age of the victim was supported. Serial offenders did not routinely take precautions to avoid detection. However, some older offenders and those committing the most serious offences (rape and murder) were more cautious. Furthermore, there was a relationship between previous prison experiences and injurious offending. There were also several associations between the offenders' relationship, living status and their offending behaviour. Substance abuse was also linked to the most injurious offending. Theoretical implications for these findings were discussed including whether displaced aggression could explain relationships between injury and different stages of courtship. There was a clear need from this study to examine the sequences of the serial offending and implications for risk assessment, policing and wider multi-agency offender management were discussed.

# Chapter 4

## Serial sexual offenders: pathways of offending

The previous chapter explored serial sexual offenders and concluded that in the current dataset serial offenders generally commit relatively short series over a short period of time. Where precautions were taken to avoid detection they were generally offence dependent; when offenders had experience of prison they were likely to have committed more injurious offences. This notion that prison might influence an offender's behaviour has recently been highlighted by Liu et al. (2010) who note it might lead to escalation in some circumstances. Returning to the literature, emphasis has been placed on the criminal career over time (see Chapter Two) and recidivism rates (see Chapters Two and Five). However, research examining the sequences of crime, or the 'forensic process' is considerably rarer (Taylor, Jacques, Giebels, Levine, Best, Winter, & Rossi, 2008). Chapter Two described the theories of sexual offending and how offenders begin offending. In order to develop the research question for this chapter, it will recap the perspectives as to why sexual offenders persist in criminal careers and then review the debate as to whether sexual offenders are specialist, generalists, or both. Finally, what other theoretical understanding may explain the different patterns of offending and what insight sequence analysis might offer will be reviewed.

From a criminological perspective, the study of criminal careers has recently regained momentum; what is interesting, however, is that there has been acknowledgement of the needs to embrace individual factors – particularly genetics (Soothill et al., 2009). It could be argued similar progression has developed with the psychological theory of sexual offending with the integrated theory of sexual offending (Ward & Beech, 2006). It has also been acknowledged by criminologists that criminal careers research methodology of longitudinal study may result in out-of-date obsolete findings by the time the study comes to an end (Soothill et al., 2009).

Therefore, refocusing the research is of extreme importance. The assumption of escalation in offending seriousness underlies much criminal justice policy (Liu et al., 2010). This is supported by Lulham and Ringland (2010) who describe crime seriousness as a fundamental consideration in policing and the court system and offence severity being central to the criminal justice system response to offenders. Therefore, as Sullivan et al. (2006) note, investigations into whether offenders specialise in their criminal behaviour carry implications for both criminological theory and public policy. However, these investigations should remain cognisant of research suggesting offenders' risk changes over time (Hanson & Harris, 2001). As Liu et al. (2010) write, "Recent acknowledgment that escalation in crime seriousness over the criminal life course continues to be an important issue to study in criminal careers. Quantitative research in this area has not yet been well developed owing to the difficulty of measuring crime seriousness and the complexity of escalation trajectories" (2010, p.1).

Farrington (2002) explains the importance of investigating offending history or sequences over time as those behaviours act as stepping stones to following offending behaviours. He describes the understanding of onset, persistence, escalation and desistence of offending as being crucial. Where an offender is known, greater understanding of their criminal career can assist to manage risk and assist in focusing resources on the highest risk offenders (as is required, MAPPA, 2009). As Chapter One described, this thesis aims to focus on those offenders who commit the most serious harm and to provide insight to assist with the understanding, management and mitigation of risk. More importantly, if offenders are correctly identified, then the investigative response will be proportionate to the risk they pose (Kent Police, 2010a). Clearly, an escalating serial offender will receive a different operational response to a one-off offender. This highlights the importance of understanding the different levels of risk and pathways. Chapter Two provided a review of the literature on criminal careers and presented four pathways following onset of offending: escalation, maintenance, oscillation and de-escalation.

Considering the pathways, Lulham and Ringland (2010) identified four specific groups. The groups were: offenders who commit primarily low seriousness offences (33%); offenders who escalate from low to high seriousness offences (16%); offenders who primarily commit high seriousness offences (26%) and offenders who

de-escalate from high to low seriousness offences (25%). In discussing these findings, Lulham and Ringland (2010) questioned whether the de-escalating trajectory group could be related to how police process offenders with no prior convictions. They queried whether police are more likely, in the case of a more serious offence, to initiate formal proceedings against a first time offender. They question whether, for less serious offences police might use informal cautions and warnings, but once offenders have prior convictions police may proceed formally, regardless of the seriousness of the offence. They argue these processes may have complex impacts on trajectory models and suggest further research into these issues.

*The Question of Escalation*

Whilst research is now emerging on escalation (e.g., Liu et al. 2010), Farrington's (1997) assertion that further research into escalation was required is still valid and supported by Liu et al. (2010). The research which has been conducted investigating escalation has approached the concept from a variety of directions including: amount of force used; amount of blunt physical trauma; type of crime committed; seriousness of offence; and likelihood of offending resulting in murder. One of the most contemporary studies is Liu et al. (2010) who conducted a longitudinal study of escalation and noted that escalation is used to describe both increasing frequency of offences and increasing seriousness of offences. They draw on Blumstein, Cohen, Roth and Visher (1986) definition of escalation as a tendency to move to more serious offence types. Liu et al. (2010) divide escalation into association with: 1) an experience of the criminal justice system; and 2) age and maturation. Generally, studies of escalation have had varied and conflicting results. Piquero et al. (2003) refer to escalation by the term 'aggravation'; they identify that the evidence for escalation is uncertain. Some studies have found no evidence for escalation (e.g., Datesman & Aickin 1984) whereas others provide significant developmental models for the stages of escalation (Le Blanc & Frechette, 1989). In many respects the findings seem to depend on the question that is being asked of the data.

Where specific types of escalation have been identified, they have yielded interesting results. Hazelwood and Warren (2001) found variation in arrest and conviction histories of serial offenders including sexual offences and differences in sexual behaviours throughout the series. They found serial offenders who inflict more blunt force trauma on their victims accounted for 25% of cases and varied their behaviour including expressing more hostility in general and toward women in particular. However, Warren et al. (1999) noted, "Findings suggest that there is no consistent escalation in the amount of physical force used by the majority of serial rapists" (1999, p.55). Other studies which have examined the escalation over a series classified 32% as escalators, 32% as non-escalators and 36% were first time offenders (Stermac & Hall, 1989). In that study, escalators were significantly younger than non-escalators (24.81 years versus 31.31) and had fewer previous convictions than non-escalators and had more frequent histories of 'exhibiting' (exhibitionism) or obscene phone calls. A further study that investigated lower tariff offences in the series is Stermac and Hall (1989). They concluded that sexual offenders who escalated in the seriousness of their crime were younger men and more likely to have histories of psychiatric treatment. They noted lower tariff offences at the beginning of the escalation. Interestingly, when isolating exhibiting, Firestone, Kingston, Wexler, and Bradford (2006) found that over a mean follow-up period of 13.24 years, 23.6, 31.3, and 38.9% of exhibitionists were charged with or convicted of sexual, violent, or criminal offences respectively and they suggest exhibitionism is not a benign act and may lead to more serious crimes. They also found that hands-on sexual recidivists accumulated a greater number of prior violent and criminal charges and or convictions than did the hands-off sexual recidivists. There is some support for this concept in recent review of seriousness; Ramchand, MacDonald, Haviland, and Morralon (2009) reported, on average, individuals engage in less severe crimes before they undertake more severe ones. In terms of the progression from lesser sexual offences to the most serious offences, little research has actually reviewed the end point of murder. One notable exception is Francis and Soothill (2000) who reviewed those that commit a sexual murder; they reported that approximately one in 400 of those convicted of a sexual offence were convicted of a murder in a 21 year follow up. This represented an increased risk of over sevenfold against males in the general population. Those convicted of child sex offences were no more likely than other sex offenders to

murder. Child sex offenders were more likely to kill an adult stranger and general sex offenders were more likely to kill in a domestic situation.

In summary, the question of escalation seems to depend on the perspective taken to investigate it; over entire criminal careers, studies debate whether escalation exists. However, recent research seems to be more specific in the research question being addressed and is finding escalation (Liu et al., 2010; Lulham & Ringland, 2010). Those same authors also provide insight to types of investigation and conclude there are distinct criminological processes. Liu et al. (2010) report the number of conviction occasions are associated with escalation and there are two types of escalation process in crime seriousness over the criminal career (life course): 1) escalation due to experience; and 2) escalation due to age. The first produces statistically positive effect – escalation, the second produces statistically negative effect – de-escalation. The two types of escalation combined determine what is observed.

De-escalation tends to be linked to desistence as consistent de-escalation will eventually mean there are no less serious offences to commit. Early work on the persistence or desistence of careers was presented by Rankin and Wells (1985). They explain that age is an important factor; offenders may de-escalate so that their behaviour decreases in seriousness as well as frequency. Alternatively as they grow older they may persist, that is, only become involved in one type of behaviour; this specialisation (which may still be de-escalation) is discussed later in the chapter. Rankin and Wells (1985) gave several reasons for desistence including: getting married and relationships with partners, the cost of the crime (longer prison terms) and job satisfaction among those given. More recent work by Laub and Sampson (2003) cite reform schools (similar to young offender institutes), military service, stable marriages and employment as reasons why offenders desist and note that absence of these factors can be reasons why offenders may persist. They describe a lack of positive turning points, excitement of crime, alcohol abuse and the criminalising effect of prison as other factors that contribute to persistence of offending. However, Barry (2006), in reviewing criminological theory of desistence and persistence, suggests there is no common thread of understanding why the offender follows either route. Whilst the concept of desistence may seem quite straightforward, in practice it can be more complicated (Soothill et al., 2009). The main reason for this is that an apparent cessation of crime can be re-activated by a

single act. For the offender, deciding to desist and successfully doing so are two very different things – there is a significant distinction between an offender realising crime is not for them and the offender actually understanding the process of staying crime free and remaining that way (Maruna, 2001). One of the criminological explanations as to why offenders desist or persist is rational choice theory.

*Rational Choice Theory*

The study of criminal careers has mainly been undertaken from a criminological perspective (Soothill et al., 2009) and traditional explanations of the reason for the careers evolving are discussed in Chapter Two. However, recently there has been a more in-depth focus on the decision making of the offender (Leclerc, Proulx, & Beauregard, 2009). The next chapter provides an overview of the decision-making literature. However, Beauregard and Leclerc (2007) see the rational choice perspective as criminology's theoretical framework designed to investigate offenders' decision-making. The rational choice perspective suggests criminals offend as crime provides the most effective means of achieving desired benefits (e.g., prestige, sexual gratification, money, material goods, etc). Several factors can constrain the offender's decision-making, for example, time, cognitive abilities and the availability of relevant information in their attempt to minimise risk of apprehension and maximise gains (Cornish & Clarke, 1987; Johnson & Payne, 1986). Offenders are perceived as decision makers whose choices are directed by the values, costs, and likelihood of obtaining desired outcomes. The rational choice perspective is relevant as it "offers just such a fluid, dynamic picture—one that views offending as more present-oriented and situationally influenced" than other criminological theories (Clarke & Cornish, 2001, p.32). Factors such as the victim resisting, influence offenders' decisions (Tedeschi & Felson, 1994). From the rational choice perspective, theorists have suggests the whole crime-commission process can be investigated to provide 'crime scripts' which are step-by-step accounts of the strategies adopted by offenders to commit crimes with a view to assisting crime prevention strategies. An early example is Cornish (1998) who outlined two particular scripts related to sexual abuse of male

victims by stranger offenders in public places and residential institutions. The model describes:

> "preparation (elaboration of sexual fantasies, access and use of child pornography, network of other offenders), entry to setting (already in setting), preconditions (using a legitimate role, right of access to all aspects of setting, absence of capable guardians), instrumental precondition (selecting a potential victim), instrumental initiation ("grooming"), instrumental actualization (removal or access to an unsupervised place, lack of escape routes), doing (sexual assault), post-condition (successful disengagement) and exit from setting" (Cornish, 1998 cited in Leclerc et al., 2009, p.6).

It could be argued that psychological theories of how offending is achieved, maintained and escalates, such as Eldridge (1998), have significant similarities to Cornish (1998). Those psychological theories see fantasy and masturbation playing a key role. Eldridge (1998) developed Wolf's (1984) theory and proposed three cycles of offending: continuous, inhibited and short circuit cycles (see Chapter Two). Each cycle goes through some of the stages identified: fantasy reinforcement, fear of detection and guilt, illegal fantasies, masturbation/orgasm, target victim, fantasy rehearsal, grooming and then abuse. Advancing Eldridge (1998), Sullivan (2002) developed the spiral of sexual abuse, which is effectively the cycles of abuse continuing in a spiral. This conceptual framework lends itself to illustrating how abuse maintains and escalates in its nature. The spiral illustrates a process for the offenders; it moves through motivation, into illegal fantasy to follow a path overcoming obstacles of guilt and fear encompassing cognitive distortions to offence preparation that ends in the sexual offending. He notes, "The spiral can be used effectively in illustrating the evolution of most forms of sexually abusive behaviour, from the opportunistic stranger attack to the intricately planned inter-familial abuse," (Sullivan, 2002, p. 19). He explains that the spiral allows explanation for different types of offending such as the indecent exposer who graduates to hands-on sexual offending. Whether an offender graduates and how their offences unfold has been given considerable attention in the specialisation versus generalisation debate.

Whether offender specialisation exists continues to be a subject of empirical inquiry researchers into criminal careers and has been for some time (Simon, 1997; Soothill et al., 2000; Sullivan, McGloin, Ray & Caudy, 2009). Early research consistently noted generality of offending. However, more recent work has revealed mixed findings (Sullivan et al., 2009). As Soothill et al. (2009) identified, there has historically been a distinction drawn between sexual and general offenders. An often cited review by Lussier (2005) describes two major hypotheses being put forward to describe the criminal activity of sexual offenders in adulthood. The first is sexual offenders are specialists who tend to repeat sexual crimes. The second is sexual offenders as generalists who do not restrict themselves to a particular type of crime. Indeed studies such as Soothill et al. (2000) have found sexual offenders are "most likely to be convicted of the same kind of sex offence as the target offence ... This consistent pattern for each group produces the general sense that sex offenders are fairly 'specialised' within the range of sex offending categories" (Soothill et al., 2000, p.62). Soothill et al. (2009) (citing Stander, Farrington, Hill, & Altham, 1989) note, more than other offenders, there is a tendency for sexual offenders to be convicted of the same offence again and this happens in 45% of cases which suggests specialisation. Rankin and Wells (1985) assert that, as offenders grow older and persist, they may only become involved in one type of behaviour. More recently, two perspectives have begun to conceptualise specialisation differently (Soothill et al., 2009) and question what specialisation research is seeking to answer. The presence of both generality and specialisation in the offending behaviour of sexual offenders is not being seen as contradictory as it originally was by Lussier (2005). Indeed, Lussier (2005) suggests the focus should be within-individual changes in offending over time to disentangle the generalisation and specialisation processes in sexual offenders. Where studies have begun to do this, such as Sullivan et al. (2006), evidence of short-term specialisation with regard to offending patterns has been observed. This concept of differing temporal aspects, among other issues, has led Soothill et al. (2009) to conclude that, whether an offender is a specialist very much depends on what measurement is used. For example, if crime types are divided into three types, it is much less likely to find specialisation than if divided into 30 types. Also, the amount of time studied may yield different responses over time. The most recent perspectives

suggest two levels of analysis: 1) investigating participation in crime generally to determine specialisation; and 2) investigating within the offenders' sexual offending career, the analysis of specific kinds of sex offending. These two levels may act quite independently so could be a specialist at one level and a generalist at the other. They therefore provide four possibilities of offending:

Table 14

*The Four Possible Generalist-Specialist Combination for Offenders who Commit Sexual Offences*

|  | General offending | Sexual offending | Example |
| --- | --- | --- | --- |
| Pure generalist | Variance | Variance | Burglar who commits separate violent acts and exposes himself and rapes |
| Generalist specialist | Variance | Specialisation | Burglar who commits separate violent acts and is serial rapist |
| Specialist generalist | Specialisation | Variance | Sexual offender who commits exposure, indecent image offences, spousal rape |
| Pure specialist | Specialisation | Specialisation | Serial rapist |

As described in Chapter Two, two of the four descriptions of offending pathways are maintaining an offending pattern or oscillating between different offences. This could also be interpreted as the difference between generality and specialisation of offending. In Chapter Two, examples of how motivational theories can demonstrate behaviour were given, for example, Prentky and Knight (1989). In their theory, the offender with the sexual gratification motivation is described as more likely to find other outlets (sex clubs, massage parlours) and show deviant sexual behaviour such as voyeurism, exhibitionism and fetishism. It is clear, however, that, as McGloin et al. (2009) note, it would be useful to further investigate the aetiology of this within-offender, within offence-type variation. Recent studies have highlighted the

importance of investigating the sequences of criminal acts in sexual offender studies (Blonigen, 2010).

*Sequences Versus Criminal Careers*

Recent research has suggested that further study should concentration on the temporal aspect of offending when considering risk (Bani-Yaghoub, Fedoroff, Curry & Amundsen, 2010) and the temporal scale on which escalation has been measured has been a neglected area of focus (Liu et al., 2010). Taylor et al. (2008) note the considerable effort within investigative psychology to differentiate offenders based on their behaviour at the crime scene. However, they argue the methodology used takes no account of the order in which behaviours occur during the crime. They suggest this approach neglects the importance of interaction process and interactionist theories of human behaviour (Mischel, 2004), which suggest people do not act consistently in different situations. They also propose that criminal acts and investigative decisions occur as events to be understood within larger sequences rather than single variable events that are be counted. This notion of the individual's behaviour was posited by Jones and Gerard (1967) who proposed that an individual's present behaviour is not only contingent or predictable from the their past behaviour but also their partner's (or another individual's) influence on them and the subsequent behaviour. This set of rules or a 'grammar' is therefore formulated to provide a system for predicting an individual's likely response with differing situations. Therefore, in order to find patterns in data sequences, sequential statistics are used seeking statistical dependencies between events over time. Fossi, Clarke and Lawrence (2005) describe "Sequential analysis is a visual, quantitative approach to data that allows a researcher to achieve a richer qualitative understanding" (Fossi et al., 2005, p. 1447) by "looking at the data to see what it seems to say" (Tukey, 1977, p. 5). Abbott (1995) concurs with this concept in his review of sequence analysis. He highlights one method of sequence analysis that sees the sequence investigated either for itself or as an independent or dependent variable. He notes sometimes the interest is simply in the patterns in a collection of sequences. However, in other scenarios, how the prior event sequence affects the immediate future is relevant. Finally, the investigation may seek to understand what accounts for different sequences of behaviour; that is, what past variables, for example, lead to descending spirals into criminality?

Several recent studies have used sequence analysis to try to understand criminal interaction early work beginning investigating police cases of road traffic accidents (Clarke, Forsyth, & Wright, 1999). Later work has applied the technique to: investigating offenders' verbal strategies during stranger rapes (Lawrence, Fossi & Clarke, 2010; reviewing the sequences of sexual behaviours in stranger rapes (Fossi et al., 2005); describing the process by which individuals become involved (and later uninvolved) in extremism (Jacques & Taylor, 2007) and finally understanding bystanders and the informal regulation of violence in the night-time economy particularly in terms of escalation of the event (Levine, Best, & Taylor, 2007, cited in Taylor et al., 2008)

If the analysis of sequences is of merit, then determining the focus of the analysis is key. Fossi, Clarke and Lawrence (2005) identified that research examining sexual assault has tended to fall into two categories: first, focussing on the offender by assessing characteristics to understand the etiology of sexual violence and the heterogeneity and taxonomic structure of the population; second, researching victimology concentrating on rape prevention. They identify that by studying the sequences of the behaviour "a new methodology that could produce greater texture and depth than the more conventional descriptive studies of sexual offenders and offenses" (Fossi et al., 2005, p. 1447). In many respects the, research question returns to what is pragmatically relevant (Fishman, 1999) and what would add value to the body of literature.

There are three mains aims of this study: the first is to explore and test the offending in terms of the four possible outcomes over time (de-escalator, maintainer, oscillator and escalator); the second is to test and explore the concept of highest tariff offences being escalated to, for example murder; third, is to map and explore the disparity in the literature in terms of sexual offending being a heterogeneous or homogenous crime and, finally, try to map the pathways of offending and their interactions. Within these aims there are a number of hypotheses:

*Hypotheses.*

The first hypothesis aims to investigative if the four pathways within the criminal careers literature are present in serial sexual offenders.

1. There will be clear demarcation of the four pathways: escalation, maintenance, oscillation and de-escalation

In terms of the specific pathways, the Lulham and Ringland (2010) study found that 16% of the general population escalated. Therefore the following hypotheses will be tested:

2. Serial sexual offenders will demonstrate escalation in their offending and therefore similarly represent the general offending population;

3. Serial sexual offenders will demonstrate de-escalation in their offending and therefore similarly represent the general offending population.

Studies that have specifically investigated sexual offenders, for example, Stermac and Hall (1985) noted levels of escalation at 33% whereas Hazelwood and Warren (2001) noted 25% of serial offenders were escalators in their blunt force trauma. Studies such as Firestone et al. (2006) have commented that lower tariff offences such as exhibitionism can lead to serious offences; this is the escalation hypotheses that offenders progress from less serious to more serious offences. Therefore:

4. Escalators will be present in the current sample in similar proportions to Stermac and Hall (1985) and Hazelwood and Warren (2001);

5. There will be a discernable progression from lower tariff offences to higher tariff offence.

Soothill et al. (2000) found 1 in 400 offenders who had committed a sexual offence went on to commit a murder. Therefore:

6. Murders will be preceded by a lower tariff sexual offence.

Contrary views of Simon (1997) and Soothill et al. (2000) present heterogeneous or homogenous offence patterns. Soothill et al. (2000) found sexual offenders are likely to be convicted of the same type of offence as their target offence. Therefore:

7. There will be an evident specialisation in offence type.

From the specialisation debate, this study has presented from the literature four specialisation types. Therefore:

8. There will be a discernable pure specialist and specialist generalist type.

Finally, an exploratory research question will be posed: what different pathways are followed where different sexual offences are committed?

## Method

The method followed was as with the previous chapter; however, Each of 520 offences were coded based on an adapted scale of seriousness taken from Francis, Soothill, Humphreys, and Bezzina (2005). The offences were given seriousness scores calculated through average (mean) actual recorded sentence length for the offence. The adaptions were made as Francis et al. (2005) did not include attempts (other than attempt murder) and SCAS had three offences not listed in Francis et al. (2005).

## Results

The results of the present study are in two distinct parts: the first describes the individual offenders' graphs and their method of offending; the second shows the State Transition Diagram for the Stranger offences and then describes the contingencies between offences.

*Method of Offending*

Of the 154 offenders, 24% were de-escalators ($n$ = 37), 39% were maintainers ($n$ = 60), 36% were oscillators ($n$ = 23) and 13% were escalators ($n$ = 21). Table 15 illustrates the four methods of offending for the whole data set, those committing three or more offences, four or more and so on. Only up to six offences are shown due to low $n$, Table 16 illustrates the full breakdown in terms of the individual numbers of series. As can be seen, there are no oscillators at the two offences as a minimum of three offences is required for oscillation. Just under half of the data set committed

three or more offences ($n$ = 74); of those, 48% ($n$ = 15) were oscillators, 24% ($n$ =18) were maintainers, 20% ($n$ = 15) were escalators and under 7% ($n$ = 5) were escalators. As the number of offences in the series increased, the number of maintainers and de-escalators steadily decreased, the escalators cease all together and the oscillators steadily rose. This is illustrated in Table 17.

Table 15

*Summary of Pathway Types with Offence Frequency*

|  | Whole Set | | 3 + offences | | 4 + offences | | 5 + offences | | 6 + offences | |
|---|---|---|---|---|---|---|---|---|---|---|
|  | N | % | N | % | N | % | N | % | N | % |
| De-escalator | 37 | 24.0 | 15 | 20.3 | 6 | 14.3 | 3 | 10.0 | 1 | 5.6 |
| Maintainer | 60 | 39.0 | 18 | 24.3 | 8 | 19.0 | 4 | 13.3 | 1 | 5.6 |
| Oscillator | 36 | 23.4 | 36 | 48.6 | 28 | 66.7 | 23 | 76.7 | 16 | 88.9 |
| Escalator | 21 | 14.6 | 5 | 6.8 | 0 | 0.0 | 0 | 0 | 0 | 0.0 |
| Total | 154 | 100.0 | 74 | 100 | 42 | 100 | 30 | 100 | 18 | 100 |

Table 16

*Comparison on Pathways' Percentages Between the Current Study and Lulham and Ringland (2010)*

|  | Current study | Lulham and Ringland (2010) |
|---|---|---|
| Escalating group | 14% | 16% |
| Persisting group | 62% | 59% |
| De-escalating group | 24% | 25% |

Table 17 shows the breakdown of method for each series. This illustrates that in short series of two offences, the vast majority of offenders commit the same offence again. The next statistic is 28% ($n$ = 22) of the offenders committing two offences then committed a less serious offence. This table depicts consistency of the oscillators in later series and the decreasing of all of the other methods.

Table 17

*Number of Offences in the Series by Pathway Type*

| Number of offences | Method of offending | | | | Total |
|---|---|---|---|---|---|
| | De-escalator | Maintainer | Oscillator | Escalator | |
| 2.00 | 22 | 42 | 0 | 16 | 80 |
| | 28% | 53% | 0% | 20% | 100% |
| 3.00 | 9 | 10 | 8 | 5 | 32 |
| | 28% | 31% | 25% | 16% | 100% |
| 4.00 | 3 | 4 | 5 | 0 | 12 |
| | 25% | 33% | 42% | 0% | 100% |
| 5.00 | 2 | 3 | 7 | 0 | 12 |
| | 17% | 25% | 58% | 0% | 100% |
| 6.00 | 0 | 0 | 5 | 0 | 5 |
| | .0% | .0% | 100.0% | .0% | 100.0% |
| 7.00 | 0 | 0 | 4 | 0 | 4 |
| | .0% | .0% | 100.0% | .0% | 100.0% |
| 8.00 | 1 | 0 | 1 | 0 | 2 |
| | 50% | 0% | 50% | 0% | 100% |
| 9.00 | 0 | 0 | 1 | 0 | 1 |
| | 0% | 0% | 100% | 0% | 100% |
| 10.00 | 0 | 0 | 3 | 0 | 3 |
| | 0% | 0% | 100% | 0% | 100% |
| 11.00 | 0 | 0 | 1 | 0 | 1 |
| | 0% | 0% | 100% | 0% | 100% |
| 13.00 | 0 | 1 | 0 | 0 | 1 |
| | 0% | 100% | 0% | 0% | 100% |
| 19.00 | 0 | 0 | 1 | 0 | 1 |
| | 0% | 0% | 100% | 0% | 100% |
| Total | 37 | 60 | 36 | 21 | 154 |
| | 24% | 39% | 23% | 14% | 100% |

In term of what offences appeared in what series, the most serious offences yielded interesting findings. Over half of the murderers in the study, ($n = 11$) were maintainers, that is, they committed murder after murder. Four offenders escalated to murder, three de-escalated from murder and three included a murder in their series. Attempt murder had a very different picture with five of six of these offences being an escalation. The offence of rape mainly split between maintainers and oscillators with 36% ($n = 59$) and 31% ($n = 52$) maintaining. Twenty four percent then de-escalated and 10% escalated. The offence of indecent assault was more likely to be included in the oscillator method with 49% ($n = 102$), followed closely by the maintainer method

with 31% ($n = 65$) maintaining. The majority of indecent exposures and breaches of the peace were in the oscillator method.

Table 18

*All Offences Represented as Pathways Category*

| | De-escalator | Maintainer | Oscillator | Escalator | Total |
|---|---|---|---|---|---|
| | 3 | 11 | 3 | 4 | 21 |
| | 14.3% | 52.4% | 14.3% | 19.0% | 100.0% |
| Murder | 3.0% | 7.1% | 1.4% | 8.5% | 4.0% |
| | 1 | 0 | 0 | 5 | 6 |
| | 16.7% | .0% | .0% | 83.3% | 100.0% |
| Attempt murder | 1.0% | .0% | .0% | 10.6% | 1.2% |
| | 39 | 59 | 52 | 16 | 166 |
| | 23.5% | 35.5% | 31.3% | 9.6% | 100.0% |
| Rape | 38.6% | 37.8% | 24.1% | 34.0% | 31.9% |
| Abduction | 2 | 2 | 3 | 1 | 8 |
| Specific offence – breakdown of method | 25.0% | 25.0% | 37.5% | 12.5% | 100.0% |
| Specific offence – breakdown of offence | 2.0% | 1.3% | 1.4% | 2.1% | 1.5% |
| | 19 | 4 | 17 | 4 | 44 |
| | 43.2% | 9.1% | 38.6% | 9.1% | 100.0% |
| Attempt rape | 18.8% | 2.6% | 7.9% | 8.5% | 8.5% |
| | 0 | 0 | 3 | 0 | 3 |
| | .0% | .0% | 100.0% | .0% | 100.0% |
| Attempt abduction | .0% | .0% | 1.4% | .0% | .6% |
| | 0 | 2 | 0 | 0 | 2 |
| | .0% | 100.0% | .0% | .0% | 100.0% |
| GBH | .0% | 1.3% | .0% | .0% | .4% |
| | 0 | 0 | 0 | 1 | 1 |
| | .0% | .0% | .0% | 100.0% | 100.0% |
| Gross indecency | .0% | .0% | .0% | 2.1% | .2% |
| | 29 | 65 | 102 | 12 | 208 |
| | 13.9% | 31.3% | 49.0% | 5.8% | 100.0% |
| Indecent assault | 28.7% | 41.7% | 47.2% | 25.5% | 40.0% |
| | 0 | 6 | 1 | 2 | 9 |
| | .0% | 66.7% | 11.1% | 22.2% | 100.0% |
| Burglary | .0% | 3.8% | .5% | 4.3% | 1.7% |
| | 1 | 0 | 4 | 1 | 6 |
| | 16.7% | .0% | 66.7% | 16.7% | 100.0% |
| Robbery | 1.0% | .0% | 1.9% | 2.1% | 1.2% |
| | 4 | 0 | 3 | 1 | 8 |
| | 50.0% | .0% | 37.5% | 12.5% | 100.0% |
| Assault | 4.0% | .0% | 1.4% | 2.1% | 1.5% |
| | 0 | 7 | 21 | 0 | 28 |
| | .0% | 25.0% | 75.0% | .0% | 100.0% |
| Indecent exposure | .0% | 4.5% | 9.7% | .0% | 5.4% |
| | 1 | 0 | 0 | 0 | 1 |
| | 100.0% | .0% | .0% | .0% | 100.0% |
| Public nuisance | 1.0% | .0% | .0% | .0% | .2% |
| | 1 | 0 | 0 | 0 | 1 |
| | 100.0% | .0% | .0% | .0% | 100.0% |
| Attempt theft | 1.0% | .0% | .0% | .0% | .2% |
| | 1 | 0 | 7 | 0 | 8 |
| | 12.5% | .0% | 87.5% | .0% | 100.0% |
| BOP | 1.0% | .0% | 3.2% | .0% | 1.5% |
| Total offences | | 156 | 216 | 47 | 520 |

| Percent of total offences | | 30.0% | 41.5% | 9.0% | 100.0% |
|---|---|---|---|---|---|
| Total | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |

*Progression Within Series*

Which offences followed which shows how the offences progressed over a series. First, the sequence analysis state transition diagram will be presented followed by the numeric offence contingencies.

*State Transition Diagram*

The state transition diagram depicts the most likely way of moving from one offence to another; it shows the interaction between the transitional probabilities. The program provides a best fit of the data to allow a pictorial interpretation. In this study each offence is represented by an oval with the offence it relates to written inside. The lines with arrows show that from offence A, the offender then committed offence B. The numbers represents the frequencies and a rounded up percentage of the total of those who committed offence A, committing offence B. Figure 1 is a sequence chart showing from an offender's start point for what offence they commit; that is, what do they do as a first offence in this data set. The diagram then shows the interaction between each offence. It is important to note that this is not a representation of chronology – it shows at any given time, from the data set, what is the likelihood, with a starting point of A, the next point being B. For example, taking Figure 1, 44 offenders (approximately 40% of the stranger offences) started with an indecent assault. To avoid misrepresentation, each diagram has a frequency at which those offences with less than this frequency are not depicted. This allows the main interaction to be shown.

From Figure 1 which shows all stranger offences, what can immediately be seen is a hub of offending between rape, indecent assault and attempt rape. Taking rape as a starting point, it is clear that this is either the first offence in a series or leads on from indecent assault or attempt rape. It is also of note that for approximately 30% of offenders in this offence rape is their final offence. It can be seen that rapists continue to commit another rape in a high proportion of cases. This is depicted by the looped

arrow starting and ending with rape ($n$ = 42, 40%). With indecent assault there appears to be more routes into the offence than rape, for example, indecent exposure, breach of the peace, burglary, and so forth but also the pathways between rape, attempt rape and indecent assault. Looking at other offences, robbery is clearly not linked into any other offences as a pathway and those robberies with a sexual element are most likely to result in the same offence being committed again. Burglary has a high proportion of the offenders committing another burglary and a similar amount then committing an indecent assault. The crimes of attempt murder and abduction are most likely to be the last in a stranger series that includes these offences. Due to the low frequency, which offences preceded these are not represented. The offence of murder has a depicted starting point leading directly to it for four offenders, and the loop depicted that three offences of murder have been followed by another murder. Half of the murderers represented also have this offence as their last before ending their series. For three offences, rape has been followed by a murder. Finally, one very interesting point of note is the tangential representation of all the offences which seem to progress from the bottom of the diagram to the top with breach of the peace and indecent        exposure        at        the        bottom        and        murder        at        the        top.

*Figure 1.* State transition diagram of stranger offences.
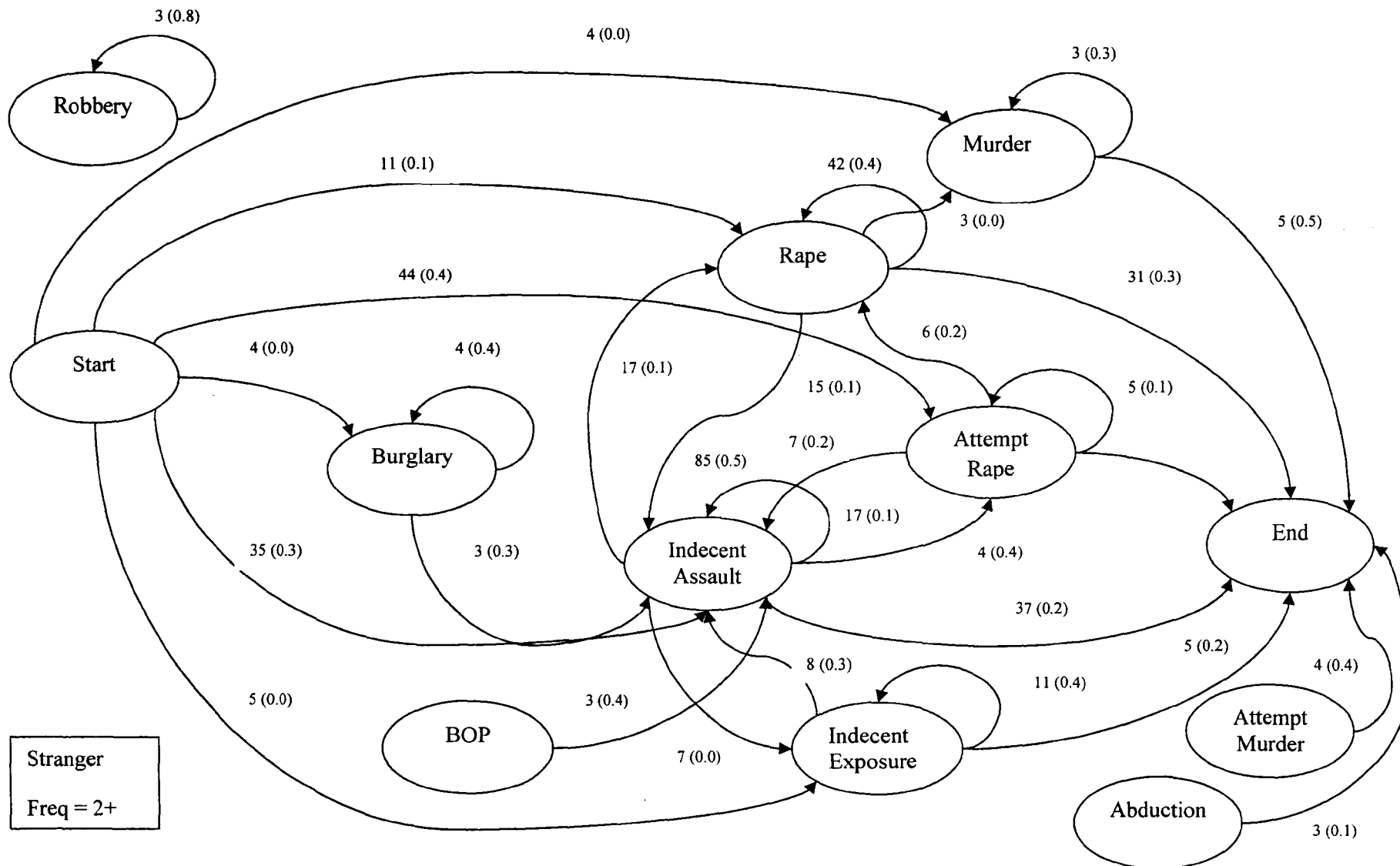
*First and Last Offences*

All of the one hundred and fifty four offenders' first and last offences are represented in Table 19. It is very clear that the majority of the data set is comprised of those committing the offences of rape and indecent assault. A high proportion begins by committing a rape (44%); however, only 32% of the sample has a rape as their final offence. Thirty-one percent of offenders start with an indecent assault with 34% ending with an indecent assault. Murder remains consistent with 8% of the data set starting and ending with a murder. The offence of attempt rape was surprisingly low in frequency with 8% ($n = 13$) of the data set starting with that offence and 10% ($n = 15$) concluding with that offence. Also of note is that the offences of abduction and attempt murder were rare starting offences but increased as a final offence. Abduction increased from 1 offender to 6 offenders and attempt murder increased from 1 to 5 offenders.

Table 19

*First and Last Offences of the 154 Series*

|  | Proportion | Beg (freq) | Proportion | End (freq) |
|---|---|---|---|---|
| Rape | 0.44 | 68 | 0.32 | 50 |
| Indecent assault | 0.31 | 47 | 0.34 | 52 |
| Attempt rape | 0.08 | 13 | 0.10 | 15 |
| Murder | 0.06 | 9 | 0.06 | 9 |
| Indecent exposure | 0.03 | 5 | 0.04 | 6 |
| Burglary | 0.03 | 4 | 0.01 | 2 |
| Assault | 0.01 | 2 | 0.02 | 3 |
| Abduction | 0.01 | 1 | 0.04 | 6 |
| BOP | 0.01 | 1 | 0.01 | 2 |
| Attempt murder | 0.01 | 1 | 0.03 | 5 |
| Robbery | 0.01 | 1 | 0.01 | 1 |
| GBH | 0.01 | 1 | 0.01 | 1 |
| Gross indecency | 0.01 | 1 | 0.00 | 0 |
| Attempt abduction | 0.00 | 0 | 0.00 | 0 |
| Attempt theft | 0.00 | 0 | 0.01 | 1 |
| Public nuisance | 0.00 | 0 | 0.01 | 1 |
| Total | 1.00 | 154 | 1.00 | 154 |

*Likelihood of Next Offence*

What would be the offenders next offence following any possible offence is shown in Table 20. Clearly, if the offender did not get the opportunity to commit another offence, they will not be shown here. There are several results of note, in terms of indecent assaults. Of those having committed an indecent assault, 100 of 156 (64%) offenders' next offence was a further indecent assault. Twenty one percent ($n = 33$) followed an indecent assault with an attempted rape or a rape. Interestingly, those who committed a rape followed that offence with another rape in almost half of the cases (49%, $n = 57$). One quarter of rapes were followed by an indecent assault, a potentially less serious assault. A total of eight offenders went onto commit

abduction, attempt murder or murder. It is clear those committing the offence of rape did not follow it with a considerably lesser offence. The offence of attempt rape was followed by a rape in 41% ($n = 12$) of cases, 31% committed an indecent assault, and 17% committed another attempt rape. One offender followed an attempt rape with a murder and two followed the offence with a lesser offence. In the case of murder, the next offence was dominated by another murder being committed in 67% ($n = 8$) of cases. The other offences were an indecent assault, two rapes and attempt abduction. Both indecent exposure and burglary were mainly followed by their own offence or an indecent assault.

Table 20

*Likely Next Offences for Indecent Assault, Rape, Attempt Rape, Indecent Exposure and Murder*

|  | Indecent assault | Rape | Attempt rape | Indecent exposure | Murder |
|---|---|---|---|---|---|
| Indecent assault | 100 | 26 | 7 | 10 | 0 |
| % of all ind. Assaults | 0.64 | 0.17 | 0.04 | 0.06 | 0 |
| Rape | 29 | 57 | 19 | 1 | 3 |
| % of all rapes | 0.25 | 0.49 | 0.16 | 0.01 | 0.03 |
| Attempt rape | 9 | 12 | 5 | 0 | 1 |
| % of all Att. Rapes | 0.31 | 0.41 | 0.17 | 0 | 0.03 |
| Indecent exposure | 10 | 0 | 0 | 11 | 0 |
| % of all ind. exps. | 0.45 | 0 | 0 | 0.5 | 0 |
| Murder | 1 | 2 | 0 | 0 | 8 |
| % of all murders | 0.08 | 0.17 | 0 | 0 | 0.67 |

*Order of Offences*

The order of the offences for the first 13 offences in any series is depicted in Table 21. The prevalence of indecent assault is shown as it increases in proportion over the first four offences; however, rape, as a proportion, decreases over the first four offences. It is of note that, although the proportions of indecent assault steadily

increase at offence two, there are 59 indecent assaults which almost halves by offence three (to $n = 33$). Attempt rape features with a low frequency but consistently until the ninth offence. Perhaps not surprisingly, murder is a short lived offence with most murders being included within the first two offences ($n = 9$, $n = 10$) and only two murders as the third offence in the series. There were no murders after the third offences. Other serious offences such as abduction and attempt abduction were more consistently evident in longer series (up to six offences in the series) although these were very low frequencies. Finally, the lesser offences were sporadically interspersed between other offences; of note was the low frequency of indecent exposure but its apparent inclusion in the longer series.

Table 21

*Offence Number in Series and Offence Types Rape, Indecent Assault, Attempt Rape, Murder, Indecent Exposure, Burglary and Abduction*

| | Rape | Prob[5] | Ind ass | Prob | Att. rape | Prob | Murder | Prob | Ind exp | Prob | Burglary | Prob | Abduction | Prob |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Offence 1 | 68 | 0.44 | 47 | 0.31 | 13 | 0.08 | 9 | 0.06 | 5 | 0.03 | 4 | 0.03 | 1 | 0.01 |
| Offence 2 | 47 | 0.31 | 59 | 0.38 | 17 | 0.11 | 10 | 0.06 | 4 | 0.03 | 2 | 0.01 | 4 | 0.03 |
| Offence 3 | 23 | 0.31 | 33 | 0.45 | 7 | 0.09 | 2 | 0.03 | 2 | 0.03 | 2 | 0.03 | 0 | 0 |
| Offence 4 | 10 | 0.24 | 20 | 0.48 | 1 | 0.02 | 0 | 0 | 3 | 0.07 | 1 | 0.02 | 1 | 0.02 |
| Offence 5 | 9 | 0.31 | 12 | 0.41 | 1 | 0.03 | 0 | 0 | 3 | 0.1 | 0 | 0 | 1 | 0.03 |
| Offence 6 | 4 | 0.22 | 9 | 0.5 | 1 | 0.06 | 0 | 0 | 2 | 0.11 | 0 | 0 | 1 | 0.06 |
| Offence 7 | 2 | 0.15 | 8 | 0.62 | 2 | 0.15 | 0 | 0 | 1 | 0.08 | 0 | 0 | 0 | 0 |
| Offence 8 | 3 | 0.33 | 4 | 0.44 | 1 | 0.11 | 0 | 0 | 1 | 0.11 | 0 | 0 | 0 | 0 |
| Offence 9 | 0 | 0 | 4 | 0.57 | 1 | 0.14 | 0 | 0 | 1 | 0.14 | 0 | 0 | 0 | 0 |
| Offence 10 | 0 | 0 | 5 | 0.83 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Offence 11 | 0 | 0 | 2 | 0.67 | 0 | 0 | 0 | 0 | 1 | 0.33 | 0 | 0 | 0 | 0 |
| Offence 12 | 0 | 0 | 1 | 0.5 | 0 | 0 | 0 | 0 | 1 | 0.5 | 0 | 0 | 0 | 0 |
| Offence 13 | 0 | 0 | 1 | 0.5 | 0 | 0 | 0 | 0 | 1 | 0.5 | 0 | 0 | 0 | 0 |

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[5] P of O is the probability of offence; this is the percentage chance of the relevant offence being the described crime – for example if it is an offender's fourth offence, 24% of offenders committed a rape.

Discussion

Discussion

This study sought to explore serial sexual offending in terms of the pathways of offending, whether specialisation was evident and to describe the nature of the offending pathways. The distribution of the de-escalating, maintaining, oscillating and escalating modes were found to be far from uniform with only 14% showing an escalating pathway whereas 39% showed a maintaining pathway. The volume of offenders showing a maintaining mode supports the concept of offence specialisation and the pathways analysis further supports this. However, the current study adds a further dimension to this concept. In terms of maintaining and oscillating pathways and the pathways offenders follow, specialisation in serial sexual offenders seems to have offence boundaries. Clearly, it is not as simple as a rapist will rape again. In this study, an insight has been gained by reviewing the differences between those with oscillating modes and the pathway distribution. In general terms, those offenders who demonstrate an oscillating mode still sit within a helix of offending and this is supported by the state transition diagram of stranger offences (Figure 1 above). In simple terms, offenders tend to commit the same or similar type of offences but vary up and/or down in terms of severity.

*The Pathways of Offending*

Perhaps the most remarkable finding of this study is the very similar percentages of escalation, persistence and de-escalation between this study and Lulham and Ringland (2010). Lulham and Ringland (2010) was a much larger study looking at general offending rather than specifically sexual offending. However, both studies found escalation to be a low proportion of the sample, persisting to be the majority and about a quarter de-escalating. This supports hypotheses 2 and 3 (the percent of escalators and de-escalators). However, hypotheses 4, that escalation would be between 25-33%, were not supported. Hypothesis 4 was derived from the work of

Stermac and Hall (1985) who found 33% of their sample escalated and Hazelwood and Warren (2001) noted 25% of serial offenders were increasers in blunt force trauma. These findings are potentially good examples of Soothill et al.'s (2009) notion that the measurement and research question are vital in the study of criminal careers. This study, although using a significantly different dataset, employed similar structure and research question to Lulham and Ringland (2010). Both this study and Lulham and Ringland (2010) used: 1) a broad seriousness scale, 2) a similar approach to the concept of escalation and de-escalation, and 3) had offenders committing long series with most committing very short series. Stermac and Hall (1989), however, defined non-escalators as offenders who most recent offence was rated *lower* than *or equivalent* to any previous sexual offence. Therefore an offender committing two rapes and an indecent assault in both Lulham and Ringland (2010) and the current study would be likely to be classed as a de-escalator whereas in Stermac, the offender was classed as a non-escalator. The more interesting and important issue is in Stermac and Hall (1989): abduction/sexual assault were categorised as more serious than aggravated sexual assault with a weapon. In Lulham and Ringland (2010) and the current study, abduction was ranked one place less serious than rape (although still extremely serious). For Stermac, this then accounted for about a third of escalators' index offence which could represent up to a ten percent variance. Stermac and Hall (1989) is a good example of an early study researching the escalation question and the lack of other studies since still makes it useful. However, there is a clear need for a universal categorisation of seriousness so that the pathways can be better understood. In terms of explaining the findings, it can be very tentatively suggested that serial sexual offenders reflect the wider population in the rates of escalation and de-escalation; why, however, poses and interesting question. Lulham and Ringland (2010) propose the de-escalating trajectory group could be related to how police process offenders with no prior convictions. They queried whether police are more likely, in the case of a more serious offence, to initiate formal proceedings against a first time offender. They question whether for less serious offences police use informal cautions and warnings whereas once offenders have prior convictions police may proceed formally, regardless of the seriousness of the offence. They argue these processes may have complex impacts on trajectory models and suggest further research into these issues. In the current study, this would be difficult to support as the conviction type was

both factored in (e.g., caution or custodial) and the most appropriate offence was coded, not the convicted offence. From a theoretical perspective, little comment can be made why offenders are in each pathway as factors identified by researchers such as Laub and Sampson (2003) (stable marriages, employment etc.) were not available in this dataset. They describe a lack of positive turning points, excitement of crime, alcohol abuse and the criminalising effect of prison as other factors that contribute to persistence of offending. Indeed, the previous chapter offers some support to the notion that prison experiences create more injurious offending. However, this maybe too simplistic as a view; for example, Prentky et al. (1989) describe high social competence child sexual offenders meeting criteria of: 1) had a job lasting three years or more, 2) had a sexual relationship with an adult for a year or more, 3) had significant parenting responsibility for a child for three years or more, 4) had been an active member of an adult-orientated organisation for one year or more, 5) had friendship with an adult (not relationship) lasting over a year. If these factors can be evidenced in child sexual offenders, then the broad approach of them being part of desistence seems contradictory. Perhaps the more in-depth aspect of this study can provide greater understanding in terms of the pathways and specialisation debate. However, before this is reviewed, the issue of classification need discussion.

One of the limitations of this study is how escalation is measured, particularly in terms of seriousness. The method used in the current study may be adequate for an exploratory study but further research would require a more robust seriousness scale. While research has tried to address the concept of seriousness scales, there have been difficulties. In terms of development of seriousness scales, Ferrante (1998) notes that indexes of seriousness are generally based on one or more of the following: maximum penalties by parliament; actual court sentencing, and public and expert opinion. From a UK perspective, Francis et al. (2005) devised seriousness scales, in particular a measure of frequency and composite measure for seriousness and frequency. They acknowledged that it may be morally unwise to use combined scales as "one rape may equal 94 shoplifting convictions. In short, the procedure produces a spurious equivalence that is technically unjustified and morally unwise to display" (Francis et al., 2005, p. 24) and which scale is used is ultimately a criminological question. A recent Australian study, MacKinnell, Poletti and Holmes (2010)

compared the Australian National Offence Index, median sentence ranking, and the median statutory maximum ranking and determined median sentence ranking to be the best method. In summary, there is a need for further research to develop a seriousness scale to allow more robust interpretation of the pathways of offending.

*Specialisation* and *Generalisation*

In terms of the specialisation debate the current study provides some interesting results. From the pathways perspective, 40% of the sample were maintainers therefore specialising across the sample. Investigating this further all but one offender had ceased their series and therefore their specialisation by five offences (see Table 14). However, at five offences, maintaining still consisted of 25% of the sample, (although this was only three offenders). This finding supports hypothesis 7 in evidencing specialisation in offence type for a proportion of this study. A second supporting factor for hypothesis 7 was the likely next offence finding (see Table 19). When an indecent assault was committed, there was 64% likelihood that the next offence was another indecent assault. This was similar for rape (49%), sexual burglary (57%), and sexual murder (67%). Finally, the proportion of first and last offences (Table 18) suggests further support for hypothesis 7 presenting similar frequencies in first and last offences. However, it is interesting that rape sees 44% of offenders beginning with rape and 32% ending with rape. There are three potential explanations for the drop in rapes from first to last offence. The first is a methodological issue: in general SCAS require a rape to be put into their data set (although there are other qualifying criteria); thus it is likely to have rape as an inflated first offence report. A second potential explanation is some offender escalated, for example, to attempt murder. A third possible explanation, which would need more research, is in the behaviour of some serial rapists. Hazelwood and Warren (2001) stated, "There appears to be a trend wherein the rapist's interest in fellatio increases while his interest in vaginal intercourse decreases" (Hazelwood & Warren, 2001, p. 458). Although this would now be classed as rape under the Sexual Offences Act 2003, at the time of data collection, this would mean moving to an

indecent assault and, thus, account for the decreased percentage rape. Further research would need to be conducted to explore this further.

There have been differing views on whether sexual offenders specialise or not. More recently the presence of both generality and specialisation is not being seen as contradictory as it originally was (Lussier, 2005). This study would tentatively support that within sexual offending (whether it be part of a wider generalised offending or not) there is evidence for specialisation *and* generalisation; however, the generalisation seems to have offence boundaries. It supports Sullivan et al. (2006) who evidenced short-term specialisation with regard to offending patterns. The likelihood of next offence findings also strongly supports Soothill et al. (2000) that sexual offenders are "most likely to be convicted of the same kind of sex offence as the target offence ... This consistent pattern for each group produces the general sense that sex offenders are fairly 'specialised' within the range of sex offending categories" (Soothill et al., 2000, p. 62). This study also supports Stander et al. (1989, cited in Soothill et al., 2009) in that there is a tendency for sexual offenders to be convicted of the same offence again and this happens in 45% of cases which suggests specialisation. However, this study provides further details on those offences that are more likely to be repeated.

Why these offences seem to be repeated is an interesting question. This first and very important issue is definitional. As Soothill et al. (2009) note, the number of categories will influence the specialisation findings. In the current study, it could be argued the categorisation was very sensitive as offences were not grouped. Thus, specialisation in this dataset is very specific to the offence type, or, put another way, shows offenders who are 'pure specialists'. However, where other studies have used broader categories (e.g., Lulham & Ringland, 2010), they have then shown higher and lower patterns of offending. There is some support in this study for a more complicated interaction within the offences. The state transition data reveals some interesting patterns. The first and foremost is there appears to be a hub of offending between rape, indecent assault and attempt rape. The second remarkable finding is the apparent boundaries progression of seriousness, for example, generally, indecent exposure offenders commit indecent assaults but not rape; indecent assault offenders

commit attempt rape and rape but not murder; rape offenders commit murder, attempt rape, indecent assault but not indecent exposure. In essence, the seriousness appears to have higher and lower boundaries. There also appear to be a helix of offending which begins at the lower part of the diagram working through the various offences to murder.

If a conclusion can be made that, as this study has found, there are both specialists and generalists within serial offending, it must be questioned why? From a criminological perspective, the explanation Beauregard and Leclerc (2007) suggest is the rational choice perspective - criminals offend as crime provides the most effective means of achieving desired benefits (e.g., prestige, sexual gratification, money, material goods, etc.). Several factors can constrain the offenders' decision making, for example, time, cognitive abilities and the availability of relevant information (Cornish & Clarke, 1987; Johnson & Payne, 1986) in their attempt to minimise risk of apprehension and maximise gains. Offenders are perceived as decision makers whose choices are directed by the values, costs, and likelihood of obtaining desired outcomes. The rational choice perspective is present-oriented and situationally influenced (Clarke & Cornish, 2001). Thus, it would therefore follow that a generalist sexual offender decides to commit varying offences and therefore further raises the question: why decide to vary? Potentially, some aspect of the offending meant that the cost outweighed the benefit. For example, if an offender's aim was rape but a highly resistant victim resisted, they may still accept the 'benefit' of an indecent assault. This is supported by Tedeschi and Felson (1994) who note factors such as the victim resisting influence the offender's decisions. As Jones and Gerard (1967) propose, an individual's present behaviour is not only contingent or predictable from their past behaviour but also their partner's [or another individual's] influence on them and the subsequent behaviour situational factors.

An alternative explanation can be provided by considering the integrated theory of sexual offending (Ward & Beech, 2006). They note three sets of factors which interact continually: biological, ecological and neuropsychological factors. Thus, if rational choice provides ecological explanations, that is, the offender interacting with

the environment, then the outstanding potential explanations are biological and neuropsychological. If motivation can be understood as neuropsychological, then Prentky and Burgess (2000) with reference to Prentky and Knight (1990) describe a motivation driven system relying on four presumptive motivations to rape: opportunity, pervasive anger, sexual gratification and vindictiveness. These different motivations will translate into different observable pathways behaviours. For example, the pervasively angry motivation is hypothesised to more commonly use other outlets (sex clubs, massage parlours) and deviant sexual behaviour such as voyeurism, exhibitionism and fetishism to be evident. This *motivation* would then translate to oscillating or generalist behaviour if caught and convicted of both voyeurism and rape.

A more cognitively based explanation of the oscillating behaviour is Eldridge (1998) who proposed three cycles of offending – continuous, inhibited and short circuit cycles. Each cycle goes through some of the stages identified: fantasy reinforcement, fear of detection and guilt, illegal fantasies, masturbation/orgasm, target victim, fantasy rehearsal, grooming and then abuse. In the continuous cycle, the sexual abuser will activate a new cycle each time with a new victim starting with fantasy reinforcement and working their way to abuse. The inhibited cycle sees the offender becoming blocked or inhibited and following an offence, the offender may stop for a period of time. The offender will retreat to sexual fantasy-masturbation-orgasm cycle fuelled by child pornography eventually overcoming their inhibition and re-entering the cycle (see Chapter Five). This is more likely to project a period of low tariff sex crime building to a serious sexual assault. This concept is one explanation for how escalation occurs. Furthermore, the short circuit cycle does not become inhibited following the commission of an offence but returns to the fantasy stage of the cycle, thus effectively bypassing earlier stages. Once again, these cognitive explanations provide different offence behaviour with continuity having more variance in victims, the inhibited cycle showing oscillations with different lower to higher tariff offences and the short-circuit maintaining a criminal offending pathway. In summary, criminological theories give some explanation for the specialisation and generality seen by describing choice and situational factors. Considering a more comprehensive concept, the integrated theory of sexual offending gives further options to describe

and understand the behaviour at a biological and perhaps more relevantly, a neuropsychological level. Perhaps by exploring the 'hub' of offending further insight can be gained.

The hypothesis that there will be a discernable progression from lower tariff offences to higher tariff offences was partially supported as it was for certain groups of offenders. The previous Sections have already highlighted the number of escalators and, for those offenders, the progression is obvious. This study does provide more details than previous studies on the 'what offence is next' aspect. By looking at the most likely next offence, one could argue indecent assault leads to rape (as this happened in 17% of cases); however, rape was followed by indecent assault in 25% of cases. This supports the hub of offending hypotheses and a complex interaction rather than straightforward progression. Perhaps the more notable result is the likely next offence findings for indecent exposure, in 45% of cases the next offence was indecent assault. While extreme caution should be exercised when interpreting these results as there were only 28 occasions of exposure in the sample, the relationship between these two offences is notable and worthy of further investigation. There have been significantly different perspectives on exhibitionism. Tuch (2008) describes it as harmless to the extent that the exhibitionist typically wants nothing more than what he gets. However, Firestone et al. (2006) found that over a mean follow-up period of 13.24 years, 23.6, 31.3, and 38.9% of exhibitionists were charged with or convicted of sexual, violent, or criminal offences, respectively and they suggest exhibitionism is not a benign act and may lead to more serious crimes. Furthermore, Warren et al. (1999) found that serial rapist non-escalators of blunt force had fewer previous convictions than escalators and also had more frequent histories of exhibiting or obscene phone calls. The finding of this study - that all offences of indecent exposure were either maintainers or oscillators - suggests further support for boundaries of offending and that in general, sexual offenders will offend within seriousness boundaries. There is a significant word of caution for considering indecent exposure at all in this study as it was included in the SCAS database under aggravating criteria and not the standard rape criteria. Also, it appears that breach of the peace is used for circumstances which could be indecent exposure. Therefore there is a significant coding issue that would need resolution before further research was conducted. As discussed within specialisation, these findings could be

interpreted using Eldridge's (1998) continuous, inhibited and short-circuit cycles with the continuous cycle having more variance in victims, the inhibited cycle showing oscillations with different lower to higher tariff offences and the short-circuit maintaining a criminal offending pathway. The short-circuit cycle may the most appropriate explanation for the finding of maintenance in sexual murderers.

Hypothesis 6 sought to test whether sexual murderers' offences would be preceded by a lower tariff sexual offence. This hypothesis was not supported. The majority of sexual murder offences were in the maintaining categories with 67% murder offences having the likely next offences as murder (the other offences were rape, indecent assault and attempt abduction). For those that did not maintain the offences generally evenly spread over the three other pathways. Francis and Soothill (2000) who reviewed those who commit a sexual murder reported that approximately 1 in 400 of those convicted of a sexual offence was convicted of a murder in a 21 year follow up. This represented an increased risk of over sevenfold against males in the general population. This study supports the idea that sexual murders are committed by sexual offenders but provides more detail, particularly that murder is often not the end point in the series. It could be argued that these findings support offence boundaries with other offences committed by murderers being serious. However, with such small numbers, further examination is required before assertions are made.

*Limitations*

Whilst this dataset is extremely useful for research it has several limitations. The first was covered earlier in the discussion where the need for a more robust seriousness scale was identified. The previous chapter outlined several of the limitations; however, there are some that are specific to this chapter. The first is its recording criteria as it only collected the more serious offenders or less serious with aggravating features. This means that meaningful comparison is always going to be difficult for careers and therefore limits the generalisability of the findings. The way in which the data are coded means accepting the inter-rater reliability of the SCAS validation process; once again, this poses a potential unknown error. In the database itself there are several issues, the main one being missing data, for certain very useful criteria, for example, imprisonment, where the majority of the information is not

known. Furthermore, the previous criminal histories were not recorded in detail which makes criminal career research particularly difficult. Another problem is the variance of the types of offenders as all types of sexual crime are included (although one should be cautious in saying this is a limitation as the notion of specialisation is now more flexible, (Lussier, 2005). Another limitation is during this study the application of the Sexual Offences Act 2003 has meant several offences have been changed and new ones conceived; therefore there is a need for further research. All of these issues considered, the current chapter gives those who have to understand the detail of serial offenders some useful data that have not been presented before. It also gives further support to recent debates on specialisation and the psychological motivations of sexual offender. In terms of further research, there are several areas for development. The first is broadening the dataset to include the full criminal careers of these offenders. At present, comment can only be made on the offending already within a specialisation. Further data could assist to explore general offending of the dataset and full criminal conviction data would be required for this task. The second area of future research would be the offence boundary hypothesis. Tentatively, seeing just a 'serial rapist' may exclude other offences being committed and considered; for example, a serial rapist is actually likely to commit other offences within the hub of sexual offending, this needs further exploration. This study present the possible pathways of offending; however, further research needs to take a contemporary view of the risk that is posed by the offender in the future, particularly as the Sexual Offences Act 2003 has created new offences and amended old law. Chapter Five will therefore address this research question. Equally, as discussed earlier in this chapter, one potential situational factor is the performance of the police and whether they apprehend the offender. As Stern (2010) suggests different forces respond differently to sexual crimes (although it has improved) and it can be questioned how much the individual decision-making of the investigator impacts on the investigation. As Cornish (1998) identifies the offender being under certain pressure, for example, time and cognitive ability, it would be useful to understand if investigators are under those same pressures. Other studies since still make it useful; however, there is a clear need for a universal categorisation of seriousness so that the pathways can be better understood.

There are several implications from the current study. The assumption of escalation in offending seriousness underlies much criminal justice policy (Liu et al., 2010). Therefore, as Sullivan et al. (2006) note, investigations into whether offenders specialise in their criminal behaviour carry implications for both criminological theory and public policy. This exploratory study makes tentative suggestions in terms of offence boundaries and pathways of offending. Whilst this is unlikely to inform public policy, it provides a new model of the pathways to add to the current debates. There are several definitional issues raised by this study relating to seriousness and escalation in any further research. By adopting a uniform definitional approach, meaningful comparison can be progressed. A further definitional issue for SCAS themselves is the difference between breach of the peace and indecent exposure may be usefully explored and clarified. Whilst there are considerable limitations to this dataset it does represent policing reality. Often, with a stranger investigation, little is known of the offender. This study also highlights that investigators of serious sexual assault should clearly consider that the monitoring of lesser offences may be a fruitful task during their investigations to lead towards the identification of a suspect.

*Conclusion*

This study aimed to investigate whether the four pathways (escalation, maintenance, oscillation and de-escalation) existed in a serial sexual offending dataset. They did, and notably were similar to recent research on general offending populations. The study also sought to explore offence specialisation and offence progression. Existence for both sexual offenders as specialists and generalists was found. However, generalists seemed to have offence seriousness boundaries within which they confined themselves. Theoretical implications were discussed, particularly in relation to criminological and the integrated theory of sexual offending. Finally, further research and implications were presented.

# Chapter 5

## Sexual Offences Investigation: An Overview

The previous chapters have focused on the offender's behaviour in sexual offences. As described at the beginning of this thesis, the emphasis will now move to the investigation, specifically the issues, behaviours and decisions of the investigator. It aims to consider what does an individual's behaviour and decision-making tell us in terms of a likely outcome and associated risk? Chapter Seven will present a study specifically exploring the effects of time pressure on decision-making. In preparation for Chapter Seven, this chapter will provide an understanding of contemporary thinking on: a) rape (the offence in Chapter Seven) and the law; and b) the practices and policies that are applied to those investigations. This can then be used to interpret and understand the process and behaviours in Chapter Seven. This chapter will also importantly provide a reference point for examples of bad decisions (IPCC, 2010) and best practice (NPIA guides). The Section on child abuse specifically relates to Chapter Eight as, in that chapter, contact offenders have been convicted of child sexual offences including sexual touching, sexual assault and rape of a child.

*Rape Investigation in Context*

Rape and sexual assaults are an area of considerable public scrutiny for the modern police service. There have been several significant reviews in recent years (HMIC, 2002, 2007; Stern, 2010) which have aimed to address a multitude of problematic issues including attrition rates, victim care, court process and the quality of investigations. Rape always has a victim and their experiences of the police and Crown Prosecution Services range from very positive to very negative (Coy, 2009; Stern, 2010). In response to inspections such as the HMIC 2002 inspection, the police service has invested heavily in trying to improve the service to rape victims and the investigation of rape. Best practice advice, such as Guidance on Investigating Serious Sexual Offences (NPIA, 2005) has been written, disseminated, and inspected

with police services showing real improvement. However, despite best practice, rape victims are not always getting the service they deserve with cases such John Worboys and Kirk Reid demonstrating that there is still considerable work to be carried out. In both cases the offenders were eventually convicted of rape but could have been stopped earlier if the Metropolitan Police Service had acted differently (IPCC, 2010). This chapter will continue to define rape and explain the legal evolvement over the last half a century. It will then explain what should happen when rape is reported and continue to explore what actually happens and the current issues from a police perspective. In order to understand some of the wider public perception of rape, it is useful to understand what has and does now constitute rape.

*What is Rape?*

Rape is a crime that can happen to all people irrelevant of age, sex and gender. It is a unique assault that leaves victims feeling violated (Coy, 2009) and affected in many ways including nightmares, flashbacks, depression, loss of self-confidence and turning to drugs and alcohol (Stern, 2010). For England and Wales, the modern law concerning the crime of rape (see Stevenson, Davies, & Gunn, 2004 for a full review) began with the Sexual Offences Act (1956) which defined rape as 'unlawful sexual intercourse with a woman.' Twenty years later, the Sexual Offences (Amendment) Act (1976) added to the definition to include the issue of consent: rape became the 'unlawful sexual intercourse with a woman without her consent.' A further 15 years later, the case of *R v R* in the House of Lords concluded rape within marriage was illegal and the Criminal Justice and Public Order Act (1994) made marital rape illegal in statute; it also extended the definition to cover vaginal or anal intercourse against a man or a woman. In 1999, the Youth Justice and Criminal Evidence Act (1999) restricted the trial judges' discretion to introduce evidence of a complainant's sexual history. In the same year Jack Straw, the Home Secretary, announced the commissioning of a review to modernise and strengthen the legal provisions of the law in relation to sexual offences.  This review resulted in the Sexual Offences Act 2003 which came into force in 2004. Stevenson, Davies, and Gunn (2004) note that one of the fundamental changes with the act was the approach to consent: the evidential presumption became that the complainant is to be taken *not* to have consented unless evidence is adduced otherwise whereas previously it has

been argued the opposite was the case. The Sexual Offences Act (2003) also provides a new definition of rape: when someone 'intentionally penetrates the vagina, anus or mouth of another person with his penis,' that the other person does not consent to the penetration, and the offender 'does not reasonably believe that the other person consents.' The inclusion of rape by mouth was a significant change. As well as rape, several other offences were created including: assault by penetration, sexual assault, causing sexual activity without consent and an array of existing offences were amended including indecent images of children. The commencement of the 2003 act was followed by ACPO NPIA (2005, 2009) guidance on the investigation of sexual offences; these provided the police with a framework for the best practice investigations. Best practice will now be outlined which will precede discussions on this subject in Chapters Seven and Eight.

*How Police Investigate a Rape (Best Practice)*

"The police are the public authority who see all the men and women who decide to report a rape, including those who later withdraw their complaints. Police call handlers will take the 999 calls. The police officers on duty at the time of a report will often see victims at their most distressed, and traumatised. They will need to call upon a range of skills: basic human sympathy, understanding, tact and patience, as well as investigative expertise." Baroness Vivien Stern (2010). The Stern Review.

In order for the police to begin an investigation into a rape or sexual assault, the police need to be notified of its occurrence. Unfortunately, it is a well established fact that many rapes are never reported to the authorities (HMIC, 2007; Stern, 2010). When a rape is reported a criminal investigation should commence. A criminal investigation is defined within the Criminal Procedure and Investigations Act (CPIA) codes of practice (2005) as "an investigation with a view to it being ascertained whether someone should be charged with an offence (or guilty) and includes: investigation where crimes have been committed, where the purpose is to ascertain if a crime has been committed and where the investigation begins with the

belief that a crime may be committed" (CPIA, 2005, 2.1). The rape investigation goes through several stages some of which are chronological, others that run simultaneously. Many of the aspects of rape investigation are similar to other crime investigations; however, there, are parts of a rape investigation that are specific to that crime. To guide the investigator, forces have guidance and policy on investigation. Kent Police Policy M120 - Adult Rape and Serious Sexual Assault (2010b) provides such guidance with five relevant areas of the policy: a) initial report, b) initial police attendance, c) medical examination and specially trained officers, d) crime investigation, e) criminal justice management. Each will be reviewed in turn.

*Initial Report*

HMIC (2007) states that the ACPO NPIA Guidance on Investigating Serious Sexual Offences (2005) emphasises the need for positive action and the obligations incurred at every stage of the police response to sexual offences. The guidance notes the importance of a positive and supportive attitude with the need to use every investigative opportunity to secure evidence. This often means that the first response officer is faced with the conflicting demands of meeting the needs of the victim and preserving evidence. The most likely member of the police service to receive a report of a rape is front desk staff or a police call taker. NPIA (2009) issued guidance on the initial contact in rape cases and acknowledge, "It is your responsibility to take steps to ensure the immediate safety of the victim, provide re-assurance, respond to medical needs and protect any evidence while deploying the police first response" (NPIA, 2009, p.1). The guidance describes that the victim may still be at risk and action should be taken with regards to keeping the victim informed – a priority is to consider if they require medical assistance and even if they decline, an ambulance should still be considered. The guidance explains that in-depth questioning is not appropriate as interviews will be conducted later by a specially trained officer (STO). Twelve questions are recorded that should be ascertained from the victim or caller and five key actions to preserving evidence are advised depending on the nature of the complaint. Kent Police Policy (2010b) explains how the call takers will utilise an 'aide memoir' to provide a professional and consistent approach for information gathering and rapid deployment.

"The initial police attendance is crucial in terms of both the impact upon the victim and the investigation. The 'Golden Hour' i.e., the very early stages following a crime having been committed, is the optimum time to identify and secure valuable potential evidence by early apprehension of the offender, obtaining witness testimony and exploiting early potential forensic evidence opportunities" (Kent Police Policy M120, 2010b, 4.3.1.1.).

The NPIA (2009) gives guidance that, as the first response officer, making the victim feel safe and starting the investigation process is central to the response. They acknowledge that in most rape cases the suspect is known and efforts should be made to make an early arrest. An early assessment is essential and action should be taken to: a) ensure the victim's medical and welfare needs are met; b) take a first account from the victim; c) assess the scenes (including the victim, location(s) and suspect; d) use an early evidence kit to preserve evidence; e) identify witnesses; f) keep accurate records of was said and vehicles etc. The guidance acknowledges there may be conflicting demands and reiterates that the main concern is the medical and welfare needs of the victim.

One of the main methods of gathering evidence is the Early Evidence Kit (EEK). These were introduced for immediate use by first responders when dealing with victims prior to the medical examination. The purpose of EEK is the effective recovery of non-intimate forensic samples that may be affected by the passage of time. An example would be a woman reporting a rape where the last thing she remembers is having a drink at a friend's party and then waking up with no clothes on but feels like someone has had sex with her. A reasonable hypothesis would be that she has been raped using drugs or alcohol. Early capture of a urine sample could indicate levels of drugs, alcohol and may also capture semen helping to prove administering of a substance, identifying the offender and assisting with the time line of the substance administration. Whilst EEKs can assist to capture non-intimate

samples, officers are not trained to capture intimate samples as this is the role of the forensic medical practitioner.

*Medical Examination and the Specially Trained Officer*

The medical examination is crucial in sexual assault investigations to gain evidence and manage the welfare of the victim. The role of the forensic practitioner is to ensure appropriate samples are taken and note injuries while tending to the welfare needs of the victim. They also sometimes provide expert opinion to support or refute the allegation (HMIC, 2007). In recent years Sexual Assault Referral Centres (SARCs) have been established in hospitals where victims can undergo a forensic medical examination and receive medical care. Professionally trained staff are available to provide services such as psychological counselling, legal advice and other support. These centres are particularly important where a victim does not want to go to the police at that time but still wants the evidence retained. Fast capture of evidence is supported by Ledray (1999) who found that the best medial evidence is collected within the first twelve hours after the sexual assault. From an evidential perspective the medical evidence can prove the penetration aspect of the offence and corroborate the victim's account. In stranger attacks it can also lead to the identification of the offender where they are not known to the victim.

The medical examination should be supported by a specially trained officer (STO) (HMIC, 2007) or an initial response officer (IRO) (Kent Police, 2010b) whose role is to support the victim though the medical process and offer support and advice. They should also liaise with the Detective Sergeant Investigating Officer in terms of completing a risk assessment and ensuring that the safety and welfare needs of the victim are identified and responded to. Once the medical is completed this officer should hand over to a trained officer who will obtain an evidential statement from the victim (Kent Police, 2010b). The medical evidence can then form part of the wider criminal investigation.

*The Criminal Investigation*

On one level, the criminal investigation can be seen as a standardised process organised into a sequence of stages. Each stage is dependent on the other and defines the trajectory of the inquiry (Innes, 2002). The actual strategies used may vary dependent on the crime under investigation (Cook & Tattersall, 2008). In order to describe the specificities of rape investigations those general strategies should be understood. The lead investigator is the Senior Investigating Officer (SIO). Cook and Tattersall (2008) describe the SIOs' approach to crime, stating that it is their responsibility to define the objectives of the investigation. They then set the strategies (or plans) that can be used to achieve the objectives. It is also their responsibility to record their hypothesis to explain what they think happened and any alternative hypotheses that could explain the facts. To explore their hypotheses, there are several strategies that will appear in most investigations: house-to-house, forensic, passive data (e.g., CCTV), witness, victim, intelligence, search and media. For the most serious crimes, a full incident room will commence, in less serious crimes the strategies may become a list of actions to detect the crime. For example, a theft of a milk bottle may have the actions of taking the victim's account and house-to-house inquiries but it is extremely unlikely the constable investigating would then try to draft a media plan. Rape is a serious crime and some offences will require a full incident room; however, not all are investigated in this way.

The theme of best practice investigations is a consistent, professional, and thorough investigation which is prompt and treated as a priority (Kent Police, 2010b). Furthermore, an effective rape investigation needs supervision to ensure that the investigation is conducted to a high standard and remains victim-focused (HMIC, 2007). To achieve a structure, supervision policies assign certain roles with the investigation, for example:

- The Investigating Officer for the crime of rape will be an officer of the rank of Detective Sergeant. The duty/on call Detective Sergeant will be called to attend all categories of rape reports;

- The Detective Inspector will maintain an overview of the investigation and assume the role of Senior Investigating Officer (SIO);

- Detectives engaged on the investigation and interviewing process should be accredited detectives;

- In cases of 'stranger rape,' this being a more complex investigation, the Detective Inspector will assume the role of Investigating Officer and be called out to conduct the investigation. The Detective Chief Inspector will assume the role of SIO, directing the course of investigation and maintaining an overview of progress. This will generally be an SIO from the Major Crime Department;

- Officers engaged with investigations of rape and serious sexual assault will be trained and equipped with the skills to undertake such serious investigations in accordance with National Centre Policing Excellence and Kent Police College standards, and utilising practical guide to investigative interviews with suspects, practical guide to investigative interviews with victims and following National Investigative Checklists;

- A prosecution team approach in conjunction with the Crown Prosecution Service (CPS) is of fundamental importance (Kent Police, 2010b).

Supervision is a key factor in successful rape investigations; another particularly important strategy is the interview strategy. Best practice suggests that any interview of a rape victim should be conducted by a qualified interviewers of at least Professionalising the Investigation Process (PIP) level three (there are five levels and level three is the specialist level) (HMIC, 2007). A robust and full investigation will often result in the charging of an offender. This then enters the offender into the criminal justice system.

*Criminal Justice Management*

The successful management of rape cases at court is dependent on good working practice between the police, CPS and other partners (HMIC, 2007). Police policy acknowledges that supportive victim care through the criminal justice system with efficient trial management will improve the detection rate (offenders being charged) and the number of offenders brought to justice (Kent Police, 2010b). Best practice has shown that the police supporting the victim at court can have a substantial effect on the victim's approach to the trial. It is widely acknowledged that the trial process can be extremely unpleasant and the use of specially trained police, lawyers and judges contributes to a more professional response (Stern, 2010).

> "John Worboys and Kirk Reid were men who managed to rape and
> assault many women before they were stopped, because the police in
> London did not take the victims seriously enough when they came to
> report what had happened to them and rape was not a sufficiently high
> priority for some of the police at the time. These cases must have done
> great damage to the confidence of victims in reporting what has happened
> to them and many lessons needed to be learnt" (Stern, 2010, p. 3).

The reality, as described above by Baroness Stern, is that best practice is not always achieved. There are several reasons why best practice might not be achieved; for instance, it may be due to the circumstances of the case or questionable decision-making. The different circumstances will briefly be reviewed below and a case example will be given.

Feist, Ashe, Lawrence, McPhee and Wilson (2007) conducted a comprehensive review into the investigation and detection of offences of rape. They reviewed 676 rape cases recorded by eight UK police forces in 2003/04. This study provides a useful context to the intricacies of the individual cases. The five relevant areas which were noted in the best practice Section of this chapter will be revisited considering the Feist et al. (2007) findings. Their study explains why and where lines of inquiry might not be followed due to the circumstances; this may in turn have an effect on the success of the case.

*Initial Report*

Fifty-four percent of all offences were reported by the victim and approximately 90% of offences were reported by a phone call or visit to the police station. Interestingly, 8% of offences came to light during the investigation of another offence and 4% were referred by another agency. In terms of when they were reported, 46% of all rapes were reported on the same day on which they occurred, although 14% were

reported more than six months after they took place. This has particular relevance to the best practice of evidence captured from the victim. Feist et al. (2007) found that as the time between offence and report increases (beyond seven days), there is a decrease in the proportion of detected offences.

*Initial Police Attendance of Specially Trained Officers*

Feist et al. (2007) note that an increasing emphasis is being placed on the use of Specially Trained Officers (STOs) in investigating sexual offences. In their study, STOs were used in one-third of rape cases and more recently HMIC (2007) suggests that this is still improving.

*Medical Examination*

Forensic medical examinations took place in half of all offences. The main reason for an examination not taking place was the passage of time (limiting the value of an examination). A further important finding is that in a quarter of 'no examination', the reason was the victim not wishing to be examined. In terms of how long it took to get examined only four in ten victims were seen within four hours after the report with an average of 6 hours 42 minutes.

*Crime Investigation*

The lead investigator was most commonly a Detective Constable (DC) (70%, *n* = 355); however, in 13% of cases (*n* = 66), a Police Constable (PC) was identified as the lead officer. In terms of suspect identification, suspects were usually identified early in the investigative process (71%) by the victim. Twelve per cent of cases had no suspect linked to the offence. Perhaps surprisingly, in 37% of cases where a suspect was identified, no suspect was arrested. The reasons varied: in eight cases where the suspect was not arrested it was because he could not be located and in 24% the victim had withdrawn the complaint prior to any arrest being made. In a further 34 cases (19% of no arrest cases, 6% of the full sample), the victim did not want to pursue a formal complaint. In term of the reviews of cases by a senior officer, this was conducted in 58% (*n* = 258) of rape cases.

*Criminal Justice Management*

Just under three-quarters of the 'crimed[6]' offences that failed to result in a charge were due to two reasons: withdrawal of the complaint by the victim and insufficient evidence (35% and 40% respectively). Crown Prosecution Sservices (CPS) decisions to terminate proceedings post-charge occurred in a modest number of charged cases (35 cases, or 22% of all charged cases). The vast majority of CPS terminations took place on evidential grounds (91%, $n = 34$). In total, 130 cases reached Crown Court (23% of the original sample of crimed cases) and, of these, information on the plea at court was known for 126 cases. In two-thirds of offences that reached Crown Court, defendants pleaded not guilty to the principal charge, while an additional 14% pleaded not guilty to the principal charge but guilty to a lesser charge. In all, defendants in 18% of Crown Court cases pleaded guilty. This group includes four cases where the defendant pleaded guilty to the more serious charge but not guilty to a lesser charge and two cases where the offender changed his initial plea at the Magistrates' Court from not guilty to guilty. The main defence offered in not guilty cases was either total denial of the offence (in more than 46% of not guilty cases) or claiming consent (in 44%). The decision of whether the offender is found guilty almost always rests with the jury. There are, however, examples of cases where poor decisions earlier on in the investigation have resulted in negative consequences for the victim. This forms the basis for trying to understand how police decision-making evolves in a rape investigation.

*Cases Involving Child Sexual Abuse*

Many of the studies of victims of rape include child victims; therefore, the issues are not for adults in isolation. However, there are some aspects of child sexual abuse that are unique as the victim is a child. Sadly, studies have found that the criminal justice process can adversely affect children's emotional reactions (Connon, Crooks, Carr, Dooley, & Guerlin, 2011; Hall and Sales, 2008). However, as Jones, Cross, Walsh, and Simone (2005) note, certain best practices are seen to improve some of the

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[6]'Crimed' refers to a reported crime that has been recorded as having taken place. The test applied is on the balance of probabilities by the Home Office Counting Rules.

system‚s negative effect. Jones et al. (2008) identify seven best practices to assist children: multi-disciplinary investigation teams; trained child forensic interviewers; video taping the child's evidence; specialised medical examiners; victim advocacy and support programmes; mental health treatment and children's advocacy centres. The principles within each of these services are similar to those for adults. However, it could be argued that working with children is even more challenging. For example, if the victim of rape is two years old, the challenge for the medical examiner is potentially more difficult as the child cannot explain what happened and to what parts of their body. As Jones et al. (2011) write, professionals should adopt as "child-centred and sensitive position as possible when working with sexually abused children" (p. 118). The emphasis with such studies is the same gold hour and best evidence principles as with adult rape.

*The Case of John Worboys*

In February 2008, John Worboys, a hackney cab driver, was arrested and subsequently charged with a series of sexual offences. He would tell lone female passengers he had won the lottery and invite them to celebrate with a drugged drink. He would then assault them while they were unconscious. Worboys was first identified as a suspect following an allegation of sexual assault in July 2007 but not charged with any offence and attacked a further seven women before being charged in February 2008.

A recent review (IPCC, 2010) highlighted some critical areas where, in that case, the investigation had not met the required standard. In the previous Section, police policy and best practice was described for key investigative points within a rape investigation. These will now be briefly reviewed in terms of the Worboys investigation.

The complaints to the Independent Police Complaints Commission (IPCC) in this case included: (a) the initial response was insensitive; (b) the STO gave the victim false information about passing the case to the CPS; (c) the investigation was not thorough and the victim was not updated; (d) the DI made the decision not to search Worboys' home address; and (e) another DI concluded the investigation before all

lines of inquiry were completed. The IPCC substantiated most of the complaints and made recommendations for improvement. In terms of the decisions that were made, the IPCC noted two issues: (a) mindset and (b) error of judgement. In terms of mindset, the Detective Constable's first entry onto the crime report was, "The victim cannot remember anything past getting in the cab, it would seem unlikely that a cab driver would have alcohol in his vehicle let alone drug substances" (IPCC, 2010, p. 10). This would suggest that the first hypothesis was that the crime did not happen and no further hypotheses were considered. Further, the decision not to search the house or the cab appeared to have been given minimal thought as to what evidence might be found at Worboys' home or in his cab. This was particularly relevant as in the victim's account, tablets were offered and a significant amount of money was described (IPCC, 2010). The IPCC concluded this was a serious error of judgement.

*Conclusion*

This chapter sought to provide the basis to understand and interpret the results of Chapters Seven and Eight. It aimed to provide an understanding of contemporary thinking on: a) rape and the law, and b) the practices and policies that are applied to those investigations. The next chapter will therefore consider how to measure a good decision and what is the appropriate methodology to research investigators' decisions.

# Chapter 6

# Methodologies for exploring investigator decision-making

The previous chapter set the context of rape investigations in the UK. This chapter will then consider the appropriate methodology to understand and explore those issues of investigator decision making. An argument for the use of tactical decision games will be proposed and a discussion of potential method to increase its fidelity. The issue of good decision-making and how to measure it using experts and the Delphi technique will be provided with a methodology in preparation for the following chapter.

*Methodology to Analyse Decision-Making*

The theories of decision-making will be presented in the next chapter; however, there are effectively two schools of thought: traditional decision-making theory (TDT) and naturalistic decision-making (NDM). It could be argued that the two perspectives in decision-making are in some way defined by the research approach they have taken. Klein (1999) bases his findings on 'field work' whereas more traditional theories have adopted a more traditional empirically based approach (Kahneman & Klein, 2009). There has been considerable review of the benefits of experimental design versus naturalistic observation (Grant & Wall, 2009). True experimental design gives the researcher the opportunity to describe causal effect; however, this method is often criticised for its lack of generalisablity into the real world. Conversely, true field experimentation maintains the fidelity "but involve tradeoffs between internal and external validity" (Grant & Wall, 2009, p. 654). True field experiments have two primary obstacles: opportunity for experimenters to control random assignment to treatment conditions (Lawler, 1977) and lack of experimenter control over key variables. More recent research approaches have explored how the research question can be answered in the real world with the most appropriate research design (Robson, 2002). The laboratory can be seen as a closed system shut off from

external influences whereas studies outside the laboratory operate in open systems (Robson, 2002).

In a recent review, Grant and Wall (2009) proposed that a position between the two approaches, quasi-experimentation, offers "many of the benefits of the true field experiment for strengthening causal inference in settings with high external validity while relaxing the requirements for experimenter control over random assignment to treatment conditions and manipulations of independent variables" (Grant & Wall, 2009, p. 655). They identify five key benefits: (a) strengthening causal inference when random assignment and controlled manipulation are not possible or ethical (e.g., studying of negative events); (b) building better theories of time and temporal progression; (c) minimising ethical dilemmas of harm, inequity, paternalism and deception; (d) facilitating collaboration with practitioners; and (e) using context to explain conflicting findings.

From a police research perspective, the first consideration with any research has to ensure an ethical approach is taken. As rape victims already describe some aspects of the criminal justice system as like being raped all over again (Stern, 2010), any research has to carefully consider if there will be any victim contact at all. However, while research may be difficult investigators still need to be prepared for the sometimes unpleasant task they may have to undertake. Thus, police and other emergency services still need to be trained to deal with what they might encounter and more importantly understand what they should do. Three main types of exercise exist to achieve this aim: seminar, table-top and live exercise (Home Office, 1997). Each type of exercise has strengths and weaknesses: for instance, a full scale exercise will give high fidelity but may be very expensive; equally a table top exercise may lack experience of planning and decision-making under high temporal constraints or in the dissemination of information (Dowell, 1995). Military simulations have tried to increase fidelity (e.g., fighter simulations); however, these are also expensive.

One method of training and learning from decision-making is the use of a tactical decision game (TDG). The TDG is a simulation of incidents that may occur during an emergency response. In the simulation, participants decide upon actions to be taken to manage the situation, which may include a degree of uncertainty under a

specific amount of time. The key factors of TDGs are: including a dilemma; the participant taking on a certain role requiring decisions; limited time and information in which to make a decision; allowing critique of participants' decision-making and incorporating contingencies or unexpected events (Crichton, Flin, & Rattray, 2000). A TDG also allows the participant to exercise and practise decision-making skills and boost expertise in judgement. Participants can develop a shared understanding and build a repertoire of patterns which can be quickly recognised and acted upon in the future, particularly during emergency situations. Finally, a key benefit to the participant is to practise non-technical skills such as situation awareness, decision-making, communication, stress management, and teamwork, (Klein & Wolf, 1995; Schmitt & Klein, 1996; Klein, 1999).

*A Question of Fidelity?*

As outlined earlier, the naturalistic approach which captures the highest fidelity, real-life situations has some negatives in terms of how the findings can be controlled and interpreted. Quasi-experimentation tries to overcome the differences between the traditional and naturalistic research approach by combining certain aspects. As already outlined, TDGs are described as low fidelity (Crichton et al., 2000). In terms of the best generalisable results, the question is: can TDGs be enhanced using a quasi-experimental methodology to increase fidelity thus becoming a low-cost, high-fidelity experimental technique? To increase fidelity the approach must try to simulate reality; thus, the design should be based on a real-life scenario. The TDG then advances using visual and audio stimuli as the participant goes through the scenario. This is supported by Brehmer and Dörner (1993) who suggest computer simulation allows the combining of naturalistic and experimental approaches with complex scenarios, thus increasing fidelity but also allowing manipulation. Furthermore, the researcher will employ a quasi-experimental approach in two ways to increase fidelity: firstly, by increasing environmental fidelity by carrying out the study in the real police environment; and, secondly, by controlling the allocation of the participants into different groups. This approach allows the measurement *and manipulation* of specific factors (e.g., number of decisions or flow of information), but allows information to be captured in real-time. In essence, this methodological approach aims to embrace the positive research approaches taken within NDM and

TDM, combining them into a modern TDG with aspects of increased fidelity that are underpinned in a quasi-experimental design.

*Best Practice as a Measurement?*

In the last chapter, best practice in rape investigations was outlined; however, it was demonstrated by Feist et al. (2007) that the decision-making will be *dependent on the circumstances*. This raises the question of who decides that a decision is a good one. Furthermore, how is a good decision measured? This is an extremely difficult concept, particularly as the outcome of the decision's success may depend on the perspective of the person viewing the decision. For example, in a rape, if the only doctor available for the medical examination is a man and a female doctor would take several hours to arrive, which is the best decision for the victim: maximising the forensic opportunities or minimising the psychological impact?

There are two perspectives to what makes a good decision. The first is the outcome of the decision and the second is the process of the decision. In order to consider the concept of outcome of a decision, what a decision is must be defined. Yates stated, "A decision is a commitment to a course of action that is intended to yield results that are satisfying for specified individuals" (2003, p. 24). Yates and Tschirhart (2006) explain that there are five key features of a decision: action – people do things; commitment – the execution of the action; intention – a decision is a intentional behaviour; satisfying results – having high utility; and specified individuals – serving the interests the decision maker or others. They argue that a high quality decision is one that achieves such satisfying results. They cite Yates, Veinott and Patalano (2003) who asked people to bring into mind a serious decision and put them into good and bad categories. Good decisions yielded desirable outcomes, bad ones led to poor results.

The supplementary perspective can be seen as based in a Toulminian (Toulmin, 1958, 1972) approach which would suggest that a good argument can succeed in providing good justification by a process of testing and sifting. A good decision is based on the process used to arrive at the decision itself. Indeed, the approach "recognises the need for the justificatory function of substantive argument, whilst

also being aware of the limitations of formal deductive, decontextualised logic for practical, 'real world' issues" (Alison, Smith, Eastman, & Rainbow, 2003, p. 174). Toulmin proposed six inter-related concepts: the claim; the evidence that supports the claim; the warrant, the movement from the claim to the evidence; the backing; rebuttal; and finally the qualifier which effectively describes a rationalisation process arriving at a judgement: in short, as Yates and Tschirhart (2006) write, the logical coherence of the procedures employed in making the decision. An example of a Toulminian argument is if a person stated "I am a police officer (claim) as I was sworn into office in 2002 (grounds) and being sworn into office will legally make me a police officer (warrant)". If the individual then provided the certificate of swearing in, this would be the backing and the rebuttal would be the earlier statements made accompanied with "unless I has retire or am dismissed". The above statement would be qualified by the individual saying "I am definitely a police officer" versus the words "possibly" or "probably". This can also be seen as linking to the TDT process of evaluating all the options to achieve the best subjective expected utility (SEU). More recent perspectives on expert decision-making have combined these two concepts whereby the outcome is important but the 'cardinal decision issues' need to be satisfied during the course of any decision (Yates & Tschirhart, 2006).

Applying the concept coherence of the decision process to the senior investigating officer is extremely interesting as it appears that guidance may be dependent on how much time the investigator has. Indeed, "an SIO has to show courage in being able to make any prompt decisions, and if necessary 'shoot from the hip.' Ideally there would always be sufficient time to reflect and consider various options, consult others, hold meetings, discussion, etc. but hesitation can sometimes be debilitating, following the maxim 'paralysis by analysis'" (Cook & Tattersall, 2008, p. 25). They also write that adequate decisions should be based on sound reason with supportive argument and evaluation and the SIO should record those decisions in a policy file/decision log to "accurately reflect the important strategic and tactical decisions made by an SIO during the course of the investigation" (Cook & Tattersall, 2008, p. 196). The lead investigator in a criminal inquiry also has to manage other issues as well as the decisions. It involves management of people, information and materials but also involves interpretation of the facts within the context of the objectives of the inquiry (Jones, 1994). They describe the inquiry as going through four steps: receipt

and evaluation of information; interpretation of information and rationalising it with an account; making investigative decisions about action or inaction; investigation direction resulting from information from action results, thus, returning to step one.

In summary, best practice advice gives the investigator some of the outcomes that are required and some assistance to deal with the cardinal decision issues. Best practice, in many ways, describes the decision framework but not the actual specific action required. It is clear in policing that an extremely important objective of a rape inquiry is the successful prosecution of the offender and the care provided to the victim (Stern, 2010). In order to evaluate decision-making by investigators, it must be understood what decision *may* or *will* contribute to successful investigation. Roycroft (2007) describes these as solvability factors for the success of the investigation. The question of who provides the interpretation of best practice and more generic lines of inquiry in an investigation is the next challenging question. To establish to best practice *for a particular set of circumstances* is a complex task. How to identify the criterion for success that others should be measured against or, in other words, performance based assessment. Shanteau, Weiss, Thomas and Pounds (2002) describe performance based assessment of expertise: if there is an external criterion (a 'gold standard'), the answer is straightforward and it is a simple comparison between the standard and the decisions made. Shanteau et al. (2002) describes nine traditional approaches to identifying an expert: experience; certification; social acclamation; consistency within reliability; consensus; discrimination ability; behavioural characteristics; knowledge test and creation through training. The nature of expertise will be discussed further in the next chapter; however, from a methodology position how to create the gold standard must be articulated. Smith and Flanagan (2000) used social acclamation combined with a certification approach when researching the effective SIO. As a result they found three clusters that make an effective senior investigating officer: management skills, investigative ability, and knowledge levels. Social acclamation is using experts identified by people working in the field. Furthermore, certification is where they receive some form of accreditation or title, for example, Detective, SIO or Doctor (Shanteau, 1992). Several techniques have been used to identify expert decisions; however, one method which has been widely accepted, especially in the medical field, is the Delphi method (Shanteau, 1992). In the present study, this method was used to identify the criterion

for success by achieving consensus between experts' results but this process does not aim to obtain consensus between the experts by them changing their views. This process will now be described.

*The Delphi Process - Measure of Investigative Decision-Making Performance*

The Delphi method embraces the consensus aspects of expertise as highlighted by Shanteau (1988, 1992). It aims to determine how much agreement there is between experts on a specific issue. In the next chapter, this process was used to identify the 'gold standard' for the study. Experts were selected through the process of social acclamation and certification and all experts were anonymous to each other. The purpose of the consensus process was explained to the experts – namely, that they would develop a 'gold standard' response against which participants' decisions would be measured. The experts were selected to give the most robust analysis combining practitioners with policy and training experts - all were certified Detectives. The experts were:

- A Detective Chief Inspector (DCI) from Major Crime Department at Force Headquarters. The DCI had experience of investigations at all ranks to DCI and was an experienced SIO. The DCI was responsible for investigating the most serious sexual assaults and murders. They had also contributed to the force rape and sexual assault policy;

- A Detective Inspector (DI) from Major Crime Department at Force Headquarters. The DI had considerable experience as SIO on Basic Command Units (BCU) and force wide;

- A Detective Inspector (DI) responsible for processes in initial response for crime force wide. The DI had considerable experience as a Detective Sergeant and SIO on Area Major Enquiry Team (AMET) on BCU and experience as an on-call DI;

- A Detective Constable (DC) from Headquarters Public Protection Unit (PPU) with responsibilities for co-ordinating the force's response to rape and serious sexual assault (including policy writing and investigatory review). The DC were specifically responsible for a daily review of reported rapes;

- A Detective Constable (DC) from Headquarters Training Department with force wide responsibilities for training the response to sexual assault. Also, trainer for (Violent and Sexual Offender Register) detectives, and the SIO and DS's courses. The DC also had BCU crime group experience and conducted peer reviews of difficult cases. Their role included contributing to National Core Doctrine on Investigative Practice.

Three rounds were used to gain the expert rating list:

*Round 1.*

For the entire study, 276 participants completed the investigative scenario and recorded their decisions. The decisions were then categorised to impose structure using the constant comparison method (Cooke, Stout, & Salas, 2001). They were divided into five categories (victim, offender, witness, scene and other lines of inquiry) and then sub-divided into codes using thematic content analysis, (Braun & Clarke, 2006). For example, an investigator recorded the following:

- *preserve forensic opportunity of victim* or
- *make ambulance aware of rape to preserve evidence e.g., clothes, samples at later stage* or
- *medical staff to be made aware of offence investigated and their duty to assist with forensic capture.*

These were then recorded in the victim Section under 'Secure and preserve forensic opportunities from victim'. This process yielded 183 decisions to be rated by the experts in a questionnaire.

All decisions were tested by two independent inter-raters. In order to ensure that all decisions were included this resulted in 38 participants responses being coded (amounting to 14% of the data set). Reliability analysis indicated the lowest Cohen's kappa as .73, therefore indicating good internal reliability.

For round 1 the experts completed the scenario as the participants would have done. The only difference was that the experts were given access to the manipulations.

*Round 2.*

An 'expert consensus questionnaire' (see Appendix 4) was devised containing the 183 decisions that the participants had generated. The four stages of the experiment were split into the five decision categories outlined above. This questionnaire was given to each expert with the researcher present to resolve any ambiguities in the wording of the questionnaire. The experts rated each of the 183 decisions for two constructs: importance and time urgency. Importance referred to how important it is that a particular decision should be carried out to ensure a successful investigation. Importance was measured using a six point scale – ranging from *extremely unimportant* to *extremely important*. Time urgency referred to how quickly a decision should be carried out to ensure a successful investigation. Time urgency was measured using a six point scale - anchored by *extremely low* and *extremely high*. Experts were also invited for any comments as they completed this process.

*Round 3.*

Once the panel of experts had compiled their ratings, the importance ratings generated were put into rank order, from six (*extremely important*) to one (*extremely unimportant*). This identified 57 extremely important decisions that all of the experts had agreed were extremely important. These 57 extremely important decisions were used as the 'gold standard' for participants' decisions to be measured against. The between-expert consensus correlation was $r = 0.74$.

The final validation stage was for decisions to be compared with the current best practice to ensure there had not been any omission errors. The validation was

conducted against all 183 decisions as these were reported and analysed therefore ensuring error omission was important. The ACPO Practical Advice on Core Investigative Doctrine (2005), ACPO Guidance on Investigating and Prosecuting Rape (2009), and Force Policy M120 for Adult Rape and Serious Sexual Assault (Kent Police, 2010a) were reviewed against the 183 decisions. The 'gold standard' was then used to rate all of the investigators who took part in the study.

*The Gold Standard*

A total of 57 decisions were rated by all five experts as 6, extremely important to the success of the investigation. Table 22 shows the 57 decisions in terms of: which part of the study they came in, and the theme they were coded under (victim, offender, witness, scene, or other lines of inquiry). It can be seen from the table that there is a reliance on the gathering of forensic evidence and its continuity. This is illustrated particularly well in feed three and no mention is made of what to do with the media; the emphasis is to guard and retain evidence

Table 22

*Gold Standard Inquiries*

| Feed | Category | Gold Standard Inquiries |
|---|---|---|
| 1 | Victim | Safety of victim/ preservation of life |
| | | Secure/ preserve forensic opportunities from victim |
| | | Do not let victim drink/eat/smoke/go to toilet/ wash |
| | | Early evidence samples to be taken prior to clothes being taken off IRO/STO |
| | | Clothing to be seized |
| | | Gain consent/take victim's blood for alcohol/drug levels |
| | | Medical examination by force medical examiner (FME) |
| | | First account/ verbal statement (including proper description and details of offenders' movements) to be obtained |
| | | Statement to be recorded and fed to investigator e.g., Pocket Note Book |
| | Offender | Search area for potential offender |
| | | Offender description circulated to patrols |
| | Witnesses | Identify potential witnesses |
| | | Officers to conduct house to house (H2H) inquiries nearby (with consideration to time of night) |
| | | Officers to consider potential CCTV evidence for scene and surrounding area |
| | Scenes | Identify scene/s e.g., collapse point |
| | | Secure scene includes cordon |
| | | Commence scene log |
| | | Common approach path |

| | | |
|---|---|---|
| | | Scene to be attended by CSI |
| | | Scene search for potential forensic evidence |
| | | Obtain possible coverage if bad weather or if needs be walk scene and secure potential evidence if raining heavily |
| | Other Lines of Enquiry (OLOE) | Treat as genuine rape until proved otherwise |
| | | Inform/notify duty DI / DS or other supervisor |
| | | Attend scene |
| | | Ensure no cross-contamination issues |
| 2 | Victim | Forensics from victim |
| | | Check welfare of victim |
| | Offender | Obtain name, address, date of birth, telephone numbers |
| | Scene | Ensure officers record conversations with suspect (inc. demeanour/ appearance) |
| | | Preserve forensic opportunities from suspect e.g., prevent washing |
| | | Forensic exam |
| | | Take non-intimate samples |
| | | Ensure professional capture of clothing |
| | | Medical examination by FME (including intimate samples) |
| | OLOE | Ensure no cross-contamination issues |
| 3 | Scene | Make sure scene is secured |
| | | Commence scene log |
| 4 | Victim | Safety of victim/ preservation of life |
| | | Police officer to go with victim to hospital to receive medical attention for continuity |
| | | Identify victim |
| | | Secure/ preserve forensic opportunities from victim |
| | | Forensic capture |
| | | Early evidence samples to be taken prior to clothes being taken off |
| | | Consider Force Medical Examiner (FME, doctor) call-out for forensic capture from victim |
| | | Gain consent/ take victim's blood for alcohol/drug levels |
| | | Verbal statement/ account to be obtained |
| | | Account to be recorded and fed to investigator, once victim is conscious |
| | | Ascertain if the victim could ID offender |
| | | Record any detail or signs of struggle |
| | | Deal with as victim of crime until proved otherwise |
| | | Clothing to be seized |
| | Offender | Identify offender |
| | Scene | Commence scene log |
| | | Common approach path |
| | | Scene search for potential forensic evidence |
| | OLOE | Ensure continuity of exhibits |
| | | Cross-contamination issues e.g., between victims, police staff, scenes |

## Conclusion

The purpose of this chapter was to explain the methodology that will be used in the next chapter but also explain the difficulties in defining such methodology. This chapter therefore considered the methodological approaches to investigating police decision-making and provide an argument for the use of TDGs with potential ways to increase fidelity. The next chapter puts that assertion to the test. The complex issue of a good decision was presented and an approach using experts and the Delphi

technique to provide a platform for whether the investigator made the right decisions was argued. The next chapter introduces the stressor time pressure; this has been the focus of recent consideration in the decision-making literature (Cohen, 2011).

# Chapter 7

## Investigators' Decision-Making in a Serious Sexual Assault Case Including the Effects of Time Pressure.

Chapter Five outlined the process of sexual offence investigations and Chapter Six described the challenges of decision-making research in devising experiments that balance the rigour and interpretability of traditional experimental methods against the richness of available data from field experiments. This chapter is a study which takes the quasi-experimental approach to investigator decision-making. It also considers one of the considerable stresses within policing: time pressure. As this thesis has concentrated on sexual offences, it is entirely logical to consider a serious serial sexual assault scenario; however, why introduce time pressure? The reasons for investigating time pressure are threefold: first, as one of the central tenets to this thesis is best use of resources underpinned by evidence-based decisions; this does not only mean using the right people at the right time but also for the right *amount* of time. This is an area that has been neglected in the policing research; second, within criminal investigations time pressure exists. As Chapter Five illustrated, police policy emphasises the 'golden hour' as the optimum time to identify and secure valuable potential evidence (Kent Police, 2010b). Best practice further promotes time criticality through use of *early* evidence kits and timely forensic capture. Furthermore, the consequences of allowing the passage of time are evident in Feist et al.'s (2007) finding that, as the time between the offence and report increases (beyond seven days) the likelihood of the crime being solved decreases. There are also time pressures built into investigations, for example Section 41(1) of the Police and Criminal Evidence Act (1984) provides that a person should not be detained for longer than 24 hours without charge.

*Decision-Making in Policing*

There is a paucity of research on police decision-making; however, it is an increasing area of study (Mullins, Alison, & Crego, 2008). Recent studies have begun to investigate the cognitions of investigators (Ask, 2007), apply naturalistic decision-making concepts (O'Keefe, Brown, & Lyons, 2009) and develop a taxonomy towards SIO decision making (Mullins et al., 2008). These all, to a lesser or greater degree depend on the actual processes used to make the decisions. To consider those processes an understanding of the underpinning theories of decision-making is required.

*Theories of Decision-making*

Theories of decision-making have evolved considerably over the last century. It is widely acknowledged (Eyre, Crego, & Alison, 2008) that there are two prevailing theories which are generally seen to differ in perspective. These theories of traditional decision-making theory (TDT) and naturalistic decision-making (NDM) will be outlined in turn. However, it should be acknowledged beforehand that, as Kahneman and Klein (2009) note, (as two of the major contributors the decision-making theory) some professionals are impressively skilled while others are flawed.

*Traditional Decision-Making Theory*

The principle underlying TDT (Savage, 1954) is that people do what is best for them. They work through a probability-based process of comparing the relative values of the options available to them. This subjective expected utility (SEU) operates on the concept of best yield. When presented with two or more options, the weighing up of the options will generate the best decisions while, if new factors are introduced, the process is worked through again. It is suggested that the reality of how people make decisions is they do not assess the SEU and prefer to take cognitive short-cuts. In trying to understand what people actually do when making decisions, Kahneman and Tversky (1973) identified that people use heuristics and biases when making decisions. Heuristics are rules used by individuals to make decisions and are developed out of concepts such as availability and representativeness. The

availability heuristic is how people predict the frequency of an event, or is based on how easily an example can be brought to mind. The representativeness heuristic is a rule of thumb wherein people judge the probability or frequency of a hypothesis by considering how much the hypothesis resembles available data (Kahneman & Tversky, 1973). While early TDT theories reflects Bayesian (the probability of something happening) deliberations, the representativeness heuristic judges the probability of how much the information resembled the available data (versus all data). For a full review, see Gilovich, Griffin and Kahneman (2002). This mathematical concept of total evaluation has been criticised by authors such as Klein (1999) as not transferable to the real world. Naturalistic decision-making aimed to explore that application and propose a different model of decision-making.

*Naturalistic Decision-Making*

"The ideal we sometimes have of a machine-like diagnostician carefully tagging new data and withholding judgement does not fit the reality of what people do" (Klein, 1999, p. 91).

The concept behind NDM is to understand how people make decisions in the real world as opposed to a laboratory setting (Lipshitz, Klein, Orasanu, & Salas, 2001). NDM research is mainly based on field observations where decision makers are observed during the incident or debriefed after the event. Klein (1999) documents the beginning of his work in 1985 which concentrated on how fire fighters make life-and-death decisions. The fundamental premise of his work is to study how people use their experience to make decisions in field settings. Consequently, Klein and colleagues formulated the recognition-primed decision model (RPDM), which fuses two processes. The first process is how decision makers 'size up' the situation to recognise which course of action makes sense. The second process is the way they evaluate that course of action by imagining it.

In its most straightforward form, a 'simple match' means experiencing the situation in a changing context with the decision maker perceiving it as typical (e.g., a replication of a previous experience informs decision-making). From this, four by-products aid decision makers' understanding: (a) *goals* that make sense, (b) *cues that*

are important versus those that are not, (c) *expectations* of what comes next and how to prepare themselves, and (d) *typical ways of responding* to the situation. The simple match only caters for those situations that *almost* replicate a previous experience. Klein (1999) further suggests two additional variations regarding how the decision maker deals with atypical occurrences. His second variation explains a scenario where the decision maker is presented with a situation that does not clearly match a typical case. Here, decision makers respond to an anomaly or ambiguity by checking the interpretation that best matches the situation. They may attempt to build a story or explain some of the inconsistencies. Klein's (1999) third variation accounts for a scenario where decision makers evaluate a single option by playing out its course. In this instance, decision makers adjust their actions based on anticipated difficulties or possibly reject or consider another option. The second and third variations are likely to involve the use of a 'mental simulation,' which is defined as the "ability to imagine people and objects consciously and to transform those people and objects through several transitions, finally picturing them in a different way than at the start" (Klein, 1999, p. 45). This description of mental simulations is similar to Pennington and Hastie's (1993) story building concept which explains that people decide whether they are trying to account for the past (terminal state) or the future (initial state) and then specifies the causal factors that drive the transformation. There are typically three casual factors and six transitions. Decision makers then evaluate their simulation for coherence (does it make sense?), applicability (will it provide what the decision maker needs?) and completeness (does it include too little or too much?). If this evaluation highlights difficulties they may re-examine the need they originally identified or the parameters again.

Recent reviews have questioned the perceived polarity of TDT and NDM. Eyre and Alison (2007) argue that they should not be treated as exclusive or contradictory as both seek to explain the process of deciding. They suggest that a pragmatic approach in research can combine both TDT and NDM by the end goals taking precedence over theory building. Indeed, they propose that NDM lends itself to research by starting with practitioner-based problems then, once a research agenda is set, more traditional experimental studies can develop robust and replicable models. Interestingly Kahneman and Klein (2009) have identified "intuitive judgments can arise from genuine skill—the focus of the NDM approach—but that they can also

arise from inappropriate application of the heuristic processes on which students of the HB tradition have focused" (p. 524). In recent years these theories have been applied to a variety of professionalisms: one such area is police decision-making.

There are few works that specifically articulate police decision-making; however, those that do tend to focus on two concepts: the factors that affect the decision and the internal cognitive processes, particularly those that may result in a negative bias in some way. Both of these issues are present in the taxonomy of decision-making (Mullins, Alison & Crego, 2008). Their taxonomy focuses on three aspects: decision environment, the decision maker and the decision bases. The decision environment are those external factors ranging from cultural issues (e.g., blame) to time constraints. They identify accountability, hierarchy, policy, publicity, investigation type, stage and area. These factors directly influence the decision maker who, in their taxonomy of murder enquiries, is likely to be a senior investigating officer (SIO). They note that with regards to the SIO, "Their own level of expertise and experience will define the extent to which decisions are considered and exhaustive" (Mullins et al., 2008, p. 128). The authors further suggest that, whether it is an individual, team, or group making the decision, it can have both positive and negative outcomes. The third aspect of the model is the bases for the decision itself; in other words, it questions what levels of uncertainty are in motion. They propose that evidence, information, and hypotheses are the bases for decisions. Evidence is seen as the most solid ground for decision-making, information affords direction and certainty, while hypotheses involve consideration of alternatives (therefore, following lines of logic).

Previous research has noted that there can sometimes be an over-reliance on single hypotheses and that when individuals are motivated to find support for a particular conclusion they may rely on four different psychological mechanisms: quality of processing, inferential strategies, biased memory search and theory construction (Ask, 2007). In brief, quality of processing means people view information with scepticism that does not accord with their belief. Inferential strategies, especially in terms of hypothesis testing, refers to people seeking and interpreting information in ways that support their belief of motivation. Biased memory searching refers to memories being accessed that support the directional goal (for example, remembering an offender's clothing that did match the description but failing to

recall the clothing that did not match). Finally, theory construction explains that people's desire to support their conclusion may result in them creating ad hoc theories that support their conclusion even when a more plausible explanation is available. Rossmo (2006) also notes cognitive biases, but comes from a more functional perspective. He explains that people can only hold five to nine items in their conscious memory and agrees that certain cognitive short cuts are taken. However, he advocates that through managerial awareness, an atmosphere of open inquiry, considering different perspectives and seeking creatively rather than through consensus, that some of these cognitive negative outcomes can be avoided. The description so far has been about different cognitive processes whereas there are also cognitive differences between individuals. These cognitive skills are not equally developed within all individuals and that variation of task and performance will vary (Irving & Dunningham, 1993). This is especially relevant as investigations can be extremely complex (Smith & Flanagan, 2000) and therefore cognitive processes themselves, in other words, the cost of thinking, may affect the outcome.

The cost of thinking has been explored by several studies and they have shown that more complex tasks require higher levels of cognitive effort (Garbarino & Edell, 1997). Indeed, Mandler (1982, cited in Garbarino & Edell, 1997) suggests that the categorisation process may itself produce effects that contribute to the evaluation of the stimulus. In other words, before the investigator even thinks of outcomes, by simply putting the information into categories to understand it, they use up cognitive load. Mandler (1982) notes that arousal and cognitive effort are heightened as incongruity between a stimulus and schemas increases. This means the difference between the information being processed and the cognitive framework or concept that helps organise and interpret that information creates a heavier workload the more differences there are. This leads to a more extreme evaluation of the stimulus. Garbarino and Edell (1997) built on this concept and found that the 'process of processing', termed cognitive effort, leads to the decision maker generating more negative effects choosing alternatives that are less effortful to evaluate. They also found that effect of processing difficulty on cognitive effort was heightened as the number of attributes increased.

Decision-making under time pressure and stress is a part of many people's lives and appears to be a chronic state in some professional activities. During their work, police officers (and police staff) are exposed to incidents capable of eliciting stressful reactions (Paton, 2005). Flin (1996) investigated stress from the operational environment of incident commanders. She describes stress as a condition when the perceived demands (stressors) exceed the perceived resources to cope with these demands. Flin (1996) writes:

> "The critical appraisal of demands and coping resources is based on a
> host of factors, such as previous experience, training and personality,
> thus resulting in distinct individual differences in the onset and extent
> of stress reactions" (p. 100).

There are two types of stress: chronic or occupational stress and acute stress (Flin, 1996). The first relates to conditions in the work place and the individual's reaction to them, while the second refers to emergency stress or critical incident stress. In the most extreme circumstances, the fight or flight response may result and physiological and psychological functioning can be affected. In other words, a stressor is a variable that often results in decrement in performance, self-reported stress or physiological change (Backer & Orasanu, 1992). Cannon-Bowers and Salas (1998) provide a relatively comprehensive list of stressors in the operational environment. Examples from their work are: multiple information sources, incomplete and conflicting information, rapidly changing and evolving scenarios, high work and information load, auditory overload or interference and time pressure.

Time pressure is understood to exist "when there is a deadline *and* the decision maker realises that the available time may be too short to make a decision" (Oswald & Kunz, 2007, p. 417). Research into time pressure has highlighted a continuum from the individual to the environment; that is, time can be an individual stressor or part of a number of task or environmental factors (Maule & Hockey, 1993). There has been significant investment in terms of researching the effects of time pressure (especially in the early 1990s) and as a result there is consensus in the literature on

many of its effects. A key finding is that it is not always time per se, but rather the perception of time insufficiency for dealing with the decision, thus leading to impairment of information processing (Mann & Tan, 1993). The effects of time pressure have been acknowledged as an important area of research, specifically in terms of how to counteract its negative effects (Edland & Svenson, 1993). In short, there is a minimisation of cognitive effort: time pressure causes increased selectivity of information, giving more important attributes more weight in the decision-making process, using non-compensatory decision rules and locking into one strategy.

*Increased Selectivity and Acceleration*

It is a reasonable assumption that doing the same task quicker in less time is one way to deal with a deadline. This process of 'acceleration' means that the decision maker increases the speed of information processing and therefore needs less time to execute it. Selectivity, on the other hand, means that the decision maker processes less information under time pressure (Oswald & Kunz, 2007). A key study exploring selectivity was that of Payne, Bettman and Johnson (1988) who concluded from their experiments that time pressure takes effect in three steps. First people speed up their processing, then if that is not sufficient they become more selective, and finally, they move to more attributive rules of searching and processing with elimination of key aspects and words. Janis and Mann (1977) found that another method of dealing with time pressure is to conduct a shallower search for information meaning, an increased search across all of the alternatives and a decreased search in terms of depth of alternatives. An earlier study by Bruner, Goodnow, and Austin (1956) found that time pressure affected individuals' scanning process - the process by which one hypothesis at a time is formulated and tested. This study highlighted the cognitive process and the potential effect on the robustness of the decision. For example, high time pressure leads to fewer decision alternatives being generated (Janis, 1982) and time pressure will limit the generation of hypotheses. Indeed, according to Edland and Svenson (1993),

> The generation of decision alternatives under time pressure would predict difficulties in finding new alternatives and locking into existing decision problem formulation under time pressure (p. 36).

From a decision-making perspective, Luchins (1942) supports this notion and reports decision makers have a tendency to lock into a specific problem solving strategy and not recognise when a new similar problem requires a different strategy. In a similar concept, Simon (1957) defines a decision strategy he calls satisficing, which is selecting the first option that works.

*Importance of Attributes*

One of the most influential early studies analysing the effects of time pressure on judgements was conducted by Wright (1974). Subjects were given descriptions of 30 hypothetical car models described on five attributes and were required to judge each car according to the likelihood of them purchasing it. The three time pressure groups were manipulated by instructions given to the participants. The study found that under high time pressure participants changed their strategies and used more negative evidence to inform their judgements, thus giving relatively less weight to positive information. Where there was time pressure versus no deadline, subjects seemed to use fewer attributes. These findings have been questioned, as Svenson, Edland and Slovic (1990) found participants were more likely to rely on positive aspects under time pressure. A study by Abelson and Levi (1985) tends to support Svenson et al. (1990) as they identify two effects of imposing time pressure on the decision maker: (a) a tendency to rely on only one or two salient attributes in making the choice, and (b) a tendency to attach greater weight to unfavourable information about the choice alternatives, therefore becoming more cautious. Another effect of time pressure is that once information is identified there is an inclination to increase perceived important information and prioritise it (Svenson & Maule, 1993).

*Using Non-compensatory Rules*

There is considerable discussion in the time pressure literature about decision rules being characterised as either compensatory or non-compensatory. A compensatory rule takes account of all the relevant information and evaluates each element fully into one rating. A non-compensatory rule is based on less information, with each element often processed more simply in a more piecemeal way (Maule & Svenson,

1993). Studies exploring this concept (Billings & Marcus, 1983; Olshavsky, 1979; Payne, 1976) have reported that participants use more non-compensatory rules when under high information load. Edland and Svenson (1993) comment that this could indicate that non-compensatory strategies are easier, quicker and therefore more likely under time pressure. In testing this notion, Zakay (1985) found that under time pressure non-compensatory strategies were used more. Furthering this balance of strategies, Christensen-Szalanski (1980) noted that participants under time pressure reported a preference for using more complicated strategies than that which they actually used. Where no time pressure was applied, participants did not report a preference for a different strategy. This could offer support to the notion that when under time pressure more basic rudimentary heuristics and selection criteria are used.

As can be observed above, time pressure affects the type of processing employed. However, studies have also investigated the effect of time pressure on the speed of processing. Maule and Mackie (1990) found that decreasing deadlines increased the speed of processing and responding. This too proposes a contrary dimension to the Wright (1974) study and is particularly illustrated by work on risky decision-making by Busemeyer (1985). Here, time pressure increased the participants' likelihood of risk taking where the perceived outcome was negative whereas time pressure decreased the likelihood of risky decisions where the perceived outcome was positive. This is a theme also presented by Janis (1982) on the Challenger disaster where, under perceived time pressure, the likelihood to embrace a risky decision strategy was higher.

*Managing Time Pressure*

There is considerable literature attempting to 'fix' the negative aspects of time pressure; however, it must be recognised that time pressure may sometimes work in the favour of the decision maker. For example, according to Locke and Latham (1984), the inclusion of an explicit deadline increases the motivational effect of setting a goal. This is particularly interesting as, "In general people seem to cope with time pressure by attempting to keep the judgement and decisions as close as possible to those made under no time pressure" (Edland & Svenson, 1993, p. 37).

Where there is a need to develop mechanisms to deal with time pressure, Maule and Andrade (1997) suggest the following coping strategies:

1. Lower goals: accept the need to reduce aspirations and do the best that can be achieved in the time. This involves filtration and increased use of simpler decision strategies.

2. Do what was done previously in a similar situation: use prior experience to adapt what was done in a similar situation to the present situation.

3. Involve others: allow others to undertake some of the scheduled activities or, to a lesser extent, provide advice.

4. Re-schedule activities: involves working longer, not taking breaks and rests, working less on other activities and multi-tasking.

5. Rely on intuition/gut reactions: use this mode rather than more analytical thinking and reasoning.

The fact that strategies can be trained so that individuals can handle time pressure more effectively is a significant point. Dror and Fraser-Mackenzie (2008) note that police officers should receive proper training in cognitive biases, and appropriate procedures and best practices to deal with training issues is needed. However, perhaps surprisingly, Zakay and Wooler (1984) conclude that, under high time pressure, training did not improve the quality of decision. This could be due to the relatively short length of the learning period (Edland & Svenson, 1993).

Another potential method of managing time pressure is provided by returning to the NDM literature. Klein (1993) describes experienced decision makers as performing at very high levels despite time pressure. Indeed, Klein, Wolf, Militello, and Zsambok (1995) found that experienced individuals used different strategies for coping with time pressure compared to lesser experienced individuals. They specifically noted that the emphasis was on assessing the nature of the situation rather than the comparison of alternative courses of action. This is further supported by Klein (1999) who notes experienced decision makers adapt to time pressure well by focusing on the most relevant cues and ignoring others. From a policing perspective, Crego and Spinks (1997) propose that police officers' use of decision strategies depends on their assessment of the available time. The notion of strategic

thinking has been further endorsed by Cohen (2011) who suggests satisfactory time management for deliberation requires substantive domain knowledge and strategic skill.

In summary, time pressure affects cognitive performance but certain factors, such as expertise, may mitigate it. Chapter Six described a methodology to identify good decisions which will be used in this study; however, this does not consider individual differences. As Jones (1994) writes, there may be differences between individuals and that the study of decisions should consider whether people actually want to make decisions and how they deal with the cognitive processing.

*Measurement of Cognitive Processing*

Ask and Granhag (2007) conducted one of the few studies that have investigated police decision-making. They found the need for closure scale to be a useful tool when measuring cognitive ability. The original need for closure scales (Webster & Kruglanski, 1994) sought to tap the urgency of striving for closure in judgment and decision-making assuming individuals "with a high need for closure would experience an urgent desire to reach closure, reflected in a *decisiveness* of their judgments and choices" (Webster & Kruglanski, 1994, p. 1050). While this scale has been questioned in terms of exactly what it measures (see Roets & Van Hiel, 2007), using the same scale in this study may allow for comparison of results and the concept of closure in judgement is a theme within police decision-making. When considering what other tools are used to measure cognitive performance, policing offers a potential answer as the Ravens Progressive Matrices (RPM) is used for selection of police offers on to the high potential development scheme (NPIA, 2010). RPM aims to measure general cognitive ability, specifically two aspects of that ability: "(a) *eductive* ability (from the Latin *educere,* meaning "to draw out"), the ability to make meaning out of confusion, the ability to generate high-level, usually nonverbal, schemata which make it easy to handle complexity; and (b) *reproductive* ability—the ability to absorb, recall, and reproduce information that has been made explicit and communicated from one person to another" (Raven, 2000, p. 2). This can therefore be used as a very useful measure to assist with interpreting cognitive ability.

*Physiological Measures*

This chapter has outlined the psychological aspects of stresses such as time pressure and cognitive processing; however, there is also a significant body of literature exploring the physiological manifestations. Police officers experience both physical and psycho-social stress whilst at work. They also anticipate stress and suffer anticipatory stress reactions (Anderson, Litzenberger, & Plecas, 2002). Research has shown that the autonomic (nervous system) arousal to stress accompanies emotional behaviour, physical exercise, and cognitive effort (Critchley, Corfield, Chandler, & Mathias, 2000). Of these, heart rate has been described as the primary indicator of autonomic nervous system activation experienced during stress (HeartMath, 1999). However, cardiovascular stress is also described by increased blood pressure. Whilst the body may have stress reactions, the individual's cognitive appraisal of a situation may mediate stressfulness. The cognitive appraisal modifies the quality and intensity of the emotional and physiological response (Anderson et al., 2002).

When specifically considering the biological effect of time pressure, studies of the behaviour of surgeons have noted that high stress was not associated with poorer performance (Poolton, Wilson, Malhotra, Ngo, & Masters, 2011). Time pressure caused a significant increase in stress levels but did not influence completion time on the task. However, when considering police studies, the majority of research into biological reactions centres on firearms and critical incidents. As Vickers and Lewinski (2011) note, experienced officers have been found to identify where weapons were hidden and achieve this earlier for longer. In summary, heart rate and blood pressure have been found to be good measurements of the physiological effect of stress, specifically when under time pressure. Cognitive workload creates biological stress; therefore this was added as an exploratory measure to the current study. This may give further insight into the role of time pressure.

*Individual differences*

Much of the research within decision-making concentrates on the internal processes of the decision-maker. It is acknowledged that different experiences can then

influence a decision-makers ability to mentally simulate (Klein, 1999). One of the factors that effects story-building is the decision-makers ability to deal with ambiguity. One potential way to explore the decision-makers approach to ambiguity is to apply Webster and Kruglanski (1994) need for closure scale. Whilst it has been disputed exactly what the need for closure (NFC) scale measures (Roets & Van Hiel, 2007) it is seen as tapping ability to make decisions, or be decisive. Decisiveness is effectively the ability to make a decision quickly with no further consideration. This notion of being able to make a decision without further condieration is also contained within the monetary choice questionnaire (Kirby & Marakovic, 1996). This questionnaire assesses an individual's ability to evaluate reward sizes based on a decreasing function of delayed reward. Including this in the current study gives an added understanding to the NFC in terms of risk based decision-making. In terms of other individual differences, as described at the beginning of this chapter, stress can affect decision-making. A widely accepted measure of current stress is the State-Trait Anxiety Inventory (STAI: Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983). It measures both anxiety - state anxiety and trait anxiety which should assist to give a reflection of the individuals stress in both the here and now and also more generally. Finally, as discussed earlier in this section, cognitive processing can affect an individual's ability to make a decision. However, different decision-makers may have different levels of ability in terms of cognitive workload. Raven (2000) has designed Raven Progressive Matrices (RPM) which measures *eductive* ability, the ability to make meaning out of confusion and *reproductive* ability, the ability to absorb, recall, and reproduce information (Raven's, 2000). This can give us an insight into individual decision-making differences.

In summary, this study aims to explore decisions in sexual offence investigations and the effects of time pressure. There is the suggestion that time pressure decreases the generation of decisions and hypotheses: therefore this will be tested. Furthermore the literature suggests time pressure increases prioritisation: therefore this will also be investigated. Finally, the NDM perspective suggests experience can somehow modulate the effects of time pressure: this will be the final area study. The study will also explore individual differences in terms of intelligence and decisiveness under time pressure.

*Hypotheses*

The chapter's hypotheses are set out below:

1. Time pressure will decrease the generation of decisions;
2. Time pressure will decrease the generation of important decisions;
3. Time pressure will increase prioritisation of decisions;
4. Time pressure will decrease the generation of alternative hypotheses;
5. There will be a positive correlation between years of experience in crime investigation and generation of important decisions under time pressure;
6. Those in the time pressure condition will have greater physiological stress reactions when compared to the control group.

Method

*Sample*

Seventy-six police investigators from Kent, UK volunteered for the study. (This constitutes two of the nine experimental conditions and 27% of the 282 participants for all conditions which formed part of a larger study including Doran, 2010). All participants were in a Criminal Investigations Department (CID) role varying from initial detective training to specialist major and serious crime investigators. At the time of the study, Kent Police was structured into six geographic Basic Command Units (BCUs) and headquarters directorates. Researcher co-ordinators assisted the researchers to gain representation from BCUs and directorates. Forty-one officers were in the control group and 35 were in the time pressure condition. The investigators consisted of 47 males and 29 females, aged between 21 and 58 years, with a mean of 34.1 ($SD$ = 8.1) years.

In the control group, years of service in policing ranged from 11 months (0.92 years) to 32 years with a mean of 9.31 years ($SD$ = 8.07). In terms of years in crime

investigation, the range was new starters in CID to 25 years with a mean of 5.55 years (*SD* = 5.93).

In the time pressure condition, years of service in policing ranged from 11 months (0.92 years) to 29 years with a mean of 7.56 years (*SD* = 7.09). In terms of years in crime investigation, the range was new starters in CID to 25 years with a mean of 3.94 years (*SD* = 5.49).

Fourteen participants with a mean age of 34.54 years (SD = 8.13) took part in physiological monitoring. There were an equal amount of male and female participants. For the between group factor, seven participants were part of the control, and seven the time pressure group.

The less experienced participants tended to be on a training programme designed to give them investigations' experience on a BCU whereas the more experienced officers were either BCU CID officers or headquarters departments that specialised in serious (e.g., organised acquisitive crime) or major crime (e.g., murder or stranger rape). Other headquarters department that specialised in child abuse and corruption were also included.

*Procedure and Materials*

Area commanders and departmental heads (Detective Chief Inspectors) were written to with the authority of the Deputy Chief Constable to offer the study to volunteers who would be given feedback at the end of the study for their participation. BCU and headquarters research co-ordinators assisted to administrate the process. The researchers then attended police stations countywide to carry out the experiment.

The experiment was divided into five distinct phases:

1. Decision making questionnaire (paper questionnaire);
2. Time paradigm (on a lap top);
3. Scenario (on a lap top);

4. Scenario questions (on a lap top);

5. Raven's Progressive Matrices (paper questionnaire);

6. Physiological measures.

The participants attended a room in a police station where enough laptops were set up for one per participant. Each laptop had a mouse and its own headphones to listen to the audio feed. On arrival, the participants were presented with participant instructions and the informed consent agreement. All participants could leave having read both documents if they chose to do so. The participant instructions (Appendix 2 took the participant from arrival to conclusion of the experiment. Each participant was given feedback if they requested following the analysis of results (Appendix 5). Participants were not aware of what condition they were in. Each Section of the experiment and participant instructions will now be described chronologically:

*1. Decision making questionnaire.*

The questionnaire consisted of five Sections. Section one obtained basic demographic details of participants. Section two was the monetary choice questionnaire with amendments from $ to £ for UK participants (Kirby & Marakovic, 1996). Section three was the short form of the state trait anxiety inventory (Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983). Section four was the life events scale (Holmes & Raha, 1967). Section five was a reduced version of the need for closure questionnaire (Webster & Kruglanski, 1994) including the revised decisiveness Section by Roets and Van Hiel (2007).

*2. Time paradigm (on a lap top).*

The perception of time has been linked to an individual's impulsivity. Indeed, "Increased allocation of attentional resources to time and/or increased arousal states, possibly driven by emotional distress, could be the main factor that alters the way in which impulsive individuals take time into account when making decisions" (Wittmann & Paulus, 2007). In order to measure this decision-making concept, Dougherty, Mathias, and Marsh (2003) developed the time paradigm to measure impulsivity via time perception. Time paradigm which is a computerised assessment

of time estimation used to measure participants' estimates of a one-minute interval measure. Participants were instructed to press the computer's mouse button to start and stop a timer, pressing once to start the timer and once again to stop the timer after they thought that one minute had elapsed. Participants did not have access to timepieces and did not get feedback on how long each estimation was (they carried out five in total). The number of seconds was recorded.

### 3. Scenario (on a lap top).

Klein (1999), who has considerable experience of field based studies and scenario design, explains, "The design of the scenario is critical, since the goal is to show many common cases to facilitate a recognition of typicality along with different types of rare cases so trainees will be prepared for these as well" (Klein, 1999, p. 30). Based on this concept, the scenario was designed by the author based mainly on two real life sexual offences investigations that he had overseen as a senior investigating officer but also drew from several other investigations. The principles were to make the scenario as real as possible and include generic sexual assault problems and lines of inquiry but also issues that had arisen giving the SIO difficult decisions to make. The scenario was an amalgamation of real incidents to avoid any officers identifying the cases it referred to. The scenario was based on the on-call situation, where typically a telephone call is received and a considerable amount of information in a short space of time must be gathered. The scenario also included a media issue as this is often difficult for investigators to manage. The scenario design used the principles of a tactical decision game (Crichton et al., 2000). However, the underlying principle within the design of the scenario was to make it as real as the medium would allow. With this in mind, the scenario was prepared as a combination of real time voice recordings and written supporting material. The voice recordings were presented using a power point style presentation which automatically advanced as the scenario progressed. Each investigator was given an investigators' notebook (as would be the case in the real world) and a map (as they would have access to these as an investigator). The scenario was divided into four phases. Phase one had three pieces of information: a call from the force control room giving details of a sexual assault, a call from the police constable (PC) at the scene of the assault and missed call and message from the night duty DC en-route. The investigator could

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then record their initial thoughts and actions. Phase two was a call from a PC who had stopped a male matching the description of the suspect (the description was also used a manipulation for uncertainty; see Doran, 2010). Phase three was a phone call from a special constable where the media were trying to get into the scene of the crime and phase four was a call from a PC who had come across a young woman who was unconscious and with her underwear around her ankles.

Table 23

*Description of Scenario Feeds*

| Feed | Time | Source | Information received |
|---|---|---|---|
| Start | 1.15am | Telephone call: force control room (FCC). | Allegation of rape, name and location of victim. |
| 1 | 1.15am | Telephone call: PC at scene, and voicemail from inexperienced PC on his way to scene. | PC Paulson, phone call: first account of offence, name and location of rape victim. Suspect description. Victim has collapsed while waiting for an ambulance. PC Stonebridge: voicemail message: Officer is on his way to scene and is going to keep the victim there to see what happens. |
| 2 | 1.18am | Telephone call: PC Simmons, on burglary initiative. | The officer has stopped a suspicious looking male seen running in the area. He matches the description of the suspect given at Feed 1. The officer asks the participant if they should arrest the man. |
| 3 | 1.22am | Telephone call: Special Constable Gardiner. | News crew filming in the area has requested to walk through the alleyway where the rape is alleged to have taken place. SC Gardiner asks the participant whether to give them permission to do so, and how much information to give to the news crew about the incident. |
| 4 | 1.34am | Telephone call: PC Calderwood at new alleged crime scene. | PC Calderwood reports a collapsed female; the officer suspects she is intoxicated. She has a head wound, and her underwear is round her ankles. The officer asks the participant what they want done. |

*4. Scenario questions (on a lap top).*

Once the participants had completed the scenario, they were instructed to complete the post-scenario questions. This document was on the laptop and consisted of two Sections. The first Section re-administered the state trait anxiety inventory they had completed in the pre-experiment questionnaire and they were also asked to mark on a visual analogue scale how much time pressure they felt during the scenario (from *none* to *a lot*). The second Section asked the participant to work through the scenario; it emphasised, "What we are trying to capture is what you thought **at that time and** ***not* what you think *now.*** Please answer the questions as you would have if they were asked at the time."

The following questions were developed and asked for each feed of information:
What did you think had happened?
Did you have alternative explanations? If so, what were they?
What were your fast track actions?
Did you prioritise these actions at the time? If yes, how were they prioritised?
What decisions did you make and what were the reasons behind them?
Were there any other actions you were considering at the time?

The questions were aimed at accessing officers' decision-making at the time they made their decisions; so as to avoid contamination of later thoughts the following question was added:
With reflection, are there any other actions you would consider now?

*5. Raven's Progressive Matrices (paper questionnaire).*

The final phase of the experiment was that the participants were given unlimited time to complete the Raven's Progressive Matrices (Raven, Raven, & Court, 2003). RPM was used for two reasons. First, it is a selection tool already used within policing, therefore results may have greater generalisability and application. Second, RPM

measures both eductive and reproductive abilities and both are relevant to the literature.

### 6. Physiological measures.

Fourteen investigators were selected randomly to have ambulatory blood pressure readings taken. Verbal consent was obtained and then officers were fitted with a Suntech Accutracker Ambulatory Blood Pressure Monitor on their non-dominant side. Before beginning the Kent Police Sexual Assault Scenario, two baseline readings were taken from officers whilst resting. During the scenario the monitors were programmed to take blood pressure and heart rate readings at two points - five minutes into the twelve minute scenario (in order for the manipulation to take effect), and at the end of the scenario. This happened automatically.

Three measures were recorded:

1. Diastolic (DIA) - refers to the least or lowest exerted on the arterial walls;
2. Systolic (SYS) – represents a period of greatest pressure in the arterial vascular system;
3. Heart rate (HR) – measured by beats per minute.

### Time pressure manipulation.

As previously stated this chapter concentrates on the time pressure manipulation. The participants did not have less time, just the subjective perception that they had less time. The time pressure condition was administered by the researcher and this was given just before starting the scenario (phase three), the researcher would say:

*"...As we are short of time today, we have had to cut down the amount of time we would normally have for you to complete the scenario. You will notice gaps in the scenario where you will be making notes and deciding on lines of inquiry, these have been shortened. As a result, you will get less time to complete the scenario compared*

*to other officers. However, it is reasonable to finish within this time, but you will have you keep a rather fast pace.* "

*Expert identification of decisions.*

The process for identification of decisions and the Delphi technique was outlined in Chapter Six. In order to identify the ideal response to the scenario, an expert decision panel was assembled using five domain specific rape investigator experts. The experts were chosen using the principles of social acclamation (Shanteau, 1992), specifically, their previous experience and role at the time of the study. Panel membership was kept anonymous. As a panel they were all trained accredited detectives and had domain experience of sexual assaults' investigations including: SIO, on-call detective at all ranks to DCI, training, policy writing and implementation. The Delphi technique was used to obtain expert consensus (see Glaser & Chi, 1988) of the decisions. During the Delphi process, the experts rated all decisions in terms of importance (1 = *not at all important*, 6 = *extremely important*). Decisions which experts rated as extremely important were used to compare against the decisions of the 76 participants. Extremely important decisions were coded dichotomously in terms of presence or absence. The number of hypotheses generated was measured using a hypotheses coding scheme. The decisions generated by investigators were compared against the expert template and a score assigned to each investigator, with good inter-rater reliability (Cohen's = .81).

Results

*Time Pressure Manipulation Check*

A t-test on the manipulation check for perceived time pressure was significant (p < .01). A nine-point visual analogue scale was used. Both conditions felt some time pressure; however, the mean time pressure scores for the time pressure condition was 5.12 (beyond the mid point of the scale) and the control group score was 4.44 (below the mid-point of the scale).

The results are presented in order of hypotheses.

*Time Pressure Will Decrease the Generation of Decisions*

A Mann-Whitney U test was conducted to evaluate the hypothesis that time pressure will decrease the generation of decisions and no main effect was found. The results of the test were in the not in the expected direction and were not significant, $z = -0.09$, $p = 0.46$. Investigators in the control group had an average rank of 40.73 whereas investigators in the time pressure condition had an average rank of 40.23.

*Time Pressure Will Decrease the Generation of Important Decisions*

A Mann-Whitney U test was conducted to evaluate the hypothesis that time pressure will decrease the generation of important decisions and no main effect was found. The results of the test were in the not in the expected direction and were not significant, $z = -0.06$, $p = 0.47$. Investigators in the control group had an average rank of 40.68 whereas investigators in the time pressure condition had an average rank of 40.35.

*Time Pressure Will Increase Prioritisation of Decisions*

A Mann-Whitney U test was conducted to evaluate the hypothesis that time pressure will increase prioritisation of decisions and no main effect was found. However, when each of the four phases were analysed, investigators were more likely to prioritise lines of inquiry having just received the time pressure manipulation. Investigators in the control group had an average rank of 44.51 whereas investigators in the time pressure condition had an average rank of 37.05, $z = -1.88$, $p < 0.05$.

*Time Pressure Will Decrease the Generation of Alternative Hypotheses*

A Mann-Whitney U test was conducted to evaluate the hypothesis that time pressure will decrease the generation of alternative hypotheses and a main effect was found. The results of the test were in the expected direction and were significant, $z = -2.13$, $p<0.05$. Investigators in the time pressure condition had an average rank of 34.58 and generated significantly fewer alternative hypotheses opposed to investigators in the control group had an average rank of 45.59.

*Time Pressure Will Decrease Generation of Decision Rationale*

A Mann-Whitney U test was conducted to evaluate the hypothesis that time pressure will decrease generation of decision rationale and no main effect was found. The results of the test were not in the expected direction and were not significant, $z = -0.20$, $p = 0.98$. Investigators in the control group had an average rank of 40.45 whereas investigators in the time pressure condition had an average rank of 40.55.

*There Will be a Positive Correlation Between Experience in Crime Investigation and Generation of Important Decisions Under Time Pressure*

    *Total years' service.*

There was a significant relationship between number of decisions generated and years' service in the time pressure condition, $rs = .36$, p (one-tailed) $<0.05$. This was not replicated in the control group, $rs = .10$, p (one-tailed) $= 0.26$. For officers in the time pressure condition there was a significant relationship between important decisions and years' service, $rs = .55$, p (one-tailed) $<0.01$. This was not replicated in the control group $rs = .07$, p (one-tailed) $= 0.33$. Finally, there was a significant relationship between prioritisation and years' service whilst under time pressure, $rs = .50$, p (one-tailed) $<0.01$. This was not replicated in the control group $rs = .00$, p (one-tailed) $= 0.48$.

    *Crime investigation experience.*

In the time pressure condition, there was a significant relationship between number of decisions generated and crime investigation experience, $rs$ =.32, p (one-tailed) <0.05. This was not replicated in the control group, $rs$ =.15, p (one-tailed) = 0.17. There was also a significant relationship between identification of important decisions and crime investigation experience, $rs$ =.55, p (one-tailed) <0.01. This was not replicated in the control group $rs$ =.19, p (one-tailed) 0.10. Finally, there was also a significant relationship between prioritisation and crime investigation experience under time pressure, $rs$ =.28, p (one-tailed) <0.05. This was not replicated in the control group $rs$ =.00, p (one-tailed) = 0.48.

### Rank.

There was a significant relationship between number of decisions generated and rank in the time pressure condition, $rs$ =.30, p (one-tailed) <0.05. This was not replicated in the control group $rs$ =.00, p (one-tailed) = 0.49. There was a significant relationship between important decisions and rank in the time pressure condition, $rs$ =.41, p (one-tailed) <0.01. This was not replicated in the control group, $rs$ =.05, p (one-tailed) = 0.37. Finally, there was a significant relationship between prioritisation and rank whilst under time pressure, $rs$ =.32, p (one-tailed) <0.05. This was not replicated in the control group, $rs$ =.09, p (one-tailed) = 0.26.

### Raven's Progressive Matrices (RPM)

There was a significant relationship between important decisions and scores on the Raven's Progressive Matrices. Those with higher scores were more likely to identify important decisions, $rs$ =.42, p (one-tailed) <0.01. This was not replicated in the control group $rs$ =.00, p (one-tailed) = 0.49. One result which seems inverse to the other findings was for participants in the control group. There was a significant relationship between scores on the RPM and the generation of hypotheses, $rs$ =.32, p (one-tailed) <0.05. This was not replicated in the time pressure condition, $rs$ =.14, p (one-tailed) = 0.20. Finally, there was a significant relationship between prioritisation and scores on the Raven's Progressive Matrices in the time pressure condition, $rs$ =.35, p (one-tailed) <0.01. This was not replicated in the control group $rs$ =.14, p (one-tailed) = 0.20.

There was a significant relationship between important decisions and decisiveness in the time pressure condition (NfC), *rs* =.31, p (one-tailed) <0.05. There was also a significant relationship between important decisions and decisiveness (NfC) for investigators in the control condition, *rs* =.25, p (one-tailed) <0.05.

In order to ascertain how the predictor variables related to the ability to predict important decisions under time pressure a multiple regression analysis was conducted. Table 24 shows multiple regression analyses (forced entry) computed for important decisions.

Table 24

*Summary of Multiple Regression Analysis for Variables Predicting Investigative Important Decisions Under Time Pressure (N = 35)*

| Variable | *B* | *SE B* | β | *p* |
|---|---|---|---|---|
| _Rank | -2.12 | .67 | .45 | .00[a] |
| Raven's | 0.19 | .07 | .36 | .01[a] |
| Decisiveness | 0.21 | .07 | .39 | .01[a] |

*Note:* $R^2$ = .47; *F* = 8.93, *p*< 0.01. [a]Significance levels based on one-tailed tests.

*Those in the Time Pressure Condition Will Have Greater Physiological Stress Reactions When Compared to the Control Group*

For this analysis 2 x 3 mixed ANOVAs were used to explore the effect of the group condition (control group / time pressure group) and the experimental manipulation (pre-scenario, post-manipulation and post-scenario) on the three dependent variables:

1. Diastolic (DIA) - refers to the least or lowest exerted on the arterial walls;

2. Systolic (SYS) – represents a period of greatest pressure in the arterial vascular system;

3. Heart rate (HR) – measured by beats per minute.

These were conducted to analyse any differences across the means of the between-group conditions and the within-group manipulation and any interactions.

Table 25 below indicates the average means and standard deviations for the sample at each phase of the experimental manipulation. From this it can be seen that DIA blood pressure was lower pre-scenario than at the later two manipulation time points. For systolic, the lowest rate was post-scenario with the highest rate post-manipulation. Rather than this quadratic trend, heart rate indicates a more linear effect with an increase in HR over the three manipulation points. It is important to note that two pre-scenario measurements (baseline measurements) were added together and divided by two to give the most accurate pre-scenario measurement.

Table 25

*Means and Standard Deviations for the Experimental Manipulation Groupings*

| Manipulation point | Dependent variable | Mean / *SD* | *N* |
|---|---|---|---|
| Pre-scenario | Diastolic | 75.53 / 9.78 | 14 |
| | Systolic | 146.39 / 33.89 | 14 |
| | heart rate | 74.82 / 14.59 | 14 |
| Post-manipulation | Diastolic | 79.21 / 28.98 | 14 |
| | Systolic | 149.07 / 52.52 | 14 |
| | heart rate | 76.21 / 26.43 | 14 |
| Post-scenario | Diastolic | 79.14 / 26.76 | 14 |
| | Systolic | 139.79 / 50.36 | 14 |
| | heart rate | 85.79 / 47.45 | 14 |

*Diastolic analysis.*

There was no issue of sphericity $\chi^2(2) = 1.12$, p >.05, and the variances were equal for the control and time pressure conditions at all three phases of the experimental manipulation (ps > .05).

There was no main effect of the experimental manipulation $F < 1$; however, the interaction was significant $F(2, 24) = 4.05$, p < .05) indicating a quadratic trend among the means for the diastolic blood pressure rate $F(1, 12) = 6.78$, p < .05, partial eta squared = .36. There was no time pressure effect in the experimental manipulation $F < 1$.

*Systolic analysis.*

There was no violation of the sphericity assumption $\chi^2(2) = 2.49$, *p* >.05, and the variances were equal for the control and time pressure conditions at all three phases of the experimental manipulation (ps > .05).

There was no main effect of the experimental manipulation $F < 1$, or the interaction $F(2, 24) = 1.31$, p > .05. In addition there was no time pressure effect in the experimental manipulation $F < 1$.

*Heart rate analysis.*

The data failed to meet sphericity $\chi^2(2) = 9.54$, p <.05, so the values given are following Greenhouse Geisser corrections ($\varepsilon = .63$). The variances were equal for the control and time pressure conditions at all three phases of the experimental manipulation (ps > .05).

There was no main effect of the experimental manipulation $F < 1$, with the interaction also non-significant $F < 1$. There was also no time pressure effect in the experimental manipulation $F < 1$.

Figure 2: Diastolic blood pressure      Figure 3: Systolic blood pressure rate      Figure 4: Heart rate
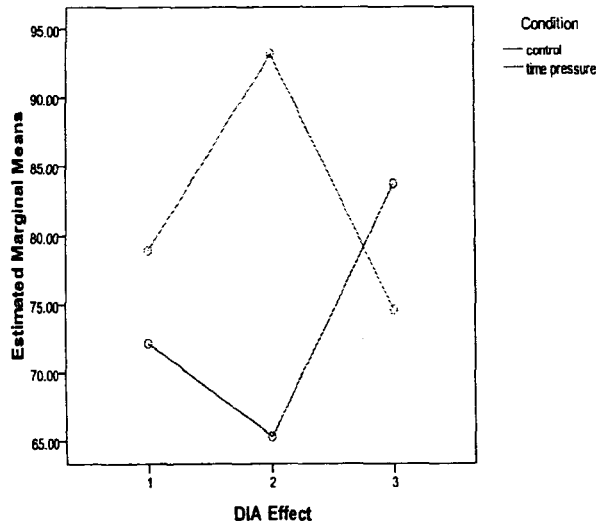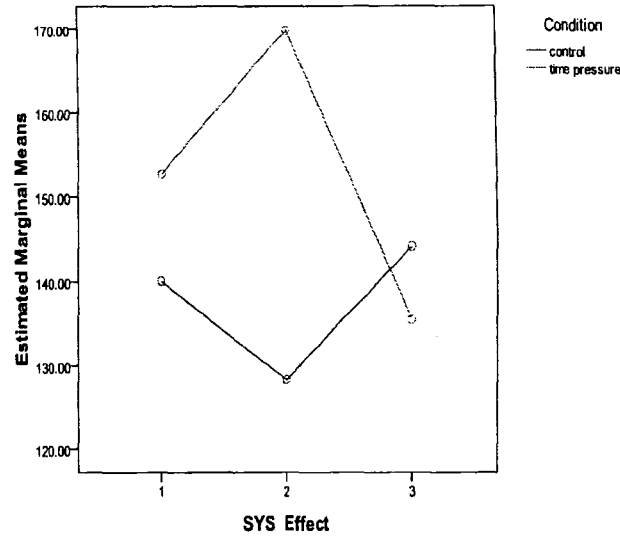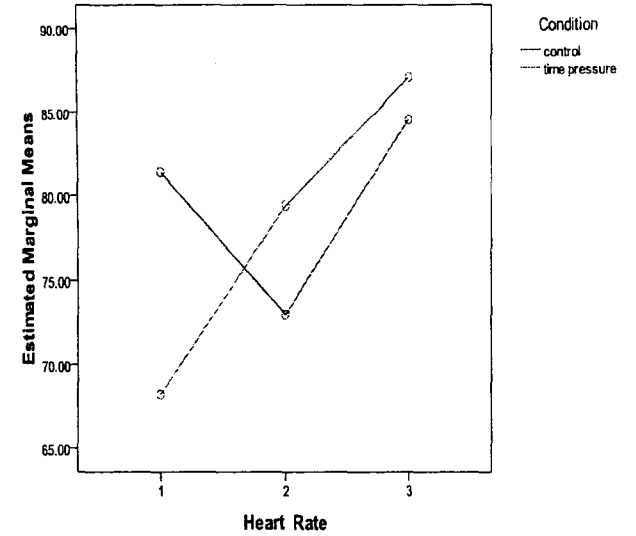
*Figure 2 – 4:* Interaction of conditions and experimental manipulation on dependent variables.

The above Figure 2 illustrates the significant interaction and quadratic trend reported for the DIA blood pressure with independent variables (condition: control / time pressure) for pre-scenario, post-manipulation and post-scenario. Although the SYS and HR did not result in significant effects (within, between or interaction), the same pattern can be seen. Both blood pressure measurements (DIA and SYS) followed a quadratic trend with the control group and time pressure group illustrating opposing patterns. The time pressure group started with a higher mean pre-scenario which then increased post-manipulation and dropped post-scenario. In contrast the control group displayed decreased blood pressure levels at the post-manipulation time point, with higher means at either side. The figures also illustrate the overall higher means for the time pressure group over the experimental manipulation when compared to the control group. As for HR, the figure shows a very similar pattern to the blood pressure measurements in that there is a decrease in heart rate post-manipulation, with other points much higher. However, the time pressure group shows a gradual increase of average HR across the three experimental points.

This chapter sought to explore the effects of time pressure on the generation of decisions, prioritisation of actions and hypotheses. It also aimed to understand the role and function of experience. The results indicate that the main effect of time pressure manifested in two ways. First, under time pressure, investigators' generation of hypotheses decreased. This means that time pressure limited their ability to think of different explanations for the scenario. Second, investigators under time pressure prioritise decisions more frequently but this only appears to happen just after the time pressure is applied meaning it was only effective for part of the scenario. Further, experience (measured by years of service in the police, years of crime experience and rank) seemed to act as a moderator of time pressure as experienced investigators were able to identify more generic decisions and more important decisions when under time pressure than inexperienced decision makers. This study was developed with the intention of assisting investigators to understand the effects of time pressure. Consequently, the results suggest that there are differences in investigators' cognitive processing of information and experience plays a critical role. As such, the remainder of this discussion will consider four interlinking concepts: (a) the role of time pressure, (b) cognitive progressing and responses to complexity, (c) the role of experience, and (d) identification of decisions.

*The Role of Time Pressure*

In this experiment, the time pressure manipulation was effective and the investigators' perception of time pressure was found to be statistically significant. It meant that by simply telling the experimental group that they had less time, they perceived that they were under greater pressure. This was also supported by the physiological measures. However, the role of time pressure was more complicated as the control group still perceived some time pressure. From an experimental perspective, this supports Cannon-Bowers and Salas (1998) in their notion of time pressure being one of three tactical variables that can be manipulated in simulated training. However, why time pressure was perceived across the study is an interesting concept. It is important to consider this before moving onto the

theoretical explanations. One explanation could be the design of the study itself, as the tactical decision scenario was informed by real events experienced by an investigator which had time pressure in them; this may have translated. Also, the scenario has inbuilt time pressure not created by the manipulation; for example, the first victim needed to be got into the ambulance and collapsed presenting an urgent threat to life. Further, the scenario was designed with the aspiration of being as 'real world' as possible, balancing the need to gain interpretable and meaningful results. Therefore if the scenario was perceived as a real investigation real time pressure of the investigatory process may have come into effect. As such, in order to imitate the continuity of time, the participants were forced to move through the scenario (as the scenario evolved automatically on a lap top). They also did not know how long they would have to make each decision; thus they may perceive a shorter time than that which they actually had. It could also be argued it was socially desirable to complete the task. The other pertinent factor was the environment in which the study was conducted. In an attempt to achieve high fidelity and minimise inconvenience to the investigators, the study was carried out in police stations as part of the investigators' working day. The nature of a Basic Command Unit Criminal Investigation Department (BCU CID) is that those investigators may have been feeling time pressure from their everyday workload, their supervisors, or other pressures. These factors can be interpreted positively as replication of the real world but will also be discussed as limitations later in the chapter.

Time pressure did have an effect in this study in terms of increasing prioritisation and decreasing generation of hypotheses. This study supports these effects of time pressure, specifically simpler decision strategies, prioritisation and increased selectivity. Research has suggested that individuals cope with time pressure through a variety of strategies, including using previous experience and lowering goals. Lowering goals includes filtration and increased use of simpler decision strategies (Maule & Andrade, 1997). Further, an effect of time pressure is selectivity of information meaning that the decision maker processes less information under time pressure (Oswald & Kunz, 2007). Time pressure also creates a tendency to increase perceived important information and prioritise it (Svenson & Maule, 1993).

*Prioritisation*

Hypothesis four sought to test prioritisation under time pressure. There was no main effect; however, there was a significant effect just after the manipulation for the first of the four parts of the scenario. This means that investigators prioritised their decisions after receiving the manipulation, but by the second part of the scenario the effects had subsided. One potential explanation is it could be suggested the time pressure was an acute stressor for a finite period increasing the cognitive workload and minimising the impact moderators such as experience, rank and intelligence could have. The finding of prioritisation would support Edland and Svenson's (1993) assertion that time pressure increases prioritisation; however, this study suggests further understanding about the temporal effect of the perception of time is needed.

*Physiological Measures*

A similar observation to the prioritisation finding was observed for the blood pressure diastolic and systolic findings. The interaction was significant with the diastolic monitoring. One potential explanation for diastolic and systolic quadratic interactions is that those in the time pressure group were having a physiological post-manipulation reaction. In simple terms, this indicates their blood pressure rose substantially as a result of the pressure caused by the time pressure manipulation and associated cognitive effect (Critchley et al., 2000). Similar to the prioritisation finding, the effect then subsides by the end of the scenario. The significant diastolic control group effect could be explained by an initial anticipatory stress reaction (Anderson et al., 2002) followed by a normalisation of blood pressure levels which subsequently rises due to the inherent stress within the scenario. This explanation is supported by the heart rate measures; although non-significant they indicate a similar response for the control group and an increase of stress throughout the scenario within the time pressure group. As heart rate is described as the primary indicator of the autonomic nervous system activation during stress, it can be tentatively suggested the stress manipulation had an effect. However, to confirm a much larger study with physiological measures would need to be conducted. Nevertheless, the three exploratory figures give substantial support for the time pressure manipulation having an effect.

*Generation of Hypotheses and Increased Selectivity*

The results found that time pressure led to a decrease in the generation of hypotheses. Hypothesis building is a key part of investigation and is useful to allow the investigator to establish the most likely explanation for what they are investigating (Cook & Tattersall, 2008). The importance of alternative hypotheses can be seen in the embodiment of responsibilities under the Criminal Proceedings and Investigation Act (2005) Code of Practice which states:

"Where a criminal investigation is conducted, the investigator must take all reasonable steps for the purposes of the investigation and pursue all reasonable lines of enquiry, whether these point towards or away from the suspect" (Criminal Proceeding and Investigation Act Codes of Practice, 2005, 17.3).

The findings of the study show that time pressure has an effect on hypothesis building. This supports studies such as that by Ask and Granhag (2005) who found that time pressure affects investigators by their becoming more selective towards hypotheses and less able to generate alternatives. They suggest that this could increase the risk of confirmation bias and, ultimately, time pressure could pose a threat to the objectivity of criminal investigations. This is a serious assertion and efforts to understand this could, if Ask and Granhag (2005) are correct, assist with improving investigative objectivity. It could be argued this process of investigators becoming more selective is a function of a maximum capacity of cognitive load. Studies have shown that more complex tasks require higher levels of cognitive effort (Garbarino & Edell, 1997). Indeed, Mandler (1982, cited in Garbarino & Edell, 1997) suggests that the categorisation process may itself produce effects that contribute to the evaluation of the stimulus. In other words, before the investigator even thinks of outcomes by simply putting the information into categories to understand it they use up cognitive load. Mandler (1982) notes that arousal and cognitive effort are heightened as incongruity between a stimulus and schemas increases. This means the difference between the information being processed and the cognitive framework or concept, which helps organise and interpret that information, creates a heavier workload the more differences there are. This leads to a more extreme evaluation of the stimulus. Garbarino and Edell (1997) built on this

concept and found that the 'process of processing' termed cognitive effort leads to the decision maker generating more negative affect choosing alternatives that are less effortful to evaluate. They also found that effect of processing difficulty on cognitive effort was heightened as the number of attributes increased. Under time pressure the likelihood of choosing the less difficult equivalent alternative was greater when the alternatives were evaluated under time pressure.

Applying this idea to the current study, the process of processing the alternative hypotheses will get more difficult the more hypotheses are created, and the more hypotheses created the more potential incongruity the investigator creates. This in turn is likely to encourage the investigator to return to the hypothesis which has the least incongruity, which is probably the first one developed (based on heuristics, experiential learning or satisficing). In simple terms, time pressure creates cognitive workload by its very existence, this is then compounded by having to think of more hypotheses and then compare them. It is also reasonable to assert that later hypotheses that are generated are more complicated or less obvious. They may also require a comprehension of the current facts rather than a generic situation that an action could rely on, that is, working through investigative aids, for example, the V.O.W.S. (Victim, Offender, Witness, Scenes) mnemonic. It could be argued that making decisions on actions to be carried out is less complex than taking all of the factors into account to establish the hypotheses of what happened. Therefore, less probable hypotheses may require more cognitive effort or termed another way, mental simulation. This could be seen as the difference between Klein's (1998) mental simulation and simple matching. This raises an interesting issue in Klein's model: how does it account for cognitive effort? Simulation by its very nature requires more effort and under time pressure it may be the case the there is a decreased openness to alternatives (Edland & Svenson, 1993). Perhaps Klein (1999) could consider factors other than the way in which the decisions are made. This will be reviewed in Chapter Nine. In summary, this chapter argues that the generation of hypotheses has a cognitive load and time pressure compounds that. There are further findings of this study that contribute to that explanation, namely the role of intelligence.

Investigators' decisions should be appropriately supported and evaluated as, "The golden rule is that good arguments are backed by evidence, supporting material and logical reasoning" (Cook & Tattersall, 2008, p. 41). There were four further findings of the study that contribute to logical reasoning and making good arguments by systematically reviewing hypotheses. First, investigators who scored higher on the Raven's Progressive Matrices generated more hypotheses if there was no time pressure. Second, investigators who scored higher on the Raven's Progressive Matrices were better at identifying important decisions under time pressure. Thirdly, decisiveness on the need for closure scales correlated with ability to identify important decisions and finally the best predictors for identifying EID in the time pressure group were rank, Raven's and decisiveness in that order. These will be considered in turn and then as an entirety.

In this study, the role of intelligence had two apparent functions dependent on whether the investigator was under time pressure. In the control group only, those with higher Raven's score were more likely to generate more alternative hypotheses. Raven's Progressive Matrices aims to measure general cognitive ability, specifically *eductive* ability, the ability to make meaning out of confusion and *reproductive* ability, the ability to absorb, recall, and reproduce information (Raven's, 2000). It seems logical that under no time pressure investigators who scored highly on a test designed to identify those with the ability to make meaning out of confusion and generate high-level schemata which make it easy to handle complexity, would do exactly that. Under time pressure more 'intelligent' investigators identified the important decisions. One could therefore argue the impact of time pressure increased the complexity of the problem and those investigators who could manage this better due to their intelligence level outperformed those who could not. This could also be understood in terms of cognitive process in that intelligence counteracts the processing of information in a simple and piecemeal way (Maule & Svenson, 1993). It could further be argued that Payne et al. (1988) three effects of time pressure as: speeding up processing, selectivity in searching and processing could be mitigated by cognitive abilities to deal with complexity.

Intelligence does not appear to be the only operating factor as need for closure also affected ability to identify important decisions. In the current study, those who scored highly on the need for closure decisiveness scale (Webster & Kruglanski, 1994) were more able to identify important decisions irrespective of time pressure as both conditions were significant. The original scales sought to tap the urgency of striving for closure in judgment and decision-making assuming individuals "with a high need for closure would experience an urgent desire to reach closure, reflected in a *decisiveness* of their judgments and choices" (Webster & Kruglanski, 1994, p. 1050). While this scale has been questioned in terms of exactly what it measures (see Roets & Van Hiel, 2007), it suggests the actual cognitive processing and motivational aspects may assist to counteract the effects of time pressure. Alternatively, decisiveness simply is not affected by time pressure. It is therefore particularly pertinent that the regression analysis revealed the three factors accounting for identification of important decisions were: rank, Raven's and decisiveness. Whilst this is a best fit model and aims to distinguish between the variables it provides a fascinating three aspect model. Increased cognitive ability, combined with motivation to reach closure and experience of investigations and management provide the best circumstances for important decision identification.

*Identifying Important Decisions*

Identifying important decisions is a key aspect to the success of the investigation (Cook & Tattersall, 2008). Hypothesis 2 aimed to investigate how investigators react under time pressure in terms of identifying those decisions that a panel of experts had identified as extremely important. Similarly, Hypothesis 1 tested the generation of investigative decisions. It could be posited that the findings of no main effect but general experience of policing, specific experience of crime investigation and rank act as a moderator of the effects of time pressure. This notion supports Klein (1999) in his assertion that under time pressure individuals cannot sample as many cues and experienced decision makers adapt to time pressure very well by focusing on the most relevant cues and ignoring the others. He notes, "If time pressure is low, the conditions are fairly stable, and the goals are clear, then we should expect to find the highest level of option comparison" (Klein, 1999, p. 96). Perhaps the second point assists to explain why experience did not have the significant effect in the control

group. Those in the control group had the perception of more time so adopted a more traditional decision-making evaluation style whereas those under time pressure had to engage in a more naturalistic approach. This could be the dichotomy Mullins et al. (2008) allude to when combining to the theories of decision-making. If this concept is rejected it can still be argued that recognition primed decision-making (RPDM) was in effect in the control decision but the necessary moderating influence of experience was not needed as there was time to review and analyse the information.

*The Role of Experience*

Although the time pressure manipulation worked, the fact that time pressure had little effect on experienced investigators' ability to generate decisions is an interesting finding. From the results of this study, it appears that general experience of policing, specific experience of crime investigation and rank moderate the effects of time pressure. One obvious explanation for this is Klein's (1999) RPDM. In its most straightforward form, a 'simple match' means experiencing the situation in a changing context and the decision maker would perceive it as typical. Logically, crime investigation experience would mean investigators had experience investigating sexual crimes and therefore could simple match the circumstances. General policing experience is likely to provide similar skills by working with CID on inquiries or providing tactics that investigators would use. For example, if an officer had been a uniformed search officer for a period of years, they would have experience of actioning the investigative parameters from CID and conducting the search of a scene. It could be argued this officer would be gaining investigative experience by carrying out the action. Alternatively it could be the majority of actions are specific to policing but not to investigations; for example, the importance of establishing a scene is promoted in the initial attendance and the crime investigation. The establishing of the scene is likely to be a patrol responsibility (NPIA, 2010) whereas the overseeing of the scene is likely to be CID. Nevertheless, one very important point about experience in this study is every participant had CID experience; therefore the general policing experience combined with some aspect of CID experience. One notion within experience that this study prompts consideration of is experience of management and supervision.

*Intelligence and Experience Combined*

Recently, Cohen (2011) has reviewed the effects of time pressure from an NDM perspective and suggested that satisfactory time management for deliberation requires substantive domain knowledge and strategic skill. This supports the argument that it may not just be speed of processing that increases performance but a complex interaction between intelligence and experience. It could be that those with more expertise are better at actually seeing the solution (based on matching) and those with higher intelligence can better see the solution due to dealing with complexity. When the two combine this could have a cumulative effect. This would support Klein (1999) in that experienced decision makers adapt to time pressure well by focusing on the most relevant cues and ignoring others but could question how intelligence factors into that process. Do experts satisfice (Simon, 1957) (select the first option that works) or have a more complicated process of evaluation?

*Experience of Management and Supervision*

When considering the role of experience every investigator in this study had to be in an investigator's role, it is therefore likely the investigators who were supervisor and managers had experience of investigations and experience of reviewing or directing investigations. Furthermore, due to the incremental promotion processes every inspector in the study will have had experience of being a sergeant and a constable so they may have had the experience of the all of the roles some investigators referred to. For example Kent Police Policy M120 (2010b) gives guidance on the investigation of sexual assaults, states three rank specific orders that mean investigators with rank will gain specific experience due to their role:

7.2 The Investigating Officer for the crime of rape will be an officer of the rank of **Detective Sergeant**. The duty/on-call Detective Sergeant will be called to attend all categories of rape reports.

7.3. The **Detective Inspector** will maintain an overview of the investigation and assume the role of Senior Investigating Officer (SIO).

7.5. In cases of 'stranger rape', this being a more complex investigation, the Detective Inspector will assume the role of Investigating Officer and be called out to

conduct the investigation. The **Detective Chief Inspector** will assume the role of SIO, directing the course of investigation and maintaining an overview of progress. This will generally be an SIO from the Major Crime Department.

Those with rank will, by their very nature, have experience of investigations but the concept to consider is whether rank operates as a different type of experience or are there other skills with rank that enhance investigators' decision-making. Smith and Flanagan (2000) identified that SIOs have three clusters of skills: investigative ability, knowledge levels, and management skills. It could be argued the combination of these skills explains why rank delineates in this study. Further explanation could be gained from Mullins et al. (2008) in their taxonomy of decision-making, as they assert that the level of expertise and experience defines the level of consideration and how exhaustive the narrative can be. This was specific to SIOs and it can easily be argued that this study supports that assertion.

In summary, time pressure did have an effect on the investigators but several factors seem to counteract or moderate its effect. The findings from the regression analysis are particularly relevant: the three factors accounting for identification of important decisions were: rank, Raven's and decisiveness. Increased cognitive ability combined with motivation to reach closure and experience of investigations and management provide the best circumstances for important decision identification.

*Limitations and Future Research*

This study sought to combine more traditional experimental techniques with higher fidelity computer-based scenarios. Time has previously been validated as a stressor that can be manipulated in the experimental environment (Cannon-Bowers & Salas, 1998). The time pressure manipulation was effective; however, it was not dichotomous between conditions as all officers felt time pressure. The reasons for this are unclear but the experiment taking place in police stations during the investigators' duty could offer explanation. This real working environment pressure can be viewed positively as increasing the fidelity of the scenario; however, an obvious criticism is it was not measured or controlled and distraction affects cognitive effort (Garbarino & Edell, 1997). The study could have therefore been

conducted in a more sterile environment. The locations of the study also had occasional interruptions and the ambient nature of these may have impacted on the officers' cognitive workload. A further limitation is this study measured perceived time pressure; however, actual time was not recorded. Further investigation could try to delineate between perceived and real time pressure and its effects. Time pressure as a stressor may have had physiological effects and this was not measured in the current study. Further study could measure the physiological effects of the stressor and susceptibility.

The concept of rank (or experience of police management) would merit further investigation, interviews or questionnaires to ascertain the key influencing factors. In terms of further study the impact of training would warrant further exploration. Determining what training experiences investigators have had and even asking them of their perceived effect would be worthwhile. One of the questions that the study did not ascertain is what those who did manage time pressure better actually did to do this. Also, was their performance lesser than it would have been without time pressure? This concept requires further research.

The issue of experience has been heavily relied on when interpreting the findings of the study. Further research could develop the concept of experience by investigating the difference between policing experience and CID experience. Consideration should be given to a condition or group of officers with no CID experience at all and review their ability to identify important decisions. This chapter has also proposed a concept of moderation; however, it is important to note in the current study that this is not a validated statistical moderation and further research could establish if experience could be proved to statistically moderate time pressure. Finally, what is apparent during this research is that there may be scope to develop an integrated theory of decision-making that incorporates stress. Similar methodology could be used as that which was used in the integrated theory of sexual offending (Ward & Beech, 2006, see Chapter 2.

*Implications*

This study began for three reasons including the author's experience that time pressure can affect investigators' decisions. It was acknowledged that more needs to done to understand the effects of time pressure in a UK policing context. There are three key areas of implications from the current study: policy and practice, training, and recruitment.

*Policy and Practice*

The implications of this study for policy and practice are twofold. Firstly, what does the study offer to current policy and practice and, secondly, what can it offer in the future? A theme of the study is that experience matters. The study seems to validate the use of supervisors and managers as investigators of serious offences. On the subject of serious and sexual offences, it could be argued that the study supports specialisation in terms of crime investigation. Indeed, by specialising, the investigators are likely to quickly assimilate 'simple match' (Klein, 1999) experiences to assist them in making decisions. The study could also support the idea of experienced officers coaching or mentoring in the real world helping experienced officers to learn 'on the job'. Coaching has been seen as best practice; however, it could be further enshrined as a process for forces to manage and mitigate the risk of decision omission, that is, when decisions are missed rather than the wrong decision made.

One of the key findings is that under time pressure fewer hypotheses are generated. This can be a negative as there is a range of complexity in investigations (Innes, 2003) and for those where the suspect is not immediately identified this may limit the direction of the investigation. The acknowledgement that a decision was made under time pressure is key and then in-built reviews that, where possible, are not under time pressure could begin to mitigate omission risk. In specifically understanding the effects of time pressure, reviewers should ideally be supervisors or managers and have experience. The reviewer (be it the Detective Superintendent in charge of crime, Professional Standards Department or Independent Police Complaints Commission) should acknowledge that they are not making or reviewing

the decision under the same pressure. In essence, they may be able to apply a more traditional decision-making approach to a problem when that was not available to the original decision-making. This finding and the raising of the awareness of type of decision-making should be disseminated to reviewing roles. Furthering this concept of review, debriefing time pressured crimes is critical – this study also supports that the debrief should aspire for all officers to be involved, capturing officers with policing and crime experience. Eyre et al. (2008) propose electronic debriefing as an extremely rich and valuable tool. An alternative way to deal with the generation of hypotheses is to use investigative models that support that process and cognitive processing (see O'Neill, 1996, the ADT model of investigation).

In terms of the future, a review of where time pressure can be anticipated and its organisational risk mitigated could be a worthwhile endeavour. Considering this question policing has several in-built time pressures. Examples are: investigations involving infrastructure – whenever a main road, rail or other network is disrupted there is pressure to re-open the infrastructure; PACE time limits when an offender is in custody; emergency driving; and even the approaching end of a shift. Taking the example of PACE time limits by ensuring timely supervisory reviews and good planning, the detrimental effects may be avoided. In summary, reviewing whether the actual time pressure can be eliminated (e.g., with shift patterns having short overlaps) may design out the time pressure. Finally, this study would support those making policy and guidance (NPIA and police policy departments) to consider further incorporation into those documents check lists and aide-memoirs to assist officers under pressure with what is effectively a cognitive jump start that may save valuable time. Having considered where policing can, through policy and practice, build on experience, where experience can be shaped will now be considered.

*Training and Simulated Experience*

Experience is hypothesised to moderate time pressure; this then draws the question of whether experiences can be created which are sufficiently real that provide the investigator with a simple match for future real life crimes. Considerable advancement has been made over the last ten years in high fidelity training both in policing (Eyre et al., 2008) and arguably longer in the armed forces (Cannon-Bowers

& Salas, 1998). This study supports the use of Hydra immersive simulation systems, a high fidelity learning environment which enables learning and monitoring of real time decision-making and leadership in critical incidents and high-pressure investigations. By using Hydra simple match and monitoring can be achieved in a relatively safe environment. The study itself as a tactical decision scenario with feedback should have equipped the investigators with a simple match of a scenario they are unlikely to have come across. This type of training is often referred to as stress inoculation or stress exposure (see Driskell & Johnston, 1998) and training that specifically includes time pressure would warrant further review from a police perspective. More traditional training could explore the effects of training and hopefully equip investigators with physiological and psychological tools to manage those concepts. Certainly understanding and being self-aware that investigators may be generating fewer hypotheses than normal could assist the investigator to seek external validation. The study of Zakay and Wooler (1984) is sometimes cited as finding cognitive training did not mitigate the effects of time pressure. This should be considered as 60 students is a low complexity, low fidelity task whereas higher fidelity, more complex tasking would perhaps benefit investigators. There are, without doubt, positives of incident training and Flin (1996) presents 11 different types from background reading to full-scale inter-agency exercises. This study supports gaining experience by whichever route. One of the benefits of this study is all participants who requested feedback were given personal feedback for their own development.

*Recruitment, Screening and Selection*

This study has shown that the value of experience, in terms of recruitment and re-employing experienced investigators, should be considered when advertising police staff investigator positions. Perhaps the more controversial implication of this study is use of the decisiveness need for closure scale and Raven's Progressive Matrices. Ability tests are already used in selection of officers onto the National Police Improvement Agency's (NPIA) High Potential Development Scheme (NPIA, 2010). However, the finding of this study is that Raven's combines with other factors to identify important decisions. Being mindful of the variation of skills an SIO has (Smith & Flanagan, 2000), RPM could be used to assist to identify those people that

could, alongside other selection processes, deal well with time pressure. The findings of this study would also support review of tenured posts; however, it is accepted tenure can be as a result of investigator welfare or organisational need.

*Conclusion*

This study sought to explore the effects of time pressure on the generation of decisions, prioritisation of actions and hypotheses. It also aimed to understand the role and function of experience. There were two significant findings: firstly, under time pressure investigators generated fewer alternative hypotheses and prioritised decisions directly after receiving the time pressure. Secondly, experience of policing and criminal investigation acted as a moderator of time pressure. Experience of police management (rank) also moderated. An investigator Raven's score (intelligence) assisted them under time pressure to identify important decisions and acted as a further moderator. The role of experience was discussed and congruence with naturalistic decision-making theories was acknowledged. The implications for simulation based training and review processes to manage the risk time pressure creates were proposed.

# Chapter Eight

## Indecent Images of Children and Likelihood of Contact Abuse: a Comparison between Contact Child Sexual Offenders and Non-contact Offenders and the Homologous Victim Selection of Contact Child Sexual Offenders.

Offences relating to indecent images of children (IIOC) have dramatically risen in recent years and are now acknowledged as a global problem (Wolak, Finkelhor, & Mitchell, 2009). Law enforcement agencies must establish whether an individual using the internet to access indecent images of children is also committing, or is likely to go on to commit, a serious contact sexual offence against a child (Eke, Seto, & Williams, 2010). Because of the large volume of cases of individuals accessing indecent images on the internet, the police and associated agencies must manage IIOC cases in terms of risk to children. With finite resources, police may utilise the material that individuals are accessing to assist in prioritising which investigations take place first. At present, however, there are very few studies that provide a clear evidenced-based approach to establishing what sorts of images are indicative of, or discriminate between, various levels of offending – from non-contact, to sexual touching, to sexual assault and to child rape. Recent studies have explored the specific relationship between possession of IIOC (Osborn, Elliott, Middleton, & Beech, 2010) and whether potential risk factors exist that are associated with contact offending (McCarthy, 2010). A recent review by McManus, Long and Alison (2011) highlighted three key questions that have been explored in IIOC literature: (1) what are the key features of IIOC offending? (2) How do offenders use IIOC within their offending? (3) How prevalent are contact sexual abusers within indecent image offender samples?

This chapter concentrates on: (i) an examination of the differences between levels of offending (from no contact through to rape) and the use of IIOC, and (ii) an examination of whether the type of material in an offender's possession reflects

some aspect of their contact offence. With regard to the first of these, this chapter makes broad discrimination between 'non-contact' and 'contact' offenders. A non-contact offender has no conviction for sexually abusive behaviour with children. A contact offender has convictions for IIOC and a contact offence including sexual touching, sexual assault, penetration and child rape (as defined by the Sexual Offences Act, 2003). The chapter will discuss the challenges of such a simple discrimination between behaviour/apparent non-behaviour. For the current purposes (and pragmatically for law enforcement agencies), a basic split between non-contact (lower priority) and contact (higher priority) is practical and inevitable given the relatively low number of comparison points.

Various arguments exist for and against the relationship between the use of indecent images and behavioural manifestation of abuse, with Buschman, Wilcox, Krapohl, Oelrich, and Hackett, (2010) and Sullivan (2002) proposing that the possession of IIOC acts as part of a behavioural pathway that can lead to contact offending. Conversely, Riegel (2004) argues IIOC operates as a diversion from or compensation for contact offending and that the psychological barriers experienced by non-contact offenders may inhibit them from acting out their deviant sexual fantasies (Babchishin, Hanson, & Hermann, 2011; Elliott, Beech, Mandeville-Norden, & Hayes, 2009). In addition, Bourke and Hernandez (2009) propose a 'behavioural extension' in which offenders use IIOC as an extension of their already paedophilic lifestyle. Beech, Elliott, Birgden, and Findlater (2008) summarise that there is a clear overlap for some (but not all) offenders between contact and internet sexual offending.

There is considerable debate as to the prevalence of contact offenders within IIOC samples. A recent meta-analysis concluded 12% of IIOC offenders had a historical contact offence against a child, increasing to 55% when using self-report data (Seto, Hanson, & Babchishin, 2011). Prevalence figures for contact offences within IIOC samples have ranged from 1% (Endrass et al., 2009) to 84.5% (Bourke & Hernandez, 2009, reported as a statistical outlier within Seto et al., 2011). In terms of convictions per se, in general, online offenders do not have criminal convictions (Seto et al., 2010). The likelihood of having a criminal conviction has been associated with risk of harm (see Chapter Two for a review). This has been reported for: stranger rapists

(Davies et al., 1998), sexual offenders (Wilson & Alison, 2005), and those at risk of committing homicide (Soothill, Francis, & Liu, 2008). However, it can be more complicated. A recent study by Sullivan, Beech, Craig, and Gannon (2011) found professionals who contact offended were more likely not to have a conviction and there were differences between intra- and extra-familial offending (though not significant). Notwithstanding the actual prevalence or convictions, it is clear that a proportion of these offenders pose an increased risk of contact sexual abuse and as such it is important to establish what factors, if any, may help identify them (Eke et al., 2010).

This chapter explores contact and non-contact offenders' possession of IIOC. It also examines the type of material within the contact offending sample as well as the means by which it is used by offenders. Since Taylor, Holland, and Quayle (2001) argue that offenders often make purposeful and deliberate decisions when downloading IIOC, a further aim of the current research is to establish what aspects of that process (making selections, possession, etc.) are revealing about the likelihood of contact offending and related to the way in which it occurs. An obvious point of examination is the extent to which severity of image is related to severity of contact offence.

*Defining Indecent Images of Children*

In the United Kingdom (UK), amendments were made to the primary legislation resulting in the Sexual Offences Act (2003), which offers new guidance on defining IIOC based on the severity of the content (Sentencing Guidelines Council, 2007). Table 26 represents the five 'types' or 'Levels' of IIOC (in ascending order) cited by the Sexual Offences Act 2003: Definitive Guideline (Sentencing Guidelines Council, 2007, p. 109).

Table 26

*Levels of Child Abuse Imagery*

| Level | Description |
|-------|-------------|
| 1 | Images depicting erotic posing with no sexual activity |
| 2 | Non-penetrative sexual activity between children, or solo masturbation by a child |
| 3 | Non-penetrative sexual activity between adults and children |
| 4 | Penetrative sexual activity involving a child or children, or both children and adults |
| 5 | Sadism or penetration of, or by, an animal |

Unlike other typologies (e.g., the COPINE scale; see Taylor et al., 2001), the levels set out by the Sentencing Guidelines Council do not include legal images of children or material that does not depict erotic posing (but nevertheless portrays children either fully clothed or in their underwear). This is because, under UK law, such content is not illegal and would not be used for sentencing offenders (Beech et al., 2008).

Although offenders are sentenced on the quantity of images at the five Sentencing Advisory Panel (SAP) levels (Sentencing Guidelines Council, 2007), this may not accurately assess the risk an offender poses (Carr & Hilton, 2009) since there is so little research on the relationship between categorisation of IIOC and offender risk (Beech et al., 2008). However, level 5 includes IIOC sadism and Craissati and Beech (2003) note that has link with risk, particularly serious harm to the victim.

*Can Offenders be Differentiated According to Their Use of IIOC?*

There is a lack of research that has examined the differences between contact and non-contact offenders in terms of their IIOC possession. Research that does exist has tended to concentrate on IIOC offenders as a group, with some comparing them to

contact offenders with no IIOC offence. In general, offenders appear to fall into four categories: (1) 'curious' and impulsive users; (2) users accessing and trading images to fuel their sexual interests; (3) contact sexual offenders who also use child pornography; and (4) those who disseminate images for non-sexual reasons (e.g., financial gain), (Beech, Elliott, Birgden, & Findlater, 2008). In a recidivism study with a follow-up period of 1.5 to 4 years, Osborn et al. (2010) used the Risk Matrix 2000 revised and found none of their internet sex offenders went on to sexually re-offend regardless of their risk categorisation. None of the high risk offenders possessed images at SAP level five. Conversely, Laulik, Allam and Sheridan (2007) reported the majority of internet offenders possessed images at level four or five. They concluded that the level of image had no impact on their potential risk of re-offending. Larger studies concentrating on the of IIOC available for all offenders have reported a continuing trend with a significant proportion of websites (58%) showing images at levels four and five (Internet Watch Foundation, 2008). Contrarily, Gallagher, Fraser, Christmann, and Hodgson (2006) found the "most serious images were the least numerous" (p. 63). Although it is unclear whether these trends are related to risk, research has acknowledged the importance of understanding how the possession of images at any level relates to risk of harm to children (Carr & Hilton, 2009).

A recent American study examined how IIOC possession relates to risk using a sample of 110 offenders (56 non-contact offenders; 51 contact offenders) convicted of IIOC offences (McCarthy, 2010). She found that contact offenders were significantly more likely to possess larger collections of indecent image than non-contact offenders. She also concluded that contact offenders were more likely to engage in grooming behaviours than non-contact offenders (such as sending adult pornography to potential victims; however, this would constitute a difference offence within the UK). Similarly, O'Connnell (2003) coined the term 'cybersexploitation' to describe how the internet can be used to groom children in the aim of sexually abusing them, a finding which is supported by Tate (1990) and Quayle and Taylor (2002) whose offenders stated IIOC helped gain cooperation from a child to participate in sexual abuse. A further behaviour associated with contact offending in IIOC samples is the production of abusive images. Wolak, Finkelhor, and Mitchell

(2005) found over half of IIOC offenders engaged in penetrative activity whilst producing their own IIOC (58%).

In terms of explanations as to why contact offenders select certain imagery, little has been written. However, previous research on adult pornography and IIOC possession suggests that individuals seek out material which is most arousing to them and reflects their sexual fantasies (Glasgow, 2010; Howitt, 1995; Seto, Maric, & Barbaree, 2001). Burgess, Hartman, Ressler, Douglas, and McCormack (1986) found that 80% of the offenders in their study claimed their most common sexual fantasy related to their sexually assaultive behaviour. Furthering this concept, Quayle and Taylor (2002) concluded that IIOC "preserve a child at the very age and stage of development that is most arousing to the offender" (Quayle & Taylor, 2002, p. 866). Therefore the possession of IIOC may indicate the sexual preference of the offender in terms of the gender, age, and preferred sexual action. Therefore behaviours exhibited by IIOC offenders may provide potential likelihood factors that need to be further examined.

In terms of other factors that maybe be worthy of exploration, whether a suspect speaks to the police is of significant interest, particularity in a crime where the victims are unable to speak for themselves. When a suspect is arrested and interviewed there are a number of factors that influence their decision to co-operate within the police interview. Gudjonsson and Sigurdsson (1999) reported that their prison inmate sample stated motivations for their confessions were based on either internal, external pressures or proof factors. The offenders' perception of proof that was against them was the most common reason for suspects to confess to their crimes. In addition, another study reported that murderers were more co-operative and helpful to the police than sexual offenders (Holmberg & Christianson, 2002). The sexual offender group reported more negative behaviours from those who interviewed them. The authors from this study and other research in this area (Kebbell, Hurren, & Mazerolle, 2006) conclude that offenders are more likely to confess to their offences if shown empathy within the interview. Therefore it is possible that taking Gudjonsson and Sigurdsson (1999) results and Holmberg and Christianson (2002) conclusions that IIOC offenders with no known contact offence would be more likely to confess and give a justification for the criminal behaviour.

This may be due to internet crimes often carrying quite conclusive evidence of this offending behaviour, with images saved on computers and email exchange (perception of proof). Moreover, IIOC only offenders may be easier to relate to and display empathy within the interview itself. Finally, contact offences carry more severe punishments in terms of sentencing (SGC, 2007) thus contact offenders may be more inclined to give a no comment interview.

Whilst there has been little empirical research in the relationship between IIOC and contact offending, this relationship has been explored theoretically, particularly from a therapeutic perspective.

*Theoretical Perspectives*

The relevant theoretical perspectives were outlined in Chapter Two and the methods of investigation and legal perspectives were described in Chapters Five and Six. From Chapter Two, this chapter will concentrate on work derived from Finkelhor's (1984) pre-condition model. The model has four preconditions (motivation to sexually abuse, overcome internal inhibitors, overcome external inhibitors, and overcome resistance of the child) that must be met in order for child abuse to occur. Wolf (1984) developed Finkelhor's (1984) model from a single process into a cycle, then expanded by Eldridge (1998) who proposed three cycles of offending ( continuous, inhibited and short-circuit). Each cycle goes through some of the following stages: fantasy reinforcement, fear of detection, illegal fantasies, masturbation/orgasm, target victim, fantasy rehearsal, grooming, and then abuse. Sullivan (2002) has since developed the spiral of sexual abuse describing the cycles of abuse that may be continually repeated within a process of escalation. This conceptual framework illustrates a process of offending that moves through motivation to illegal fantasy, following a path that overcomes obstacles of guilt and fear, encompasses cognitive distortions and offence preparation, culminating in the sexual offence. Thus, the spiral concept allows for explanations of different types of offending, such as the indecent exposer who escalates to contact offending. The same principle can be used for IIOC offenders who may move from illegal fantasy, overcoming guilt and fear escalating to grooming, inciting or even to contact sexual

offending. The notion of escalating seriousness within IIOC offenders has been explored in Krone's (2004) typology. There are three online behavioural factors of seriousness: (1) the nature of the abuse, from indirect to direct victimisation; (2) the level of networking by the offender; and (3) the level of security they employ to avoid detection. An increase in these factors would represent an increase in overall seriousness. In many respects, distinguishing the nature of the abuse from indirect to direct victimisation is one of the key aims of this study.

*Current Study*

The purpose of the current study is twofold: first, is to examine whether there are differences between contact and non-contact offenders in terms of their IIOC possession; second, is to examine whether the form of the image relates to their contact offence. The two offender groups are compared across four key areas: (1) socio-demographic characteristics; (2) quantity of IIOC possessed; (3) types of IIOC possessed; (4) internet activity. Within-group differences between contact offenders are also examined regarding their possession according to the: (1) severity of contact offence and IIOC possessed, and (2) relationship between contact offence victim and IIOC. Based on previous research and theoretical perspectives outlined, the following hypotheses were tested:

1. There will be a difference between contact and non-contact groups in terms of their possession of IIOC. It is hypothesised that the offenders will anchor on different imagery according to their offender grouping; that is, contact offenders will be more specific in the IIOC in terms of the level, action depicted, age and gender of the child whereas non-contact offenders will be less specific in their sexual preference (Burgess et al., 1986; Glasgow, 2010; Howitt, 1995);

2. Contact offenders will possess more IIOC than non-contact offenders as concluded by McCarthy (2010);

3. Contact offenders will have more convictions for producing their own IIOC than non-contact offenders as found by Sheehan and Sullivan (2010) and Wolak et al. (2005);

4. Contact offenders will display more grooming behaviours than non-contact offenders as found by McCarthy (2010) and O'Connell (2003);

5. Contact offenders will possess IIOC that relate to their contact victim: "Actual images themselves also preserve a child at the very age and stage of development that is most arousing to the offender" (Quayle & Taylor, 2002, p. 866);

6. The more serious the contact offence the more severe the IIOC possessed (contact offenders will possess IIOC that reflects their sexual preference (Howitt, 1995; Quayle & Taylor, 2002; Taylor et al., 2001).

# Method

*Participants*

There were two samples in the current study. The first sample consisted of 60 adult male indecent image offenders aged over 18 years who were selected through stratified random sampling to ensure an equal amount of both contact and non-contact IIOC offenders. The second was an extension of the first sample from 60 (30 contact and 30 non-contact) to 120 offenders (60 contact and 60 non-contact). The second sample was able to examine socio-demographic factors as these were available; however, the image details were not. The rationale for extending the sample size for this Section was to bring additional power to the results.

Non-contact offenders were required to have a conviction for any offence within Table 27 with no convictions in Table 28.

Table 27

*Definition of Non-contact Offender Convictions (n = 30)*

| Offence | Brief description |
| --- | --- |
| Making IIOC (s.1. Protection of Children Act, 1978) | IIOC is downloaded from the internet or photocopied from another image |
| Taking IIOC (s.1. Protection of Children Act, 1978) | IIOC is taken in person with a camera or remotely by webcam |
| Distribute IIOC (s.1. Protection of Children Act, 1978) | IIOC is sent via email, posted on a social network/newsgroup/website. |
| Possession IIOC (s.160 of Criminal Justice Act, 1988) | IIOC is possessed with no requirement to prove any of the above. |

In order to be categorised as a contact child sexual offender, participants had to have at least one conviction within Table 27 and at least one conviction in Table 28.

Table 28

*Definition of Contact Offender Convictions (n = 30)*

| Offence | Brief description |
| --- | --- |
| Rape (Sexual Offences Act, 2003, s.1 & 5) | Intentionally penetrates the vagina, anus, or mouth of a child with his penis |
| Assault by penetration (Sexual Offences Act, 2003, s. 2 & 6 ) | Intentionally penetrates the vagina or anus of a child with a part of his body or anything else |
| Sexual assault (Sexual Offences Act, 2003, s. 3 & 7) | Intentionally sexually touched a child |

A limitation of the current study is that those offenders who displayed grooming behaviours could appear in either the contact or non-contact group. Some offenders used grooming behaviours with no actual 'hands on' offending ($n = 6$), whilst others displayed grooming behaviours and contact sexually abused a child ($n = 26$). As this is an exploratory paper, the effect of grooming behaviour was examined as a possible discriminatory factor. Further work is currently being undertaken with a larger sample to discriminate the groomer/inciter group as a separate group of offenders from contact and non-contact offenders. It is also important to note that offenders

were categorised according to their conviction not index offence. Therefore it is possible that a contact offender had a previous contact offence and later IIOC offence. Conversely the IIOC offence may have come first and a later conviction for a contact offence. Alternatively the contact and IIOC offence may have been resulted in both offences convicted at the same time.

The offenders were all male and aged between 22 and 71 years ($M$ = 42.8, $SD$ = 11.21). The number of IIOC possessed per offender ranged from four to 199,832 with a median of 787 ($M$ = 15, 099.27, $SD$ = 37,196.51). All of the offenders were found in possession of both still images and movies; that is, the offender with four IIOC had one movie IIOC and three still IIOC. Movies were used as an inclusion criterion as Taylor et al. (2001) suggest they are the "major contemporary primary source of child pornography" (p. 98). The researchers also wanted to explore IIOC possession as a whole and any differences regarding the format of IIOC, therefore stills and movies were also examined separately. The offenders were all arrested after 1 January 2000. Data collection occurred between May 2009 and December 2010.

*Procedure*

The data were primarily provided by Kent Police but also included cases from other South East forces such as Metropolitan Police. The data were part of a larger project within Kent, which was developing a risk assessment tool to assist in the risk management of indecent image offenders: Kent Internet Risk Assessment Tool (KIRAT, 2008). KIRAT was designed to prioritise those IIOC offenders most at risk of contact offending. KIRAT's inception was due to a need to provide evidence-based decision-making on prioritisation of investigations in order to protect children.

As part of the preparation for prosecution, investigators gather information such as the number of IIOC, the format (whether still image or movie) and the seriousness of the IIOC possessed (SAP Level) which was utilised as data. Other data such as family circumstances, access to children, years accessing IIOC, previous convictions were coded using content analysis from case files that included case summaries and suspect and witness interview transcripts. Content analyses required the researchers

to identify the presence or absence of variables such as access to children and the type of access.

Inter-rater reliability was assessed by comparing the coding of Rater 1 with Rater 2. A randomly selected set of 42 offenders (70% of sample) were selected for inter-rater reliability. All reported variables had a good inter-rater reliability coefficient: Pearson's $r = .87$ or higher for continuous variables and Kappa $= .88$ or higher for categorical variables. Analysis was guided by previous research suggesting factors to identify and examine. Non-contact and contact offenders were examined and compared across four key areas, outlined in turn below.

*Socio-demographic characteristics.*

Information such as the age of offender at time of IIOC arrest was provided as a specific date within the prosecution file. Details of relationship status and access to children were documented by the investigators as part of the intelligence information. When the investigators attended the home of the suspect, more information regarding the living circumstances, of the offender and any other potential access to children was gained. Access to children was coded dichotomously. The type of access was also recorded with a choice of (1) own children (e.g., biological, foster children); (2) familial access (e.g., the offender was a grandparent or uncle); (3) job access (e.g., school teacher) and/or (4) other access (e.g., volunteered in local children's activities, befriended local children within the area). Details of each offender's previous convictions were coded dichotomously. The type of previous convictions was also recorded: (1) previous IIOC offence; (2) child sexual offence including anything from sexual touching to rape; (3) other sexual offence, that is, adult sexual offences, voyeurism; and/or (4) other offences such as theft, criminal damage.

*Quantity of images possessed.*

As part of an indecent image investigation each suspect's computer was digitally forensically examined for any indecent image material and any potential evidence of contact sexual abuse offences. Any IIOC were identified and quantified by

investigators assisted by the Digital Forensics Unit (DFU). DFU identified any potential IIOC that were passed to the IIOC investigators to view and assess the level of IIOC possessed. IIOC were viewed and assessed by specifically trained investigators who graded each IIOC according to the Sentencing Guidelines seriousness criteria (see Table 25).

On some investigations very large amounts of IIOC were identified where grading of all images would be impractical (e.g., one offender in this sample possessed almost 200,000 IIOC). Therefore, all IIOC were viewed in order to determine whether the offender had committed direct contact offences against a child. Then, as a minimum, the first 20,000 IIOC were categorised using SAP Levels and 10% of any above that number. Regarding the data used within this study, all offenders' IIOC had been viewed with an average of 79.65% categorised (SAP levels) by investigators.

In addition to the SAP levels, investigators also provided a schedule of the IIOC viewed which gave details regarding the gender, approximate age, and sexual action of a proportion of IIOC possessed. Movies were described in detail. When coding the gender of the IIOC victim, this was coded as either: male, female, or both genders. This was gathered from the investigators who viewed the offenders' possession and gave a summary of their findings; for example, the offender possessed over 85% male IIOC. The schedule of information was also used to triangulate data sources, examining the gender of victims. If an offender possessed IIOC that depicted over 80% of a particular gender then this was categorised as the IIOC gender preference. Anything less than this resulted in the IIOC gender coded as 'both genders'. For age comparisons, as above, the investigator who viewed the IIOC gave an indication if there was an age preference within their possession. Again, this was confirmed by the researcher examining the schedule of information. If an offender possessed IIOC ranging from 5 year olds to 14 year olds, then the average age was calculated as the median (9.5 year olds) and the age range was 10 years.

*Internet activity.*

Time spent downloading IIOC was measured by evidence of an offender's first to final date (usually date or arrest) of IIOC possession. This was gathered from a combination of offender interviews, summary reports provided by the investigator for use in court by the Crown Prosecution Services, and any digital forensic analysis of media possessed by the offender. It is acknowledged that there are limitations in using this methodology as exact dates were not gathered. However, as this study is exploratory, it aimed to provide a starting point regarding exploration of these factors.

Whether an offender had paid for access to IIOC was usually part of the case file where the offender's card details had been captured. In addition, all offender interviews were analysed regarding the explanation given by offenders for their possession of IIOC. These were subjected to thematic analysis, with four key areas extracted: (1) no comment on possession; (2) positive justification, for example, to catch and report offenders to police; (3) cognitive distortion, for example, downloading IIOC does not harm the child; (4) admit attraction to IIOC. It is acknowledged that these were general categories based on the interview transcripts. No actual assessment was completed to define 'cognitive distortion' other than the offender suggested that the child was somewhat complicit or that they were doing no harm by the child in possessing the IIOC.

Within the case file it was highlighted whether evidence was recovered indicating that the offender had produced their own IIOC. This would normally be charged as taking an IIOC (see Table 26). Therefore, those offenders who took IIOC webcam footage of children were categorised as producers. An offender could be classified as either a contact or non-contact and produce their own IIOC. This is because some offenders who were convicted of taking IIOC were producing IIOC via webcam, or covertly filming IIOC ($n$ = 8) whereas other offenders were pro-typical IIOC producers (Wolak et al., 2005a) and were actively part of the production and abuse that occurs within the IIOC ($n$ = 14).

Grooming behaviour was categorised dichotomously as well as the grooming method employed (online / offline / both). An offender was categorised as engaging in grooming behaviour online if he was communicating online to a child in a way

that was sexual or encouraged sexual behaviour. This could be chatting in a sexual way and/or arranging/encouraging a child to meet. Offline grooming behaviour included evidence of those offenders who had access to a child and were manipulating their trust in some form (whether through financial inducements or befriending a neighbourhood child) to achieve sexual satisfaction. Not all offenders within the sample who were coded as groomers were convicted of grooming (Section 15, Sexual Offences Act, 2003). This was because the offence of grooming is difficult to prosecute and convict (Davidson, Grove-Hills, Bifulco, Gottschalk, Caretti, Pham, & Webster, 2011).

*Relationship between IIOC possessed by contact offenders and their contact offence(s).*

Contact offenders were categorised according to the sexual action recorded within their offence using the relevant SAP levels (see Table 26). Those offenders whose contact offence involved sexual touching with no penetration were categorised as level 3. Penetrative sexual abuse was categorised as level 4. For those categorised as level 5, the coding dictionary defined this as any contact offender who had penetrated their victim and exhibited one or more of the following:

1. Violent rape, causing physical trauma to victim (e.g., bleeding);
2. Physical abuse, such as hitting victim in commission of offence;
3. Bondage, tying up victims (e.g., using rope, handcuffs);
4. Evidence of enjoyment of pain inflicted (e.g., one offender produced his own IIOC movie where victims were visibly seen to be crying and in pain).

As mentioned above regarding the detail of the IIOC possessed in terms of the gender and age of children, the contact victim information was also recorded. This stated the age and gender of the child victims. If an offender committed a contact offence against a child between the ages 13 and 15, the median age (14 years) was taken with a range of 3 years.

Results

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*Socio-demographic Characteristics*

The main sample consisted of 60 offenders (30 contact and 30 non-contact offenders), with an extension of the sample was available but only for socio-demographic characteristics. Therefore data for the 120 and 60 are presented here. The rationale for reporting both samples is that any discussions which bring together the IIOC findings and socio-demographic factors (e.g., levels of IIOC and previous convictions) would need to be present within the same sample (n = 60). The extended sample of 120 gives extra power to these findings.

*Socio-demographic characteristics for the extended sample (n = 120)*

Table 29 below shows the comparative socio-demographic characteristics for the extended sample. There were no statistical differences regarding the age of the offenders with both offender groups aged around 42 years, with no differences in their relationship status ($\chi^2$ (2) = .05, p > .05). However, differences were found in the living arrangements between the two groups ($\chi^2$ (5) = 11.90, p < .05, *Cramer's V* = .31). When considering all living arrangement categories, both offender groups were most likely to live on their own; however, 10.2% of the contact offender sample were likely to live with a partner and their partner's children compared to less than 1% of non-contact offenders. When examining this variable, it was found that contact offenders had a 14.81 higher odds ratio of living with partner and her children when compared to non-contact offenders ($\chi^2$ (1) = 10.46, p < .01) As with the significant findings above, contact offenders were more likely to have any access to children ($\chi^2$ (1) = 11.93, p < .01) with a higher odds ratio of 5.21 than non-contact, with this access most likely to be 'other' access ($\chi^2$ (1) = 12.31, p < .001, odds ratio 5.35). Contact offenders were also more likely to have any previous convictions ($\chi^2$ (1) = 16.81, p < .001) with a 5.06 higher odds ratio, specifically for non-sexual previous convictions ($\chi^2$ (1) = 8.12, p < .01) a higher odds ratio of 3.62 compared to the non-contact offender group.

Table 29

*Comparative Socio-demographic Characteristics of Non-contact and Contact Offenders: Extended Sample (n = 120)*

| | All offenders (n = 120) | Contact offenders (n = 60) | Non-contact offenders (n = 60) |
|---|---|---|---|
| Age at arrest (yrs) | Mean = 42.66 | Mean = 42.85 | Mean = 42.47 |
| | SD = 11.39 | SD = 11.89 | SD = 10.96 |
| 18-25 | 10 (8.3%) | 4 (3.3%) | 6 (5.0%) |
| 26-39 | 43 (35.8%) | 21 (17.5%) | 22 (18.3%) |
| 40-49 | 32 (26.7%) | 19 (15.8%) | 13 (10.8%) |
| 50 or older | 35 (29.2%) | 16 (13.3%) | 19 (15.8%) |
| Relationship status | | | |
| Never had | 6 (5.4%) | 3 (2.7%) | 3 (2.7%) |
| Broken relationships | 53 (47.3%) | 28 (25.9%) | 25 (22.3%) |
| Long-term partner | 53 (47.3%) | 27 (24.1%) | 26 (23.2%) |
| Access to children | | | |
| Any access** | 92 (76.7%) | 54 (45.0%) | 38 (31.7%) |
| Has children | 50 (42.0%) | 29 (24.4%) | 21 (17.6%) |
| Through job | 16 (13.3%) | 7 (6.0%) | 9 (7.5%) |
| Through family | 55 (45.8%) | 31 (26.5%) | 24 (20.0%) |
| Other access*** | 28 (23.5%) | 22 (18.5%) | 6 (5.0%) |
| Living arrangements* | | | |
| On own | 35 (29.7%) | 14 (11.9%) | 21 (17.8%) |
| Parents | 18 (15.3%) | 8 (6.8%) | 10 (8.5%) |
| Individual not a partner | 9 (7.6%) | 5 (4.2%) | 4 (3.4%) |
| Partner | 15 (12.7%) | 7 (5.9%) | 8 (6.8%) |
| Partner & her children*** | 13 (11.0%) | 12 (10.2%) | 1 (0.8%) |
| Partner and own children | 28 (23.7%) | 13 (11.0%) | 15 (12.7%) |
| Previous convictions | | | |
| Any previous offences*** | 48 (40.0%) | 35 (29.2%) | 13 (10.8%) |
| Image offences | 12 (10.2%) | 5 (4.2%) | 7 (5.9%) |
| Other sexual offences | 7 (5.9%) | 5 (4.2%) | 2 (1.7%) |
| Other non-sexual offences* | 30 (25.4%) | 22 (18.6%) | 8 (6.8%) |

*p < .05, ** p < .01, *** p < .001      Values may not add to 100% due to missing data.

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Socio-demographic characteristics for the 60 indecent image offenders are presented in Table 30. Similar to the extended sample, there was no statistically significant difference regarding the age of offender groups when arrested ($M$ = 42.8, $SD$ = 11.20), with contact offenders being slightly older ($M$ = 43.6, $SD$ = 11.42) than non-contact offenders ($M$ = 42.0, $SD$ = 11.11). There were also no statistically significant differences between the groups regarding the relationship status of the offenders ($\chi^2$ (2) = 1.21, p > .05) or living arrangements when arrested ($\chi^2$ (5) = 8.28, p > .05). However, based on the odds ratio contact offenders were 8.8 times more likely to have access to children ($\chi^2$ (1) = 5.19, p < .05). Specifically they were 3.6 times more likely than non-contact offenders to access children via other means ($\chi^2$ (1) = 4.44, p < .05) such as volunteering at club, befriending a stranger. There were significant differences between offender category and any previous conviction ($\chi^2$ (1) = 7.18, p < .01) with contact offenders 4.6 times more likely to have a conviction for any offence. In terms of criminal histories that were not sexual (e.g., theft), contact offenders were significantly more likely to have a criminal conviction (4.7 times more likely) compared to non-contact offenders ($\chi^2$ (1) = 3.87, p < .05).

Table 30

*Comparative Socio-demographic Characteristics of Non-contact and Contact Offenders*

|  | All offenders ($n$ = 60) | Contact offenders ($n$ = 30) | Non-contact offenders ($n$ = 30) |
| --- | --- | --- | --- |
| Age at arrest (yrs) | Mean = 42.8 SD = 11.2 | Mean = 43.6 SD = 11.4 | Mean = 42.0 SD = 11.1 |

| | | | |
|---|---|---|---|
| 18-25 | 4 (6.6%) | 2 (6.7%) | 2 (6.7%) |
| 26-39 | 21 (34.4%) | 8 (26.7%) | 13 (43.3%) |
| 40-49 | 15 (24.6%) | 10 (33.3%) | 5 (16.7%) |
| 50 or older | 20 (32.8%) | 10(33.3%) | 8 (33.3%) |
| Relationship status | | | |
| Never had | 4 (6.6%) | 3 (10%) | 1 (3.3%) |
| Broken relationships | 20 (32.8%) | 9 (30%) | 11 (36.7%) |
| Long-term partner | 31 (50.8%) | 16 (53.3%) | 15 (50%) |
| Access to children | | | |
| Any access* | 52 (85.2%) | 29 (96.7%) | 23 (76.7%) |
| Has children | 29 (47.5%) | 16 (53.3%) | 13 (43.3%) |
| Through job | 6 (9.8%) | 3 (10%) | 3 (10%) |
| Through family | 38 (62.3%) | 21 (70%) | 17 (56.7%) |
| Other access* | 18 (29.5%) | 13 (43.3%) | 5 (16.7%) |
| Living arrangements | | | |
| On own | 13 (21.3%) | 4 (13.3%) | 9 (30%) |
| Parents | 12 (19.7%) | 6 (20%) | 6 (20%) |
| Individual not a partner | 2 (3.3%) | 1 (3.3%) | 1 (3.3%) |
| Partner | 9 (14.8%) | 5 (16.7%) | 4 (13.3%) |
| Partner and own children | 16 (26.2%) | 7 (23.3%) | 9 (30%) |
| Partner and her children | 6 (9.8%) | 6 (20%) | 0 (0%) |
| Previous convictions | | | |
| Any previous offences** | 22 (36.1%) | 16 (53.3%) | 6 (20%) |
| Image offences | 7 (11.5%) | 4 (13.3%) | 3 (10.7%) |
| Other sexual offences | 7(11.5%) | 4 (13.3%) | 3 (10.7%) |
| Other non-sexual offences* | 11 (18.0%) | 8 (26.7%) | 2 (7.1%) |

*p < .05, ** p < .01, ***p < .001      Values may not add to 100% due to missing data.

*Extension of Sample on Socio-demographic Factors (n = 120)*

*Quantity of Indecent Images Possessed*

When examining the possession of IIOC, these varied greatly for offender groups and in most cases were significantly positively skewed, thus requiring non-parametric comparisons to be utilised (Mann Whitney U-analysis).

*The Differences Between Type of Offender and Number of IIOC Possessed*

A significant difference between contact and non-contact offenders regarding the total number of IIOC (both still images and movies combined) possessed ($U = 267.0$, $Z = -2.71$, p < .01, $r = .35$) indicated that contact offenders had significantly fewer IIOC ($M = 6,086.40$, $SD = 17,138.56$, $Mdn = 259.5$, range = 85,656.0) than non-contact offenders ($M = 24,112.13$, $SD = 48,508.50$, $Mdn = 2$, 163.0, range = 199,826.0). The total amount of still images was assessed and revealed a significant difference between the offender groups ($U = 263.0$, $Z = -2.44$, p < .05, $r = .32$). Contact offenders had significantly fewer still images ($M = 3,386.68$, $SD = 8,500.32$, $Mdn = 171.5$, range = 41,996.0) compared to non-contact offenders ($M = 23,193.83$, $SD = 47,880$, $Mdn = 1,483.5$, range = 196,387.0). The same pattern was observed for IIOC in movie format ($U = 266.0$, $Z = -2.41$, p < .05, $r = .31$) with contact offenders possessing significantly fewer movie images ($M = 53.75$, $SD = 108.96$, $Mdn = 12.5$, range = 529.0) than non-contact offenders ($M = 912.57$, $SD = 1,990.70$, $Mdn = 68.5$, range = 9007.0).

*The Differences Between Type of Offender and Level of IIOC Possessed*

Non-parametric group comparisons revealed a significant difference between the two groups of offenders and the number of still images possessed across SAP level 1 ($U = 214.5$, $Z = -3.2$, p < .01, $r = .42$), with contact offenders possessing significantly fewer ($M = 1,045.25$, $SD = 2,515.58$, $Mdn = 15.0$, range = 11,113.0) than non-contact offenders ($M = 10,471$, $SD = 27,738.39$, $Mdn = 1,036.5$, range = 117,530.0). The same significant group difference was found for level 2 still IIOC ($U = 264.5$, $Z = -2.43$, p < .05, $r = .32$), in that contact offenders possessed fewer ($M = 230.93$, $SD = 568.46$, $Mdn = 4.5$, range = 2,613.0) than non-contact ($M = 1,316.7$, $SD = 3,618.67$, $Mdn = 104.0$, range = 19,769).

As non-contact offenders were found to have significantly more still images in total than contact offenders, the amount offenders possessed was calculated as a percent to explore offenders' possession across the five levels. Non-parametric comparisons revealed a significant difference between offender groups when examining

proportion of still IIOC at level 3 ($U = 288.0$, $Z = -2.06$, p < .05, $r = .34$) and level 4 ($U = 293.0$, $Z = -1.99$, p < .05, $r = .26$). Contact offenders possessed a higher proportion of both level 3 ($M = 15.47$, $SD = 12.32$, $Mdn = 16.99$, range = 43.0) and level 4 ($M = 14.81$, $SD = 13.06$, $Mdn = 12.85$, range = 45.0) compared to non-contact offenders (level 3: $M = 8.09$, $SD = 8.54$, $Mdn = 6.6$, range = 29.2; level 4: $M = 7.79$, $SD = 8.27$, $Mdn = 6.45$, range = 30.4).

IIOC in movie format were also examined. A significant effect was found for level 1 movie IIOC ($U = 221.5$, $Z = -3.21$, p < .01, $r = .42$), level 2 ($U = 237.5$, $Z = -2.91$, p < .01, $r = .38$), level 3 ($U = 275.5$, $Z = -2.35$, p < .05, $r = .31$), level 4 ($U = 267.0$, $Z = -2.45$, p < .05, $r = .32$) with all indicating that contact offenders possessed a significantly lower number than non-contact offenders.

As with still images, the total number of movies possessed was also measured as a percent across the five levels. Results revealed a significant effect for level 1 IIOC in movie format ($U = 200.0$, $Z = -3.42$, p < .01, $r = .45$), indicating that contact offenders possessed a lower proportion ($M = 11.6$, $SD = 28.07$, $Mdn = .0$, range = 100.0) than non-contact offenders ($M = 33.33$, $SD = 35.56$, $Mdn = 15.4$, range = 100).

The average level of still images and movies possessed by the two groups of offenders was considered. Analysis indicated that contact offenders possessed a higher average level of still images ($U = 244.0$, $Z = -2.78$, p < .01, $r = .37$; Contact offenders: $M = 2.11$, $SD = .78$, $Mdn = 2.0$, range = 4; Non-contact offenders: $M = 1.57$, $SD = .63$, $Mdn = 2.0$, range = 3) and a higher average level of movie images ($U = 159.5$, $Z = -2.24$, p < .05, $r = .33$; Contact offenders: $M = 3.16$, $SD = 1.12$, $Mdn = 4.0$, range = 3; Non-contact offenders: $M = 2.48$, $SD = 1.09$, $Mdn = 3.0$, range = 4).

Correlational analysis between the average level of still images and the average level of movies ($rho = 0.42$, p < .01) suggested that the higher the average level of still images owned by an offender, the higher the average level of movies in his possession.

*Types of Indecent Images Possessed by Offenders: The difference between type of offender and type of IIOC possessed*

There was no difference between contact and non-contact offenders regarding either the gender ($\chi^2$ (2) = 3.37, p > .05) or average age (*t* (47) = 0.28, p > .05) of children within the IIOC possessed. Both groups of offenders appeared to prefer IIOC of female children with a mean age of 10 years. When the average age range of the children within the images was assessed, a significant difference was found between contact and non-contact offenders (*t* (47) = 2.96, p < .01, *r* = .40), with contact offenders possessing IIOC of children within a smaller age range (*M* = 5.35, *SD* = 3.83) in comparison to non-contact offenders (*M* = 8.41, *SD* = 3.38).

*Internet Activity*

*Time spent downloading IIOC.*

There was a significant difference in the number of years offenders had been downloading IIOC (*t* (40) = 2.22, p < .05, *r* = .33), with non-contact offenders found to be downloading IIOC for a longer period of time (*M* = 5.56, *SD* = 3.31) than contact offenders (*M* = 3.25, *SD* = 3.21). In addition, a significant positive correlation was found in terms of the total number of movies possessed and time downloading (*rho* = 0.42, p < .01) suggesting that the longer offenders had been downloading IIOC, the more movies they were likely to own. However, this relationship was not found when examining IIOC in still format.

There was a significant positive correlation between years downloading IIOC and amount of still IIOC possessed at level 4 (*rho* = .48, p < .01) and level 5 (*rho* = .50, p < .01) suggesting the longer offenders engage in downloading IIOC, the more IIOC they possess at higher levels. The same pattern was seen for IIOC in movie format with significant positive correlations found between time spent downloading IIOC and amount of movie IIOC at level 4 (*rho* =.43, p < .01) and at level 5 (*rho* = .31, p < .05).

Examining time spent downloading and average level of IIOC for the offender groups, there was a significant positive correlation for non-contact offenders indicating as years downloading increased so did the average level of still IIOC possessed (*rho* = .40, p =.05). This was not found for movies (*rho* = .04, p > .05). There were no significant correlations when examining this relationship with contact offenders' time spent downloading and average level of still or movie IIOC. This indicates that there is an increase in the severity of IIOC collecting in still format as time increases for non-contact offenders but not for contact offenders.

With regards to contact offenders, a significant positive correlation was found between years spent downloading IIOC and years contact offending behaviour (*rho* = .59, p < .05), thus suggesting that IIOC are used in parallel to contact offending.

*Payment for IIOC.*

A significant difference regarding payment of IIOC ($X^2$ (1) = 17.47, p <. 001) was found with non-contact offenders paying for access in 69% of cases whereas the majority of contact offenders did not pay for access (86%). Using the odds ratio this indicates that non-contact offenders were 13.39 more likely to have paid to access IIOC.

*Explanation During Police Interview*

Offenders were assessed on the explanation given in police interview regarding their possession of IIOC. The four options were: (1) no comment on possession; (2) positive justification, for example, to catch and report offenders to police; (3) cognitive distortion, for example, downloading IIOC does not harm the child; (4) admit attraction to IIOC. However, based on these categories there was a significant difference between offender groups ($\chi^2$ (3) = 9.59, p < .05, *Cramer's V* = .41). Contact offenders were most likely to give no justification (39%), with over a quarter (29%) giving a cognitively distorted view, and 18% admitting their attraction to IIOC. In contrast nearly half of non-contact offenders (48%) admitting their attraction and around a quarter provided an excuse and justification (24%).

Finally, offenders who produce their own IIOC (e.g., covertly record, webcam, and/or hands on recording of abuse) are significantly more likely to be contact offenders ($\chi^2$ (1) = 7.18, p < .01). Most of the non-contact offenders in the sample did not produce IIOC (80%), whereas 53% of the contact offenders did. Based on the odds ratio, contact offenders were 4.57 times more likely to have produced IIOC than non-contact offenders. Individuals who groomed children were significantly more likely to be contact offenders ($\chi^2$ (1) = 17.47, p < .001) based on the odds ratio they were 26 times more likely. The majority of non-contact offenders (80%) did not show any evidence of grooming behaviour, as opposed to 87% of contact offenders who did engage in grooming behaviour. When examining the type of grooming behaviour (four categories: 1 – no grooming behaviour; 2 – offline grooming only; 3 – online grooming only; 4 – both offline and online grooming) there was also a significant difference ($\chi^2$ (3) = 30.95, p < .001, *Cramer's V* = .718). Not only were contact offenders significantly more likely to engage in grooming behaviours, they were also likely to use offline techniques (73%), with only 10% employing online techniques, compared to 7% and 10% of non-contact offenders.

*The Relationship Between the IIOC Possessed by Contact Offenders and Their Contact Offence*

Contact offenders were categorised according to the sexual action recorded within their offence using the relevant SAP levels (see Table 31). A one-way ANOVA revealed a significant difference between the contact offenders in terms of the severity of their contact offence and the average level of still IIOC possessed ($F$ (2,25) = 4.00, p < .05, $r$ = .49. Sadistic rapist contact offenders possessed a significantly higher average IIOC ($M$ = 2.83, $SD$ = 1.17) than sexual touching contact offenders ($M$ = 1.91, $SD$ = 0.76) and penetrative contact offenders ($M$ = 1.92, $SD$ = 0.28) contact offenders. Average movie IIOC was non-significant ($F$ < 1).

Table 31

Descriptive Statistics for Average Still IIOC When Categorising Contact Offenders Using SAP Levels

| Offender label | Level | SAP level description | N | Mean/SD |
|---|---|---|---|---|
| Sexual touching CO | 3 | Non-penetrative sexual activity between adults and children | 9 | 1.91 / .76 |
| Penetrative CO | 4 | Penetrative sexual activity involving a child or children, or both children and adults | 13 | 1.92 / .28 |
| Sadistic rapist CO | 5 | Sadism or penetration of, or by, an animal | 6 | 2.83 / 1.17 |
| | | | 28 | 2.11 / .78 |

In addition, the above categories for contact sexual offences were compared against total number of still and movie IIOC at each SAP level, which was non-significant. The proportion of still IIOC possessed was found to be significant for level 1 ($F$ (2, 25) = 4.01, p < .05, $r$ = .49) with sadistic rapist contact offenders possessing a significantly lower proportion of level 1 IIOC ($M$ = 22.37, $SD$ = 22.25) than sexual touching abusers ($M$ = 61.06, $SD$ = 37.34) or penetrative abusers ($M$ = 55.14, $SD$ = 20.77). In support of this, those offenders categorised as sadistic rapists had a significantly higher proportion of level 4 IIOC ($F$ (2, 25) = 7.95, p < .01, $r$ = .62; $M$ = 30.05, $SD$ = 12.69) than sexual touching abusers ($M$ = 9.6, $SD$ = 12.79) and penetrative contact offenders ($M$ = 11.38, $SD$ = 7.65).

A significant association between the gender of the children in the IIOC possessed by contact offenders and the gender of their contact victims ($\chi^2$ (4) = 21.6, p < .001) indicated that when contact offenders owned IIOC of mainly males, they contact offended against male children 100% of the time. Similarly, if the IIOC possessed by offenders were mainly of females, the contact victim was also female in 91.7% of cases. Offenders who had fairly equal amounts of male and female IIOC, their

contact victims were female in 57.% of cases, male in 14%, and both genders 29% of the time.

Table 32

*Frequency of Gender of Victims Within IIOC and Contact Victim*

|  | Contact victim male | Contact victim female | Contact victim male & female | Total |
|---|---|---|---|---|
| IIOC male | 5 | 0 | 0 | 5 |
|  | (100%) | (0%) | (0%) |  |
| IIOC female | 0 | 11 | 1 | 12 |
|  | (0%) | (91.7%) | (8.3%) |  |
| IIOC male & female | 1 | 4 | 2 | 7 |
|  | (14.3%) | (57.1%) | (28.6%) |  |
| Total | 6 | 15 | 3 | 24 |

When taking the age of the children into account, analysis indicated a significant positive relationship between the average age of children in the IIOC and the average age of contact victims (*rho* = .43, p < .05). This suggests that the higher the average age of the children in the IIOC, the higher the average age of the contact victim (and vice versa).

## Discussion

This chapter explored the possession of IIOC for contact child sexual offenders and non-contact offenders. Contact child sexual offenders, who had convictions ranging from sexual touching to rape of a child, had a relatively smaller number of images. Non-contact offenders, who had no convictions for sexually abusing children, possessed larger numbers of IIOC. Many non-contact offenders possessed IIOC across the entire range of SAP levels. Within the contact child sexual offender group, those that possessed a higher average IIOC level were more likely to have committed acts of sexual sadism against children. Given that law enforcement agencies are in a

position that requires them to prioritise amongst sometimes large numbers (KIRAT, 2008) of individuals possessing IIOC, how might they make sense of these findings?

The results of this study indicated that there are several significant differences between the two groups of offenders. Contact child sexual offenders had significantly fewer IIOC than non-contact offenders. This pattern was found when analysing still images and movies separately. Although contact child sexual offenders had fewer IIOC than non-contact offenders, the former's 'anchor point' (the relative 'interest' across the SAP levels) was significantly higher than non-contact in both still and movie format. Specifically, contact child sexual offenders possessed a greater relative proportion of level 3 still IIOC (images depicting non-penetrative sexual activity between adults and children) and level 4 still IIOC (penetrative sexual activity between adults and children) than non-contact offenders. In contrast, non-contact offenders possessed significantly more total still IIOC at level 1 (IIOC depicting erotic posing with no sexual activity) and 2 (non-penetrative sexual activity between children, or solo masturbation by a child). When examining IIOC in movie format, contact child sexual offenders had significantly fewer IIOC at levels 1 to 4, with non-contact offenders possessing a significantly higher relative proportion of level 1 IIOC. In terms of the type of IIOC possessed, contact child sexual offenders possessed IIOC depicting children within a smaller age range.

Between-groups comparisons also found that contact child sexual offenders were significantly less likely to pay for access to IIOC and were downloading IIOC for shorter periods of time. As time downloading IIOC increased so did the total number of movies possessed for all offenders, with the number of still and movie IIOC at levels 4 and 5 positively correlating with years possessing images. As time downloading increased so did the average level of still IIOC possessed for non-contact offenders, but not for contact child sexual offenders.

Regarding other behaviours, contact child sexual offenders were significantly more likely to have access to children. These offenders were also significantly more likely to have previous convictions, specifically for non-sexual crimes (e.g., theft). Grooming behaviour and production of IIOC was another factor that was more prominent in the contact child sexual offenders group than the non-contact offenders.

In terms of the within-group comparisons amongst contact child sexual offenders, there were significant findings in relation to the IIOC possessed, victim selection and offence severity. Sadistic rapists were significantly more likely to possess a higher average still IIOC than other contact child sexual offenders (sexual touching and penetrative contact offenders). Sadistic rapists also possessed a significantly higher relative proportion of level 4 IIOC and lower proportion of level 1 IIOC. There was evidence in the contact child sexual offenders group that time spent downloading IIOC paralleled time spent contact offending. Contact child sexual offenders could be further defined in terms of their viewing and assaultive behaviour. The gender and age of the children in the IIOC was associated with the offence victims; for example, those who abused boys of a particular age were also likely to possess IIOC of boys of a similar age.

*Discriminating Between Contact and Non-contact IIOC Offenders: A Homology of Function Between Internet Use and Behaviour*

The analysis revealed McCarthy's (2010) proposal that contact offenders would possess significantly more IIOC than non-contact offenders was not replicated for this UK sample. The sheer volume of material (even at the more severe levels) was not positively correlated with severity of offence and could not discriminate between non-contact and contact child sexual offenders. Instead, what appears to be critical is the qualitative variation across the five levels and, specifically, where an individual's particular interest lies. Across the five SAP levels it appears that offenders have varying 'anchor points'. This may be one discriminating feature between those offenders with no current evidence of actual abusive contact with children and the sample of contact child sexual offenders. The anchor point appears to represent the prominent interest of an offender; in other words it may suggest a discernable preference with oscillation to other levels. For example, an offender with a very large number of images but with a significant preponderance of level 1s (even though they are in possession of higher levels as well), may be less dangerous than an offender with very few total images overall but who possesses a relatively higher preponderance of the higher level images. This is especially relevant where the anchor point shifts from level 1 and 2 towards level 3 and 4. This shift from children

only to adult and children and again from non-penetration to penetration may be a psychologically significant shift. Furthermore, the homology between images possessed and acts committed amongst the contact child sexual offenders is perhaps indicative of the way in which the more serious offenders use the internet as a behavioural adjunct to their offending behaviour and, broadly, more criminal and anti-social lifestyle.

Supporting this, in terms of contact child sexual offenders' demographics, they were significantly more likely to have a criminal conviction, specifically for a non-sexual offence (e.g., theft). This was evident in the smaller ($n = 60$) and larger sample ($n = 120$). Similar results have been found with stranger rapists (Davies et al., 1998), sexual offenders (Wilson & Alison, 2005), and those at risk of committing homicide (Soothill et al, 2008). This may suggest that contact offenders are more criminally inclined generally. However, it may not be criminality; contact offenders could be more anti-social: as Farrington (1992) notes, anti-social behaviour is central to the criminal career. It is therefore not surprising that contact offenders were more likely to give a no comment interview and less likely to engage in digitally forensically risky behaviour such as paying for access to IIOC. Both of these suggest previous understanding of the criminal justice system. One potential explanation for the no comment is legal advice due to the severity of the offence. This would need further research.

Research on non-contact offenders offers alternative explanations regarding the differences in IIOC possession. Osborn et al. (2010) found in their sample of non-contact IIOC offenders, that those assessed as low risk on RM2000 were also the group who possessed the largest IIOC collections. The current study also found that non-contact offenders engaged in IIOC downloading for a significantly longer period of time when compared to contact offenders. It could therefore be argued that non-contact offenders are more likely to come across a greater volume of images and, in terms of simple base rates, more likely to come across larger numbers of all levels of IIOC. A further explanation of the high number of IIOC may come from the reported addictive qualities of the internet and IIOC for non-contact offenders (Glasgow, 2010; Quayle & Taylor, 2002; Tate 1990). A further plausible explanation is that for

a proportion of offenders, the arrest for a contact child sexual offence precipitates the discovery of the IIOC offending and its cessation.

*Differences Between Contact and Non-contact in Terms of Their Possession of IIOC*

Taylor et al. (2001) state there is a lack of descriptions of IIOC in the literature, despite the offender making purposeful and deliberate decisions in possessing images. The results of this study show some interesting preliminary findings indicating differences in IIOC possession between the offender groups. Contact child sexual offenders revealed a preference for IIOC at a higher SAP levels and also possessed IIOC that depicted children within a more restricted age range when compared to non-contact offenders. Research in IIOC and adult pornography agree that individuals seek material that is most specifically arousing to them (Seto et al., 2001; Zillman & Byrant, 1986). Consequently, if an offender's sexual fantasy involves a particular gender, age, or sexual action, it is likely this will be depicted in the majority of the images (Howitt, 1995). While offenders may possess all the various levels of IIOC, the current data suggest that they anchor around, or stably return to, a particular level. Offenders who anchor in level 1 movie IIOC had not been convicted of any known contact child sexual offence and this may reflect a preference for visualising children without necessarily physically interacting with them. When it comes to level 3, where there is a focus on an actual behavioural interaction between an adult and a child and, further, penetrative acts at level 4, it is perhaps a reflection of the image preference of the contact child sexual offender. This does not of course imply which comes first (does image selection provoke behavioural interaction or is it a reflection of a preference?)

For all offenders (both non-contact and contact) the longer they engaged in downloading IIOC, the higher amount of IIOC possessed at level 4 and 5 for both movie and still IIOC. This lends some supports to Sullivan's (2002) spiral of offending, and also the idea of a fantasy escalation effect (Sullivan & Sheehan, 2002). Through prolonged engagement, satiation and habituation occurs, with an increased need for more severe material to reach masturbatory fantasy, a finding also reported in adult pornography use (Zillmand & Bryant, 1986). Therefore, one possible pathway is the notion of a "trajectory of internet use, moving from less to more frequent use, and less to more deviant material accessed over time" (Glasgow,

2010, p. 91). From one perspective this could also be seen as pathological or compulsive behaviour forming a key proximal factor in the maintenance of IIOC offending (Elliott & Beech, 2009). However, considering the risks associated with sadism (Craissati & Beech, 2003) still may represent more concerning behaviour. In any event, for offenders who escalate their IIOC possession over time, as yet, it is unexplored whether this escalation is related to a causal drift towards contact offending.

The current study found that contact child sexual offenders were significantly more likely to produce their own IIOC compared to non-contact offenders. Similarly, offenders in this study who displayed grooming behaviours were significantly more likely to be contact child sexual offenders. McCarthy (2010) and O'Connell (2003) found similar results and Sullivan (2002) and Buschman et al. (2010) discuss the use of IIOC in escalating to grooming behaviours. The results of this study found the majority of contact child sexual offender grooming takes place offline, suggesting that offenders have everyday access to children. Indeed, based on the results of this study contact child sexual offenders were significantly more likely to have access to children than non-contact offenders, with this most likely to involve other access such as children within the neighbourhood. This was found in both the smaller ($n = 60$) and larger ($n = 120$) data. Access to contact victims who are strangers within the neighbourhood is a finding supported by Buschman et al. (2010), suggesting the contact child sexual offender group may be more opportunistic and predatory (Wortley & Smallbone, 2006). Furthermore, the finding that contact offenders were more likely to live with a partner and their partners children supports the notion of contact predatory offending. This could be evidence of the potential planning required to gain access to children by entering into a relationship with an adult with children to gain the access. Considering these two findings together, it could be argued that those with access to children offend against them and those without immediate access, offend against children most available to them, that is, locally. Perhaps more simply, this finding reinforces Finklehor's (1984) fourth aspect of overcoming resistance of the child, in that an offenders need access to a victim to abuse them.

*Summary*

There is an ongoing debate within the literature whether the IIOC relate or potentially lead to contact offending (Bourke & Hernandez, 2009; Buschman et al., 2010; Quayle & Taylor, 2002; Riegel, 2004; Sullivan & Sheehan, 2002). Findings of this study suggest that possible trajectories exist for the different offender groups but it remains unclear as to what provokes what. Results suggest that over time, non-contact offenders' possession increases in severity supporting the fantasy escalation argument through prolonged IIOC use (Sullivan & Sheehan, 2002). However, volume and duration are not effective mechanisms for assessing priorities for investigation since non-contact offenders had been accessing images for longer and had a larger volume of material across all levels than the contact child sexual offenders. Moreover, for contact child sexual offenders, there was little evidence of escalation within their IIOC possession. This supports the view proposed within this chapter that contact offenders use IIOC as part of their already established deviant and anti-social lifestyle (Bourke & Hernandez, 2009), for example, choosing IIOC that match their contact victims in terms of age, gender, and action. Sequential analyses could further assist in understanding the development of offending; whether an offender moves from viewing IIOC to contacting and/or inciting victims online and potentially preparing to commit a contact offence requires further study.

*Limitations*

A number of limitations of the current study must be noted. Firstly, this study used a stratified random sample of IIOC offenders from the South East area, identified and grouped on the basis of their index offence. Therefore, as reported by Bourke and Hernandez (2009), there is likely to be undetected contact offenders within the non-contact group. Thus, any findings in this study should be treated with caution. Although the sample was relatively small, it is also the largest UK sample to date that has explored IIOC on these detailed factors. All information was taken from case files and discussions with investigators that were originally gathered for prosecution and investigatory purposes, not for use in this study. Every effort was made to verify data using a variety of means.

It is important to note that this research did not gather temporal information on offenders' behaviour. Consequently any findings regarding the time of downloading is based upon the offender's admission in interview at the time of arrest and any available computer analysis information. Timeline in contact offending behaviour was gathered through victim and offender statements as well as any medical documentation provided. As offenders were found to be detected and arrested through different means (contact offenders through reporting by the contact victim and non-contact offenders through another investigation or payment for images), it is acknowledged that the data analysed may be a snapshot of their offending behaviour. As a result they could be at different stages in their offending pathway. By treating the offenders as two distinct groups, it also minimises the effect of offenders engaged in grooming or inciting, which based on this study's criteria would be categorised as a non-contact offender. Therefore to strengthen the results of this exploratory chapter, further work is currently being undertaken with a larger sample and exploring the pathways in offending behaviour. Further studies will also consider the impact of this third group of offenders (groomers/inciters) who may display more risky behaviour than those viewing IIOC.

Finally, offenders were categorised as contact offenders if they had any known contact offence; therefore the contact offence could have come before, during, or after the IIOC conviction. This reflects the reality of how the information would be available to the police. When IIOC suspects are initially identified the police do not always know the identity of the offenders so are not aware of their previous convictions or the order in which their offences occurred.

*Implications*

One of the challenges for law enforcement is the prioritisation of investigations for IIOC with increasing workloads and increasingly severe IIOC (Internet Watch Foundation, 2008; Wolak et al. 2009). This study was designed pragmatically to investigate factors that may be available to law enforcement. It is acknowledged that studies such as this may have implications for law enforcement agencies (Eke et al., 2010). Any interpretation of the findings of this chapter should be tentative due to the sample size; however, it has identified several likelihood factors of contact child

sexual abuse that may be used to assist in prioritisation. The findings from this study have been used to inform the design of the Kent Internet Risk Assessment Tool, particularly those with greater numbers (e.g., access to children and previous convictions). Furthermore, the access to children finding supports the need to carefully consider disclosure options to protect children (MAPPA, 2009). This study provides an exploratory starting point in terms of detailed examination of IIOC and how possession relates to offending behaviour. Findings such as contact child sexual offenders possessing IIOC with a smaller age range and previous convictions may influence child protection strategies within investigations.

*Conclusions*

This chapter tested hypotheses proposing that contact child sexual offenders and non-contact offenders could be distinguished according to their behaviour and possession of IIOC. The study found that they could be discriminated by the number and type of IIOC viewed. Contact child sexual offenders possessed significantly fewer IIOC than non-contact offenders. Contact child sexual offenders possessed more still images of non-penetrative (level 3) and penetrative (level 4) sexual activity between adults and children whereas non-contact offenders had significantly more IIOC depicting erotic posing with no sexual activity (level 1). Whilst offenders possessed IIOC across all five SAP severity levels, they appear to have varying 'anchor points' within the imagery. These 'anchor points' appear to represent the prominent interest of the offender. This was also supported as contact child sexual offenders were more specific in their IIOC in terms of age and gender, suggesting offenders seek material they find most arousing (Howitt, 1995; Seto et al., 2001). Contact child sexual offenders who committed more severe offences possessed more severe IIOC. It is suggested that this may represent a homology between IIOC possessed and criminal acts committed. In terms of criminal acts contact offenders were more likely to have a criminal conviction; this information can be used to assist with prioritising police action.

Two main points can be taken from this chapter. Firstly, between-group differences exist that discriminate contact child sexual offenders from non-contact offenders. Secondly, when examined in detail, contact child sexual offender IIOC possession

appeared to relate to their contact offending behaviour. Whether taken in isolation or together, these findings suggest there are specific and identifiable links between IIOC possession and contact offending that requires further investigation.

# Chapter Nine

## Discussion

This thesis focused on two aspects of sexual offending. First, which offender behaviours related to more serious offending? Significant results indicated that serial offenders operated within offence boundaries and contact and non-contact IIOC offenders were discriminated according to their IIOC possession. The second aspect examined what factors affected investigators' decision-making. Results found intelligence and experience moderated the effect of time pressure in decision-making. The key findings are summarised below. They are then explored within their specific research domains and holistically.

Chapter Three was the first of two chapters examining 154 serial offenders and their offending behaviours. Chapter Three found that offenders generally commit relatively short series over varying degrees of time. Indecent assault was common and offender age was negatively correlated with victim age. Serial offenders did not routinely take precautions to avoid detection. However, some older offenders and those committing the most serious offences (rape and murder) were more cautious. Furthermore, there was an association between previous prison experiences an injurious offending. Prison was also associated and kissing the victim's chest during the offence. There were also differences between the offender's relationship and living status and their offending behaviour. Furthermore, substance abuse identified who committed the most injurious offending. There was a clear need from this chapter to examine the sequences of the serial offending. Chapter Four examined the sequences and found supportive evidence for the four pathways of offending (escalation, maintenance, oscillation, and de-escalation). The pathways were similar to recent studies on general offending populations. The distribution of the de-escalating, maintaining, oscillating, and escalating pathways were found to be far from uniform with only 14% showing an escalating pathway whereas 39% showed a maintaining pathway. These findings provide a reference set for evidence-based decisions when dealing with serial sexual offenders.

Chapter Four also explored offence specialisation and offence progression. Existence for both sexual offenders as specialists and generalists was found; however, generalists seemed to have offence seriousness boundaries in which they confined themselves. Offenders committed the same or similar offences; in other words, a rapist may commit an indecent assault but is unlikely to commit an indecent exposure. For the most serious offences of sexual murder, it was generally a maintaining pathway of offending. These findings provide a reference set for evidence-based decisions when considering the next likely offence within a series.

Chapter Seven then presented a high-fidelity simulation using a serial sexual assault scenario where 76 investigators described their investigations with or without the time pressure manipulation. There were two important findings: first, under time pressure investigators generated fewer alternative hypotheses and prioritised decisions directly after receiving the time pressure; second, experience matters. There was a significant positive relationship between number of decisions generated and crime investigation experience or general policing experience when under time pressure. This experience effect was not found in the control group. It was therefore argued that experience of policing and criminal investigation acted as a moderator of time pressure as did experience of police management (rank). Furthermore, in terms of eductive and reproductive intelligence, investigators who scored higher on the Raven's Progressive Matrices (RPM) generated more hypotheses without time pressure. Also, investigators who scored higher on the RPM identified more important decisions under time pressure. Furthermore, decisiveness on the need for closure scales correlated with ability to identify important decisions. Finally, the best predictors for identifying extremely important decisions (EID) in the time pressure group were rank, RPM and decisiveness. These findings provide best practice for investigative actions available to the investigator.

Chapter Eight then specifically concentrated on the contemporary risk issue of possession of indecent imagery of children and the likelihood of contact offending against children. The chapter found that contact and non-contact offenders could be discriminated by the content of imagery viewed. Contact offenders had more still images of penetrative and non-penetrative sexual activity between adults and children whereas non-contact offenders had significantly more imagery depicting

erotic posing with no sexual activity. Contact offenders were also more likely to have criminal convictions, specifically non-sexual, and groom offline. Contact offenders who committed more severe offences were more likely to possess more severe imagery. Contact offenders were also more likely to produce the imagery. These findings provide a set of likelihood factors for investigators to use to assist with the prioritisation of IIOC intelligence (KIRAT, 2008).

The key findings summarised above will now be discussed in the context of the three literature domains: sexual offending; decision-making, and risk management.

*Understanding Series and Behaviours During the Offences*

This thesis presents new findings and perspectives but also supplements existing research. Considering age first, recent research has questioned how clear the position is on the onset and ages of offending (Blonigen, 2010). Chapter Three concluded that male serial sexual offenders are around 30 years old committing an average of four offences. It could be argued, perhaps simplistically but logically, that there is a trajectory of offending in terms of age. This would suggest that offenders begin single offences at a younger age and, as they grow older, they commit more serious aggravating stranger offences (the concept of stranger offences being more serious is suggested by Thornton et al., 2003). Where studies have focused on aggravating factors such as stranger attacks or series, the offenders are reported to be older. Stranger rapist studies have reported mean ages of around 27.5 years old, (27.5, 27, and 28 years old, respectively found by: Beauregard et al., 2010; Davies et al., 1997; Goodwill & Alison, 2007) For serial offenders, a higher mean age of 35 years has been reported (Hazelwood & Warren, 2001) with the majority of offenders being over 26 (Warren et al., 1999). This could be further supported by the finding that serial 'maintaining' pathway rapists were the oldest. When considering offences against a child, as with Chapter Eight, the mean age tends to be higher (43 years in that chapter). This supports the finding in Chapter Three that the age of the offender is negatively correlated with the age of the victim. Several studies have noted this finding (e.g., Alison & Goodwill, 2007); therefore this thesis gives further support to that concept.

The notion that older offenders committed more serious crimes was further supported by these older offenders more likely to commit offences of murder and abduction. This tentatively supports studies where stranger rapists have been older than the general offending population (Beauregard et al., 2010; Davies et al., 1997; Goodwill & Alison, 2007). An alternative perspective could argue that serial offenders are older because they have not been apprehended so have grown older in not being caught. In Chapter Three, older and more serious offenders were more likely to take precautions (murder and rape). However, considering the most likely precaution, covering of the mouth, this still suggests a composite action during the offence to avoid detection rather than a pre-meditated action, for example, a disguise (which was used in 1 in 20 offences). Extending this, Hazelwood and Warren (2001) concluded that few rapists employed specific behaviours designed to preclude identification. Jackson et al. (1997) found that experienced criminals who took evidentiary precautions during the offence would be more likely to have criminal histories, as found by Davies et al. (1997). The lack of precautions can be hypothesised to mean one of three possibilities: first, the offender does not wish to avoid detection, second they do not know how to avoid detection or third, they were unable to do so.

In terms of other findings of note, there is a tentative suggestion from this thesis that an offender's marital and living status was associated with their offending. The suggestion would be that if the offender has access to a victim (e.g., is currently with a partner) their behaviour differs to those with limited or no access to a victim (e.g., is separated or single). In Chapter Three, those offenders who committed indecent exposure offences were more likely to be single, whereas those who committed murder were more likely to be single or separated. Those offenders who were living with a partner were more likely to use a more severe approach style (e.g., surprise approach). One possible interpretation of these results is using the model proposed by Cohen et al. (1979) of displaced aggression. If relationships are seen as stage specific (accepting there is variance), that is, single, courting, boyfriend, married, separated and divorce, each stage is likely to dictate an amount of contact with a partner. From the findings of Chapter Three, it could be argued that where an offender is within the stages relates to the seriousness of the offender's actions with a cumulative negative effect. Thus, as Cohen et al. (1979) note, the rapist uses rape as

an expression of anger with a view to humiliation and degradation. It is hypothesised the offender acts on impulse as the result of a preceding significant event with a woman in his life, for example, an argument with his wife at home (Miller et al., 2003). However, as Rankin and Wells (1985) described, one reason for the desistence from criminal careers was given as relationships with partners and getting married. Moreover, Thornton et al. (2003) cite lack of a long-term intimate relationship as a risk factor raising the risk. Perhaps a more contemporary view of these issues would be the relationship status as one of Ward and Beech's (2006) *ecological* niche factors. It could be argued relationship status has positive or negative effects dependent on its functioning and interaction with other factors. This notion of the relationship as a risk or protective factor is explored in a revised ITSO model later in this chapter. Therefore, this thesis supports the probation OASys evaluation of relationships (MAPPA, 2009) and the role in relation to risk as there are clearly both risk and protective factors within relationships.

*Sexual Offending and IIOC*

There has been considerable recent attention to the role of IIOC and how it relates to contact offending (Seto et al., 2011; McCarthy, 2010). The thesis provides two advances to the debate. It is one of the first UK studies to review the level of image in detail against the contact offences. Second, it discusses where IIOC fit in terms of specialisation or series of offending. The role of IIOC and the relationship between its possession and contact offending is an ongoing debate. Studies vary considerably between 1% (Endrass et al., 2009) and 85% (Bourke & Hernandez, 2009) of contact offenders possessing IIOC. In terms of actually analysing the amount of IIOC, few studies have discussed this issue. One American study reported contact offenders possessed significantly more IIOC than non-contact offenders (McCarthy, 2010). Chapter Eight's results indicated the opposite finding that contact offenders possessed significantly less IIOC. This was found when examining IIOC as a total collection, with further evidence of this trend when IIOC was separately examined (still and movie). However, contact offenders had more still images of penetrative and non-penetrative sexual activity between adults and children whereas non-contact offenders had more movies depicting erotic posing with no sexual activity. Exploring this, a useful premise is that individuals seek material which is most

arousing to them personally (Howitt, 1995; Quayle & Taylor, 2001; Seto et al., 2001). This concept has been supported both in adult pornography (Zillman & Byrant, 1986) and 'child pornography' (Seto et al., 2001). Consequently if an offender's sexual fantasy or offending behaviour involves a particular gender, age, or sexual action, it is likely to be depicted in the majority of images (Howitt, 1995). This may explain Chapter Eight's findings. While offenders will possess most levels of IIOC, this thesis suggests that they anchor around, or stably return to, a particular level dependent on whether or not they have contact offended. Those offenders who appear to anchor in level one IIOC have not been convicted of any known contact offence, thus it is possible that they are anchoring on less severe fantasy. This maybe further supported by Burgess et al. (1986), who found that 80% of the offenders in their study claim that their most common sexual fantasy is related to their sexually assaultive behaviour. This is particularly relevant to the within-group finding that the more severe the contact offence, the more severe the imagery viewed. It could be argued, as Quayle and Taylor (2002) write, the use of IIOC serves as a blueprint for offending. Effectively, this describes the concept of viewing the behaviour and carrying out the sexual act viewed. However, the interaction is likely to be significantly more complex. Studies do not take account of the trajectory of offending, or, more specifically the chronology of the offences (which is the key argument presented in Chapter Four). There are offenders whose offences pre-dated the internet and their use of IIOC is likely to be different from a younger offender with IIOC available from a younger age.

Research has described that often producing IIOC entails the offender taking part in the sexual abuse of a child (Quayle & Taylor, 2002; Tate, 1990; Wolak et al., 2005). Indeed, Sheehan and Sullivan's (2010) recent study on producers of IIOC concluded that the internet may provide "post-hoc justification rather than a primary precipitating factor" (p. 164) for contact abuse. Of further interest from Chapter Eight is the finding that offenders who displayed grooming behaviours were more likely to be contact offenders. This finding has been supported by various other researchers such as McCarthy (2010) and O'Connell (2003). As Chapter Eight reported, the majority of grooming takes place offline suggesting that offenders have everyday access to children. Indeed, based on the results in Chapter Eight contact offenders were more likely to have access to children than non-contact offenders.

This was most likely to involve other access such as children within the neighbourhood. This is supported by Buschman et al. (2010), indicating the possible opportunist and predatory nature of these offenders (Wortley & Smallbone, 2006). When taking into account contact offenders' demographics, it was found that contact offenders were significantly more likely to have a criminal conviction for a non-sexual offence (e.g., theft). Similar results have been found with stranger rapists (Davies et al., 1998) and may suggest that contact offenders are more criminally aware. This might also explain the findings that contact offenders were more likely to give a no comment interview when asked about their IIOC possession during police interviews and less likely to engage in risky behaviour such as paying for access to IIOC.

In summary, there is an ongoing debate in terms of the role of IIOC within contact sexual offending. On one hand there is an argument that IIOC are part of the development of the offending (Buschman et al., 2010; Sullivan, 2002); on the other the images act as a diversion from contact offending (Riegel, 2004). This thesis proposes that possession of IIOC suggest a sexual interest in children. However, there is a significant gap within the literature in terms of how these pathways develop; that is, will an offender by viewing IIOC ever progress to contact offending? This thesis provides a starting position for research suggesting links between IIOC and contact offending. One argument presented earlier was that the IIOC allows offenders to refine their fantasy or actually incite them to commit the offence as Marshall (1988) found. He reported this to be the case in more than one third of the child molesters in his study. This raises the question of where IIOC fits in terms of criminal careers (i.e., incitement should logically come before the offence). In order to discuss that concept, findings on pathways will be reviewed and then the IIOC debate discussed further.

In Chapter Four, four pathways were presented. Escalation was an increase in seriousness over the series of offences; maintenance was committing the same level of seriousness over the series of offences; oscillation was varying the level of seriousness between more and less serious over the series and finally de-escalation was decreasing the level of seriousness over the series. Perhaps the most remarkable finding of Chapter Four was the very similar percentages of escalation, persistence and de-escalation between Chapter Four and Lulham and Ringland (2010). They identified in a larger general offending population (not specifically sexual offenders) four specific groups: primarily low seriousness offences (33%); offenders who escalate from low to high seriousness offences (16%); offenders who primarily commit high seriousness offences (26%) and offenders who de-escalate from high to low seriousness offences (25%). Chapter Four and Lulham and Ringland (2010) found escalation to be a low proportion of the sample, persisting to be the majority and about a quarter de-escalating. Both deployed a similar research structure using: 1) a broad seriousness scale, 2) a similar approach to the concept of escalation and de-escalation, and 3) had offenders committing long series with most committing very short series. In terms of explaining the findings it can be tentatively suggested that serial sexual offenders reflect the wider population in the rates of escalation and de-escalation. Why serial offenders may reflect the wider population is a question of significance. Lulham and Ringland (2010) propose the de-escalating trajectory group could be related to how police process offenders with no prior convictions. They queried whether police are more likely, in the case of a more serious offence, to initiate formal proceedings against a first time offender. They suggest for less serious offences police use informal cautions and warnings but once offenders have prior convictions police may proceed formally, regardless of the seriousness of the offence. They argue these processes may have a complex impact on trajectory models and suggest further research into these issues. In Chapter Four this would be difficult to support as the conviction type was both factored in (e.g., caution or custodial) and the most appropriate offence was coded not the convicted offence; for example, if an indecent assault was accepted as a plea bargain for a rape but the behaviour was rape, rape would be coded.

In terms of other explanations, from a theoretical perspective, little comment can be made why offenders were in each pathway. Some researchers, such as Laub and Sampson (2003), have identified factors (e.g., stable marriages and employment) that may suggest the de-escalation pathway; however, these were not available in the data. They describe a lack of positive turning points, excitement of crime, alcohol abuse and the criminalising effect of prison as other factors that contribute to persistence of offending. Recent studies have reinforced substance misuse with Sullivan et al. (2011) reporting alcohol misuse as a risk present in a considerable number of contact offenders. In terms of explanation, Craissati and Beech (2003) note increased substance misuse may relate to dysfunctional coping and overcoming barriers to offending. This may suggest this criminalising effect maybe too simplistic a view; for example, Prentky et al. (1989) describe high social competence child sexual offenders meeting criteria of: 1) had a job lasting three years or more, 2) had a sexual relationship with an adult for a year or more, 3) had significant parenting responsibility for a child for 3 years or more, 4) had been an active member of an adult-orientated organisation for one year or more, 5) had friendship with an adult (not relationship) lasting over a year. If these factors can be evidenced in certain child sexual offenders then the broad approach of them being part of desistence seems potentially contradictory. However, perhaps by focusing on the main escalation factors from the literature a specific understanding of escalation can be achieved.

*Escalation Factors: Injury, Seriousness of Offences and Use of Weapon*

As previously explained, the current literature tends to present offenders' escalation in two ways: the first is seriousness of offence (Soothill et al., 2002), and the second is blunt force trauma (Hazelwood & Warren, 2001). Chapter Four concluded that in terms of seriousness of offence, true escalation is rare. Regarding injury, within Chapter Three there were two measures that relate to these: level of injury to the victim and the different offences. Considering the level of injury first, 64% of the cases reported no injury. This must be interpreted carefully as Kimerling et al. (2002) questioned whether the injuries are always reported. Chapter Three found that those who had served a custodial sentence were more likely to have committed more serious injuries. Injuries were also associated with substance misuse and weapon use.

Those using the con approach were also less likely to inflict a severe injury. There are several possible explanations to these findings. The relationship between custodial sentences and injury gives support to Scott et al. (2006). They hypothesised stranger rapists who use minimal violence would be less likely to have assault convictions or prison experience than extremely violent stranger rapists. In their study they found no correlation with violent convictions but did find prior prison experience correlated. This thesis has similar findings but the obvious limitation of these data is all previous convictions were not available. Considering the theoretical explanation for this finding one elucidation is the criminological perspective that prison is effectively a 'school of crime' (Lilly et al., 1995). In essence the schools of crime argument views prison as a breeding ground for criminality where offenders learn and trade criminal behaviour. Or, as Laub and Sampson (2003) describe, the criminalising effect of prison contributes to the persistence of offending. One review of the roles of prisons (Bukstel & Kilmann, 1980) claimed there is significant positive reinforcement for anti-social behaviours by peers and staff that promotes a pro-criminal environment. Whilst this view is challenged by other schools of thought (see Gendreau et al., 1999) this may give insight to the offending behaviour. The second inferential possibility is imprisonment is reserved for more serious offences or less serious offences with aggravating factors (Sentencing Guidelines Council, 2007) and therefore there is higher risk of serious offending per se. Furthermore, Soothill et al. (2002) found having served a custodial sentence increased risk of sexual murder. This is also supported by Douglas and Munn (1992) who found experience of prison had a significant impact on the modus operandi of the crime. Whatever the explanation, this thesis suggests previous prison experience links to certain forms of escalatory behaviour. Perhaps, whilst previous criminality can influence the level of injury, the other findings of this chapter may indicate that interaction between the victim and the offender along with other dynamic factors also relate to injury.

Within Chapter Three, two further factors related to whether a victim was injured or not: the first was weapon use, and the second was substance misuse. This chapter found, similar to Sugar et al. (2004), if a weapon was present there was a higher likelihood of injury. From a theoretical perspective, this suggests that while weapons may be present to seek control by intimidation emphasising motives of anger and

power (Groth et al., 1977), the weapon means an increased likelihood of injury. Furthermore, use of a weapon was associated with alcohol use. Alcohol can lead to increased risky decision-making (Lane et al., 2004) and it is suggested that alcohol can be used to overcome internal inhibitors towards sexual offending (Finklehor, 1984). This thesis therefore supports that use of alcohol can relate to increased behavioural risk as does Craissati and Beech (2003). In summary, specific factors offer further understanding of escalation; how offenders evolve over time can be understood in terms of which pathways they follow. The issue has been considered from a different perspective within criminology, namely the concept of specialisation.

*Specialisation*

In Chapter Four, Table 14 was presented to show the four variants of specialisation:

|  | General offending | Sexual offending | Example |
|---|---|---|---|
| Pure generalist | Variance | Variance | Burglar who commits separate violent acts and exposes himself and rapes |
| Generalist specialist | Variance | Specialisation | Burglar who commits separate violent acts and is serial rapist |
| Specialist generalist | Specialisation | Variance | Sexual offender who commits exposure, indecent image offences, spousal rape |
| Pure specialist | Specialisation | Specialisation | Serial rapist |

From the pathways perspective, 40% were maintainers, therefore specialising across the sample. In terms of offences, for indecent assault, there was 64% likelihood that the next offence was another indecent assault. This was similar for rape (49%), sexual burglary (57%), and sexual murder (67%). Finally there were similar frequencies in first and last offences; however, it was noted that 44% of offenders

began with rape and 32% ended with rape (which is discussed in Chapter Four). The majority of sexual murder offences were in the maintaining categories with murder offences having the likely next offences as murder (the other offences were rape, indecent assault, and attempted abduction). The state transition diagram (Figure 1) revealed an apparent hub of offending between rape, indecent assault and attempt rape. There were also possible boundaries of progression of seriousness, for example, generally, indecent exposure offenders commit indecent assault but not rape; indecent assault offenders commit attempted rape and rape but not murder; rape offenders commit murder, attempted rape, indecent assault but not indecent exposure. In essence, the seriousness appeared to have higher and lower boundaries. There also appeared to be a helix of offending which begins at the lower part of the diagram working through the various offences to murder.

There have been differing views on whether sexual offenders specialise or not. More recently, the presence of both generalisation and specialisation is not being seen as contradictory as it originally was (Lussier, 2005). However, from a neurological perspective, Mitchell and Beech (2011) found differences between specialists and generalists within a sexual offending sample. Chapter Four raised the definitional issue that the number of categories will influence the sensitivity of specialisation. Notwithstanding the definitional issues, this thesis would tentatively support that within sexual offending (whether it be part of a wider generalised offending or not) there is evidence for specialisation and generalisation; however, the generalisation seems to have offence boundaries. It is important to note that this thesis only comments on two of the four types of specialist, that is, the pure specialist and the specialist generalist. It supports studies such as Sullivan et al. (2006) who evidenced short-term specialisation with regard to offending patterns. The likelihood of next offence findings also strongly supports Soothill et al. (2000) that sexual offenders are "most likely to be convicted of the same kind of sex offence as the target offence ... This consistent pattern for each group produces the general sense that sex offenders are fairly 'specialised' within the range of sex offending categories" (2000, p. 62). The hub of offending could suggest that, similarly to Chapter Eight, offenders anchor around certain offence levels of offence and with specific offence boundaries.

From a criminological perspective, one explanation why offenders are either specialists or generalists could be rational choice theory (Beauregard & Leclerc, 2007). Criminals offend as crime provides the most effective means of achieving desired benefits (e.g., prestige, sexual gratification, money, material goods, etc). Several factors can constrain the offender's decision-making, for example, time, cognitive abilities, and availability of relevant information (Cornish & Clarke, 1987; Johnson & Payne, 1986) in attempt to minimise risk of apprehension and maximise gains. The rational choice perspective is present-oriented and situationally influenced (Clarke & Cornish, 2001). This perspective explains the pure specialist as illegal sexual intercourse would be the desired benefit; therefore, an offender will continue to achieve this unless apprehended. However, why a sexual offender would be a generalist according to this theory is potentially more complex. It could be argued that the desired offence is identified by the offender but is then thwarted by some situational factor whereby the offender decides that the cost outweighs the benefit. For example, if an offender's aim was rape, but the victim resisted they may still accept the 'benefit' of an indecent assault (sexual touching). This is supported by Tedeschi and Felson (1994) who note factors such as victim resisting influenced the offender's decisions. As Jones and Gerard (1967) propose an individual's present behaviour is not only contingent or predictable from their past behaviour but also their partners' [or another individual's] influence on them and the subsequent behaviour situational factors.

From a psychological perspective, an alternative explanation can be provided by considering the integrated theory of sexual offending (Ward & Beech, 2006). They note three sets of factors which interact continually: biological, ecological, and neuropsychological factors. Thus, if rational choice provides ecological explanations, that is, the offender interacting with the environment, then the outstanding potential explanations are biological and neuropsychological. If motivation can be understood as neuropsychological then Prentky and Burgess (2000) with reference to Prentky and Knight (1990) described a motivation-driven system relying on four presumptive motivations to rape: opportunity, pervasive anger, sexual gratification, and vindictiveness. These different motivations will translate into different observable pathway behaviours. For example, the pervasively angry motivation is hypothesised to more commonly use other outlets (sex clubs,

massage parlours) and deviant sexual behaviour such as voyeurism, exhibitionism, and fetishism to be evident. This motivation would then translate to oscillating or generalist behaviour if caught and convicted of both voyeurism and rape. Considering the neurological influence, Mitchell and Beech (2011) describe differences in hypo-amygdala functioning suggesting the generalist offender shows emotional deficits that would be characterised by inabilities to recognise fear in others and difficulties with aversive conditioning. They say, "Their sexual behavior is characterised by promiscuity, and a relative indifference to the age and attractiveness of potential partners ... In contrast, the pedophilic offender is a specialist offender, typically with a preoccupied style of attachment, who shows social behaviours that are similar, in some respects, to social phobia" (2011, p. 880).

A more cognitively based explanation of the oscillating behaviour is Eldridge (1998) who proposed three cycles of offending – continuous, inhibited and short-circuit cycles. Each cycle goes through some of the stages identified: fantasy reinforcement, fear of detection and guilt, illegal fantasies, masturbation/orgasm, target victim, fantasy rehearsal, grooming and then abuse. In the continuous cycle, the sexual abuser will activate a new cycle each time with a new victim starting with fantasy reinforcement and working their way to abuse. The inhibited cycle sees the offender becoming blocked or inhibited following an offence; therefore, the offender may stop for a period of time. The offender will retreat to sexual fantasy-masturbation-orgasm cycle fuelled by child pornography eventually overcoming their inhibition and re-entering the cycle (see Chapter Eight). This is more likely to project a period of low tariff sex crime building to a serious sexual assault. This concept is one explanation for how generalisation occurs. Furthermore, the short circuit cycle does not become inhibited following the commission of an offence but is returned to the fantasy stage of the cycle thus effectively bypassing earlier stages. Once again these cognitive explanations provide different offence behaviour with the continuous cycle having more variance in victims; the inhibited cycle showing oscillations with different lower to higher tariff offences and the short-circuit cycle maintaining a criminal offending pathway. In summary, criminological theories give some explanation for the specialisation and generalisation by describing rational choice and situational factors. Considering a more comprehensive concept, the integrated theory of sexual offending gives further options to describe and understand the

behaviour at a biological and perhaps more relevantly, a neuropsychological level, which is outlined later.

*The Role of Indecent Images*

For both pathways and specialisation research, definitional issues are important. By defining the boundaries of coding, the amount of escalation or specialisation will dependently vary. For example, defining attempted rape and rape in the same category precludes the observation of an escalation from the attempt to the substantive offence. Equally by defining all rapes the same, one does not represent blunt force trauma as Hazelwood and Warren (2001) previously have. When discussing specialisation, however, the more sensitive the measure, the higher likelihood of over-representation of oscillation in the pathways or generalised offending. This thesis does not propose a model for sensitivity but would, however, argue that more sensitive models may allow greater interpretation and perhaps variation on the same data set would allow more holistic interpretation. Likewise, using a universal seriousness score would allow studies to be compared with greater interpretation. From a UK perspective, the work by Francis et al. (2005) may offer a solution.

When considering Chapters Four and Eight together, an interesting question is presented: is possession of an indecent image of a child a sexual offence? It is interesting because it has significant results for whether an offender who commits rape of a child and IIOC offences is potentially classified as a maintainer or one of the other three pathways. They may also change from specialisation to generalisation.

*IIOC Within Series and Specialisation*

To consider where IIOC fits in term of specialisation, the question of what type of offence it is classified as should be reviewed. This may be remedied by the legal position. Possession of IIOC comes under Section 1 of the Protection of Children Act 1978 (PCA, 1978) and s.160 of the Criminal Justice Act 1988 (CJA, 1988). When the Sexual Offences Act 2003 (SOA, 2003) was re-drafted, IIOC remained in

its initial legislation (most other sexual offences did not). If an offender is convicted of IIOC, in most circumstances they are registered on the sexual offenders' register (SOA, 2003) and therefore visited by the police in the community (MAPPA, 2009). This, it could be argued, implicitly suggests a risk to the community beyond the offence itself. If one takes the legal position of IIOC as a sexual offence then a series whereby the offender commits several offences of IIOC and rape would constitute an oscillator and a 'specialist-generalist'. This would therefore argue that an offender who committed IIOC, then sexual touching had escalated within sexual offending. This is particularly interesting when considering the findings of Seto et al. (2009) who noted that 13% of IIOC offenders also contact offended (which could be argued as escalation). While it would be dangerous to draw comparison between that figure and the findings of escalation in this thesis and Lulham and Ringland (2010), it is of note and requires further research.

From a theoretical perspective, an alternative view is IIOC is not a just a sexual offence but a sexual behaviour (however, an illegal one). This notion comes from works such as Sullivan (2002) who suggested the role of IIOC as part of masturbatory fantasy thus may be part of preparation for an offence. Therefore, a serial child rapist may use IIOC to fantasise and complement their offending but would be categorised as a maintainer and a pure specialist. There is clearly a need for temporal analysis of the role of IIOC which may provide further explanation for how IIOC is used and potential risk of possessing them. As with serial sexual offending research, significant thought should be given to defining contact offending; as definitions vary so will the outcomes and following interpretation.

*Conclusion for Sexual Offender Research*

In terms of the contribution to sexual offending research and theory, this thesis has highlighted several key areas. It has attempted to combine the criminological and psychological disciplines on the issues of escalation and specialisation that have traditionally been separate. Some of the findings of this thesis have supported other works (Goodwill & Alison, 2007; Soothill et al., 2000), some findings have challenged them (Beek et al., 2010; McCarthy, 2010) and some of them have no frame of reference as they are new and exploratory. From a theoretical perspective

this thesis has raised some very specific issues for sexual offending research. First, it has defined the four pathways giving them definition for further analysis. Second, in the context of this thesis, escalation is rare; however, that view of escalation is a relatively simplistic one as a rising trajectory. Escalation does happen and when it does it tends to include very serious offences. This thesis has provided a further understanding of serial offending from a UK data source and compared it to a larger source from another country (Lulham & Ringland, 2010). From that comparison serial offenders seem to behave similarly to the wider population. This thesis has also drawn together aspects of the specialisation debate. It has raised the definitional issue as well as categorisation and the significant consequences to the outcome. In terms of trajectories of offending, the use of the state transition diagram revealed a more complicated yet useful hub of offending that shows a complex interaction with suggestions of offence boundaries. The serial offending chapters also provide several findings in terms of victim injury, offenders' imprisonment and precaution-taking which give support to psychological theories of sexual offending and also provide useful information on offending behaviour. The findings in terms of how IIOC is possessed by contact and non-contact offenders have advanced the understanding of this area. Although a small sample it raises questions in terms of how offenders seem to behave differently depending on whether they are contact offenders or not. The IIOC findings also support theories of sexual offending in terms of the use of IIOC; however, this needs further exploration. Furthermore, it is suggested that there may be a homology between images possessed and acts committed by contact offenders. These acts could be indicative of using the internet as a behavioural adjunct to contact offending behaviour. As outlined at the beginning of this discussion there are three distinct approaches this thesis takes. Having outlined the contribution to sexual offenders' research, the contribution to decision-making research will now be presented.

*Police Decision-making and the Effect of Time Pressure*

Chapters Three and Four considered the characteristics and behaviours of sexual offenders and those that may pertain to risk. In chapter Five, it was identified that another risk within sexual offence investigations can be the decisions made by the investigators themselves. Chapter Seven therefore explored investigator decision-

making in a serial sexual offender scenario but added a recent area of academic focus (Cohen, 2011), time pressure. The main findings were firstly that time pressure did have an effect as it increased prioritisation and decreased hypotheses generation. Secondly, experience matters, under time pressure experienced investigators were more able to identify extremely important decisions. Thirdly, intelligence (or ability to deal with cognitive complexity) also had a significant effect; under time pressure those with higher intelligence could better identify extremely important decisions. With no time pressure they also generated more alternative hypotheses.

*Time Pressure and Hypotheses Generation*

Time pressure creates a tendency to increase perceived important information and prioritise it (Svenson & Maule, 1993). There are two key aspects to that statement: firstly, perception and secondly, prioritisation. The fact that the time pressure manipulation was effective and the investigators' perception of time pressure was significant meant that by simply telling the investigators they had less time they perceived that they were under greater pressure. This offers recent support to Mann and Tan (1993) in that the *perception of time insufficiency* for dealing with the decision is all that is necessary to lead to impairment of information processing. In terms of prioritising, there was a significant effect just after the manipulation. This means that investigators prioritised their decisions after receiving the manipulation, but by the second part of the scenario, the effects had subsided. One potential explanation is that time pressure was an acute stressor (Flin, 1996). For a finite period it had an effect but then dissipated due to the moderators': experience, rank, and intelligence. Alternatively, as there was no actual time deadline the effect simply reduced (this will be considered in limitations). Although prioritisation seemed to subside, the results show that time pressure led to a decrease in the generation of hypotheses. This supports studies such as Ask and Granhag (2005) who found that time pressure affects investigators by becoming more selective towards hypotheses and less able to generate alternatives. The finding supported Janis (1982) in the assertion that high time pressure leads to fewer decision alternatives being generated and will limit the *generation* of hypotheses. Indeed, according to Edland and Svenson (1993), under time pressure individuals would have difficulty in finding new alternatives and may lock into existing decision problem formulation. What is

not known is whether it was a locking effect that took place or a cognitive workload issue. A further issue is there was no expert determination of an ideal or optimum number of hypotheses. As the optimum number of hypotheses in an investigation is not defined, perhaps as Rossmo (2006) suggests, people can only hold five to nine items in their conscious memory and this may apply to hypotheses. Also, as increasing hypotheses is likely to produce more incongruity, there may come a point where too many hypotheses become counter-productive in terms of the cognitive workload they are producing; this is an area for further research.

It could be argued this process of investigators limiting the number of hypotheses is a function of a maximum capacity of cognitive load. Studies have shown that more complex tasks require higher levels of cognitive effort (Garbarino & Edell, 1997). Indeed, Mandler (1982, cited in Garbarino & Edell, 1997) suggests that the categorisation process may itself produce effects that contribute to the evaluation of the stimulus. In other words, before the investigator even thinks of outcomes, by simply putting the information into categories to understand it they use up cognitive load. Mandler notes that arousal and cognitive effort are heightened as incongruity between a stimulus and schemas increases. This means the difference between the information being processed and the cognitive framework or concept which helps organise and interpret that information, creates a heavier workload the more differences there are. This leads to a more extreme evaluation of the stimulus. Garbarino and Edell (1997) built on this concept and found that the 'process of processing' termed 'cognitive effort' leads to the decision maker generating more negative affect therefore choosing alternatives that are less effortful to evaluate. In summary, this thesis argues that the generation of hypotheses has a cognitive load and time pressure compounds that. There are further findings of this chapter that contribute to that explanation, namely the role of intelligence.

*Dealing with Complexity and Cognitive Workload*

In Chapter Seven, higher scores on the Raven's Progressive Matrices (intelligence) had two apparent functions dependent on whether the investigator was under time pressure. In the control group, those with higher Raven's scores were likely to generate more alternative hypotheses. It seems logical that without time pressure

investigators who scored highly on a test designed to identify those with the ability to make meaning out of confusion and generate high-level schemata which make it easy to handle complexity, would do exactly that. Under time pressure more 'intelligent' investigators identified the important decisions. One could therefore argue the impact of time pressure increased the complexity of the problem and those investigators who could manage this better (measured by their Raven's score) outperformed those who could not. One of the principles of NDM is that under time pressure people rely on previous experience. It could therefore be argued that Raven's measures one of the key cognitive applications of NDM, namely the ability to reproduce and recall information. Thus, it is logical that those who score higher on Raven's can produce more decisions under time pressure. It could further be argued that Payne et al.'s (1988) three effects of time pressure: speeding up processing, selective searching and processing could be mitigated by cognitive abilities to deal with complexity.

Intelligence, as in reproductive and eductive ability, does not appear to be the only operating factor as need for closure also affected ability to identify important decisions. In Chapter Seven, those who scored highly on the need for closure decisiveness scale (NFC) (Webster & Kruglanski, 1994) were more able to identify important decisions irrespective of time pressure as both conditions were significant. The original NFC aimed to identify individuals "with a high need for closure would experience an urgent desire to reach closure, reflected in a *decisiveness* of their judgments and choices" (1994, p. 1050). However, it has been questioned what it exactly measures (Roets & Van Hiel, 2007). It could be argued that decisiveness is not affected by time pressure. Thus, perhaps those with high NFC scores are satisficing (Simon, 1957); this would need further research.

*Identifying Important Decisions*

Identifying important decisions is a key aspect to the success of the investigation (Cook & Tattersall, 2008). Chapter Seven aimed to investigate how investigators react under time pressure in terms of identifying those decisions that a panel of experts had identified as extremely important. It tested the generation of investigative decisions. It could be posited that the findings of no main effect but

general experience of policing, specific experience of crime investigation, and rank act as moderators of the effects of time pressure. This notion supports Klein (1999) in the assertion that under time pressure individuals cannot sample as many cues and experienced decision makers adapt to time pressure by focusing on the most relevant cues and ignoring the others. Klein notes, "If time pressure is low, the conditions are fairly stable, and the goals are clear, then we should expect to find the highest level of option comparison," (p. 96). Perhaps the second point assists to explain why experience did not have the significant effect in the control group. Those in the control group had the perception of more time so may have adopted a more traditional decision-making evaluation style whereas those under time pressure had to engage in a more naturalistic approach. If this concept is rejected, it can still be argued that RPDM was in effect in the control group but the necessary moderating influence of experience was not needed as there was time to review and analyse the information.

As this thesis accords with authors such as Maule and Andrade (1997), it is worthy of consideration as to what mechanisms they propose to deal with time pressure. They suggest the following coping strategies: (1) lower goals; (2) use previous experience; (3) involve others; (4) re-schedule activities; and (5) rely on intuition/gut reactions. Interestingly, points 2 and 5 could be interpreted as NDM processes. Recent reviews of the role of time pressure and its relation with the NDM perspective have suggested satisfactory time management for deliberation requires substantive domain knowledge and strategic skill (Cohen, 2011). However, Klein (1999) suggests experienced decision makers adapt to time pressure by focusing on the most relevant cues and ignoring others. Cohen's approach proposes an advance in NDM theory focused on recognition/meta-cognition theory which has three concurrent cycles of cognitive activity. The first and second bear similarities to the process of Klein's (1999) simple match and mental simulation; however, the third system regulates and monitors the recognition considering cost of processing time and critiquing and correcting (Cohen, 2011). Klein (2009) supports the concept of moving towards macro-cognition analysis, the study of cognitive adaptations to complexity, and suggests this may reflect the next step in NDM theory. This will be considered at the end of this Section. What is apparent is, as Dror and Fraser-Mackenzie (2008) note, police officers should receive proper training in cognitive

biases, appropriate procedures and best practices. This then provides them with simulated experience to rely on.

*Experience and Intelligence – a Formidable Combination*

Time pressure had little effect on experienced investigators' ability to generate decisions and rank statistically accounted for most of the identification of important decisions. One explanation is Klein's (2009) simple match in that people will quickly match the situation to the patterns they have learned and will carry out the typical course of action. This would suggest that those with crime investigation experience could simple match the circumstances against existing experiences. It could also be argued that this finding accords with Cronin and Reicher (2006) who note, although in a public order context, experienced police participants showed an early situational assessment of risk of violence. Perhaps what are more notable are rank, Raven's, and then decisiveness (respectively) accounted for identification of important decisions under time pressure. This is extremely relevant when considering Cohen's (2011) assertion that the role of time pressure and its relation with the NDM perspective have suggested satisfactory time management for deliberation requires substantive domain knowledge and strategic skill. As the criterion for this chapter was the participant must be an investigator (thus has some experience of investigating), those of higher rank had specific domain experience and strategic skill. The role of the Chief Inspector is to "formulate, monitor and review tactics to achieve strategic objectives for law enforcement operations" and the Inspector is "responsible for controlling, planning, organising, and authorising police personnel"; finally, the Sergeant must "prepare for, monitor and maintain law enforcement operations" (Skills for Justice, 2011). Each of these have an element of strategic skill, whether those individuals have been trained or simply had experience of strategic planning it appears to have had an effect. As progressing through the ranks takes time, those individuals will also have considerable policing experience. The fact that experience of crime investigation and general police experience also significantly affected identification of important decisions under time pressure also seems to support RPDM rather than TDT.

*NDM versus TDT*

Both NDM and TDT accept that some professionals are impressively skilled while others are flawed (Kahneman & Klein, 2009). The heuristics and biases approach tends to focus on flaws in human cognitive performance whereas the NDM approach accepts professionals often err but stresses the impressiveness of successful expert performance (Kahneman & Klein, 2009). Based on the data of this thesis, the findings appear more aligned to NDM. As argued earlier, Raven's measures one of the key cognitive applications of NDM, namely the ability to reproduce and recall information and this lends support to the existence of NDM. Furthermore, NDM heavily emphasises the role of experience and Chapter Seven found this to be a moderating factor. Most recent NDM perspectives considering time pressure have added another layer of strategic thinking and checking processes to NDM (Cohen, 2011). As rank was the most significant of three factors accounting for identification of important decisions, it is therefore argued that rank is a combination of domain experience and strategic experience further supporting NDM. This is particularly relevant as senior investigators often make decisions in circumstances they have not encountered before where empirical research may not be available. It has been acknowledged that these risk decisions may be based on previous experience (Carson & Bain, 2008) and this thesis provides further understanding on moderating factors in managing those risks.

*The Sum of the Parts: Risk Management*

In the criminal justice system, risk is generally focused on adverse outcomes (Blackburn, 2000). Risk management of sexual offenders has an emphasis on adverse outcomes but also considers the protective factors (MAPPA, 2009) or, termed another way, likelihood factors of not offending. In devising risk management plans, there is a need to focus resources in a way that best protects the public from serious harm (MAPPA, 2009). In order to mitigate risk there is a need to use an investigative approach (Kent Police, 2010). Part of the investigative approach is balancing protective and risk factors; however, it could be argued that theories of offending such as Sullivan (2002) and Ward and Beech (2006) focus on negative outcomes, concentrating on escalation and maintenance but not necessarily accounting for oscillation and desistence. This then becomes difficult to interpret and

understand how offenders cease behaviour and ultimately how a balanced view of risk and proportionate approach can be taken in a model (Home Office, 2009). Ward and Beech (2006) suggest an integrated theory of sexual offending (ITSO) that incorporates biological, neuropsychological and ecological factors. When considering the findings of this thesis in terms of specialisation, pathways, and likelihood factors, there appears to be a gap in the integrated theory of sexual offending. Whilst these pathways have recently been explored, for example, considering the biological behaviour of specialist and generalist offenders (Mitchell & Beech, 2011), there may be an opportunity to revise the ITSO to consider how offenders cease offending and factors that determine offending by situational access. This thesis has identified similar risk factors to the Risk Matrix 2000/C (Thornton et al., 2003) such as criminal convictions (Chapters Three and Four), non-sexual convictions (Chapter Eight) and intimate relationships (Chapters Three and Four). For example, it has been argued in this thesis that marital status can be both a protective and risk factor depending on the circumstances. It has also advanced risk factors currently relied on during the MAPPA process such as drug and alcohol misuse (MAPPA, 2009). Therefore Figure 5 tentatively suggests the integrated theory of sexual offending pathways (ITSOP). This is a modification of ITSO to include pathways of offending and opportunities to reduce risk. The key difference between ITSO and ITSOP is providing an explanation why any behaviour may escalate or maintain. For example, an offender may have a sexual interest in children and possess IIOC; however, they have some protective factors in place that reduce the likelihood of offending. In addition they may have inhibitors to victim access which further reduces the likelihood of offending. They therefore maintain the IIOC behaviour but do not contact offend. A second example could be the same offender at a different time in their life. The offender still has a sexual interest in children and possesses IIOC but also has multiple risk factors in place and victim access enablers. This combination leads to a contact offence. This is, of course, a tentative idea which would need thorough review and testing.

Figure 5

*Integrated Theory of Sexual Offending Pathways (ITSOP)*



Integrated theory of sexual offending pathways (ITSOP)
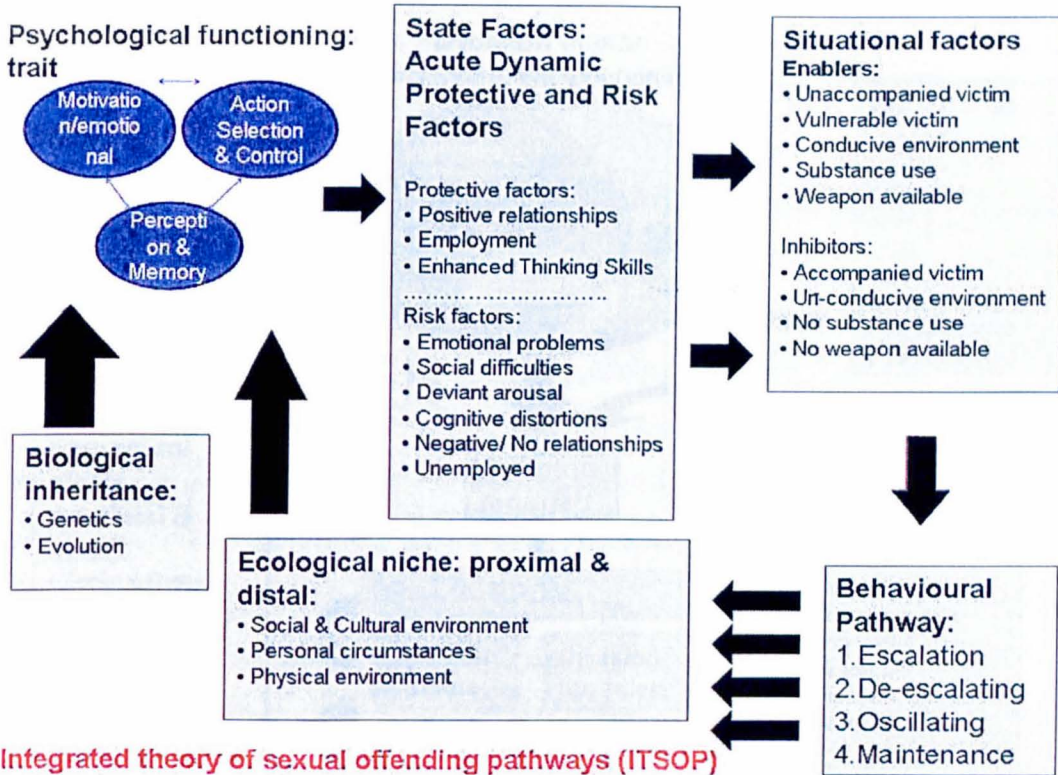
Having considered the contribution to sexual offending theory, there is a similar possibility with decision-making. It could be argued that the TDT and NDM debate takes a micro-cognition approach to a concept that is significantly wider. Recently authors have acknowledged that decisions are made in a context (Cohen, 2011). Therefore the second proposed model from this thesis is the Integrated Theory of Decision-making (ITDM). This builds on the social and cultural aspects that may affect a decision but also considers the decision-making models (Figure 6). It also acknowledges the findings of this thesis and other studies in terms of the biological effects within decision-making. This is only proposed as a conceptual model to draw some of the findings of this thesis into a model. The important issues within the model are that it takes into account the biological and ecological factors that may be affecting the decision maker. Within the neuropsychological function, the action selection includes the NDM approach. As with the ITSOP, this is a tentative idea that would need thorough review and testing.

Figure 6

*Integrated Theory of Decision-making (ITDM)*
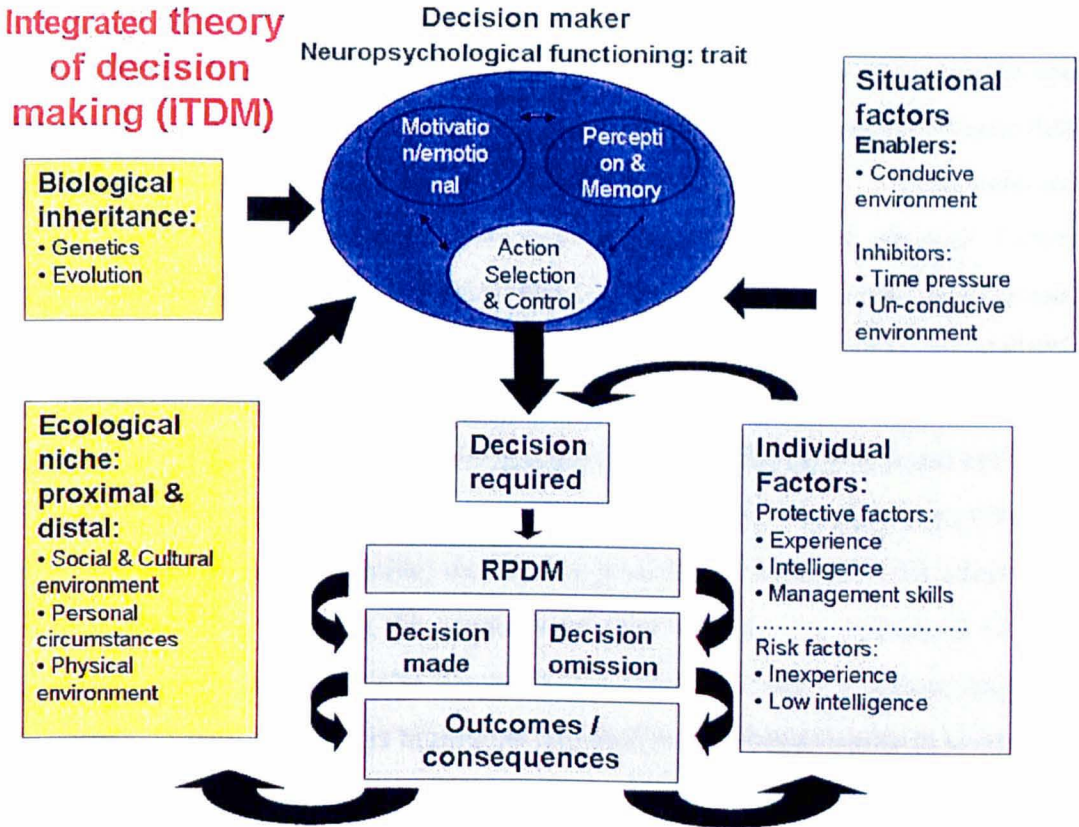


*Limitations*

One limitation of this thesis is that it has not explored the thoughts, cognitions and explanations provided by the offender[7]. For two of the studies, archival police data were used already collected for purposes of prosecution. Whilst the benefits of such data have been documented in Chapters Three and Eight this presents difficulties, especially with missing data. This ultimately means that there is very limited control over how the data were collected. It also means that the variables included were contingent upon the existing data set. Therefore, the only control that the researcher had over the data was coding. For all three data sets the samples were relatively small, especially when considering specific hypotheses. Larger sample sizes would

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[7] This was considered; however as the researcher is a serving police officer; legally, any disclosures made by offenders would have to be investigated and he would have to caution the offender as soon as he was aware of the information.

also allow more advanced, predictive analyses on the data. Each of the data sets will now be considered in turn for specific limitations.

*Data 1: Serial Sexual Offenders*

In general, there were considerable missing data from this data set. An example was whilst data were available for whether offenders had served a custodial sentence they were not available for all previous convictions of offenders as the ViClas database did not record this information. This information would have allowed further comparison with several studies. The missing data mean caution should be exercised when interpreting the findings, for example, comparisons with prison sentence (14%) and non-prison sentence (18%) where 68% this information was not known. Furthermore, while the sample size is reasonable at 154 offenders it is not sufficient to interpret factors such as the blitz method of approach ($N = 4$). However, Chapters Three and Four were explorative; therefore a descriptive approach was adopted. A further limitation is although the sequence of the offences was known, it was not recorded where prison features in the series for those who went to prison. As prison was correlated with injury, this highlights the need for further research to understand the sequence of the offending considering conviction and imprisonment. The data also presented some challenges; an example is marital status, which in some cases changed over time, and thus the most frequent record of marital status was reported.

In terms of coding the data were pre-coded by research analysts; therefore the results were reliant on the SCAS data accuracy procedures. This, once again, raises the question of inter-rater reliability that could not be verified. The researcher coded each of 520 offences based on an adapted scale of seriousness taken from Francis et al. (2005). The offences were given seriousness scores calculated through average (mean) sentence length for the offence. Adaptations were made as Francis et al. (2005) did not include attempts (other than attempted murder) and SCAS had three offences not listed in Francis et al. (2005). This is a limitation as any comparisons must be cognisant of these differences. Furthermore, as Francis et al. (2005) note, any scale that combines scales should be carefully applied as it may be morally unwise to do so as "one rape may equal 94 shoplifting convictions. In short, the procedure produces a spurious equivalence that is technically unjustified and morally unwise to display" (2005, p. 24). The data also present some issues through the

recording criteria. SCAS only collected the more serious offenders or less serious with aggravating features. This limits the generalisabilty of the findings. An example is 44% of offenders begin with a rape and 32% end with a rape. Whilst there are other potential explanations the reporting criteria are likely to influence this. A solution would be to conduct a larger study with both qualitative and quantitative measures with a wider population of offenders.

*IIOC Data Set*

Some lessons were learnt from the SCAS data set for the IIOC data. In general the IIOC data captured much more detail and where, in the SCAS dataset information was missing, for example, convictions, this was overcome in the IIOC data. However, the IIOC data set still presented some challenges. The main limitation was the likelihood of undetected contact offenders within the non-contact group (Bourke & Hernandez, 2009); therefore findings should be treated with caution. There were also differences in how offenders came to police attention. Offenders were detected through different means (generally, contact offenders through reporting by the contact victim and non-contact offenders through other investigations or payment for images). It is therefore acknowledged that the data may represent a snapshot of the offending behaviour; as a result they could be at different stages in their offending pathway. In addition, by treating the offenders as two distinct groups, it also minimises the effect of offenders engaged in grooming or inciting. In terms of where the data came from, this chapter used a stratified sample of IIOC offenders from the South East, identified and grouped on the basis of their index offence. The sample included a relatively small number of offenders that were further reduced when running the within-group comparisons of the contact sexual offenders. Information regarding the SAP levels of IIOC possessed and the details of the IIOC (e.g., gender, age, action) were provided by investigators. This raises two further limitations: first the SAP grading has no inter-rater reliability and anecdotally, the difference between levels 4 and 5 can blur; second, where only a proportion of the possessed images were coded, there is no record of the levels of the un-coded images and therefore the levels could fluctuate. The inclusion criteria also may create a limitation as only those offenders whose possession met the minimum requirement of detailed examination were included in this chapter.

Chapter Seven sought to combine more traditional experimental techniques with higher-fidelity computer-based scenarios. The time pressure manipulation was effective; however, it was not dichotomous between conditions as all officers felt time pressure. The reasons for this are unclear but the experiment taking place in police stations during the investigators' duty could offer explanation. This working environment pressure can be viewed positively as increasing the fidelity of the scenario; however, an obvious criticism is it was not measured or controlled with distraction effects possible. The scenario could have therefore been conducted in a more sterile environment. The locations of the scenarios also had occasional interruptions and the ambient nature of these may have impacted on officers' cognitive workload. A further limitation was Chapter Seven measured perceived time pressure; however, actual time was not recorded. Further investigation could try to delineate between perceived and real time pressure and its effects. Time pressure as a stressor may have had physiological effects and this was not measured in the thesis. A further study could measure the physiological effects of the stressor and susceptibility. In terms of other limitations, an omission in the individual differences was the training that the investigators had been given was not recorded. This could have been a rich source of data for analyses.

Whilst there were limitations to the dataset it represents policing reality. The SCAS dataset is one of the evidence bases that Behavioural Investigative Advisers can rely on. The IIOC data set is what is used to convict the IIOC offenders. The decision-making data were in police stations during work hours where the investigators could leave the experiment and be faced with the real version of the scenario. Whilst there were limitations within these data, there were pragmatic positives.

*Implications*

There are three themes of implications in this thesis: the first is it provides law enforcement with an evidence base for investigative and risk decisions: the second is the associated implications for decision-making training generally and specifically considering time pressure; the third is an issue of theory, in that it advances the

psychological and criminological theory in sexual offending and decision-making domains.

*Providing an evidence base.*

It has been acknowledged that policing needs to make a transition towards a risk-based and knowledge-focused paradigm (Williamson, 2008). Furthermore, policing should create a more "balanced view of risk ... building confidence to respond in a proportionate and professional manner" (Home Office, 2009, p. 73). This thesis provides a number of 'knowledge rules' (Beek et al., 2010) to assist with criminal investigations and risk prioritisation decisions. In the simplest terms, if an investigator is investigating a serial sexual offence, Chapters Three and Four provide a knowledge base to assist in: a) providing an understating of the serial offender from a UK perspective; and b) creating and prioritising lines of enquiry to generate further hypotheses. For example, if an investigator has an unidentified serial rapist who is especially violent, using the findings of Chapters Three and Four, a strategic intelligence requirement could suggest:

Identify all males for prioritisation who:
1. Have a conviction for sexual murder, rape, indecent assault (based on the hub of offending) AND
2. Have been imprisoned previously and were in the community at the time of the offence (based on the violence and imprisonment finding).

This could assist to narrow the number of suspects. Furthermore, Table 22 could also be used to confirm whether there are any lines of inquiry that had been omitted.

With increasing volumes and severity of IIOC investigations, one of the challenges for law enforcement is the prioritisation of investigations for IIOC (Internet Watch Foundation, 2008; Wolak et al., 2009). It is acknowledged that studies such as Chapter Eight may have implications for law enforcement agencies (Eke et al., 2010). For example, if an investigator had two analogous cases where both offenders have downloaded similar material where the only differences are one has non–sexual convictions and the other does not. This chapter provides an evidence base to prioritise the former offender. By default, the latter offender will be proportionately a

lesser priority (this will be considered further in future research). To assist in learning from both serial sexual offenders and IIOC, this thesis will be provided to the National Police Improvement Agency (NPIA) both for use by the Behavioural Investigative Advisers (Rainbow, 2011) and as reference material in the library.

*Decision-making in investigations and time pressure.*

A theme of the thesis is that experience matters. Those with experience of investigations and management better identify extremely important decisions under time pressure. Experience is hypothesised to mitigate time pressure. This then highlights the question of what can be done other than providing investigators with extensive real experiences. Can experiences be created that are sufficiently real that provide the investigator with a simple match (Klein, 1999) for future real life criminal investigations? Considerable advancement has been made over the last ten years in high-fidelity training both in policing (Eyre et al., 2008) and arguably longer in the armed forces (Cannon-Bowers & Salas, 1998). This thesis supports the use of such training methods and could be used to inform a training needs analysis. A further consideration is the possibility of designing police training where there is likely to be a real or perceived time pressure, for example, kidnaps. This type of training, referred to as stress inoculation or stress exposure (Driskell & Johnston, 1998) specifically including time pressure, would warrant further review. Furthermore, as part of the design for Chapter Seven, investigators received feedback on their individual differences measures and examples of how to improve problematic areas were given. This could also be incorporated into inoculation training so participants are aware of their own potential responses. More traditional training could explore the effects of time pressure and hopefully equip investigators with physiological and psychological tools to manage those concepts. For example, understanding and being self-aware that they may be generating fewer hypotheses under time pressure, could assist the investigator to seek external validation. There are, without doubt, positives of incident training and as Flin (1996) presents, there are numerous different types from background reading to full-scale inter-agency exercises. This thesis supports gaining experience appropriately.

Considering the role of Raven's and the NFC, perhaps controversially, police training could use these tools to assess investigators potential areas for development and deliver strategies to assist them. Ability tests are already used in selection of officers onto the National Police Improvement Agency's High Potential Development Scheme (NPIA, 2010). However, it must be clear that the findings of this thesis were that Raven's combines with other factors to identify important decisions. Being mindful of the variation of skills an SIO has (Smith & Flanagan, 2000), Raven's should only be used alongside other selection processes.

*Theoretical implications and future research.*

This thesis has used a broad literature encompassing criminological and psychological perspectives; it reviews both sexual offending and decision-making research. From this corpus of literature there are several potential implications. From the decision-making perspective, this thesis suggests there are specific individual factors that affect how decisions are made. This thesis therefore tentatively proposes a model for decision-making, or at the very least, suggests that individual and environmental factors require more emphasis and further research. Future research should consider the role of intelligence and specifically understand what experiences are relied on. Whether real experience can be substituted with high-fidelity stress inoculation training should be explored in terms of the effects. The concept of rank specifically (or experience of police management) would merit further investigation, interviews, or questionnaires to ascertain the key influencing factors is recommended. Furthermore, Chapter Seven did not ascertain how those who managed time pressure did so. This requires further research.

The issue of experience has been heavily relied on when interpreting the findings of this thesis. Further research could develop the concept of experience by investigating the difference between policing experience and CID experience. This thesis has also proposed a concept of moderation; however, it is important to note it is not a validated statistical moderation and further research could establish if experience could statistically moderate time pressure. Finally, as time pressure was a significant focus, further investigation could try to delineate between perceived and real time pressure and its effects.

From a sexual offender research perspective, this thesis tentatively suggests a move to a more protective versus risk factor approach considering the pathways of offending. This has implications in terms of specialisation, escalation, serial offending, and the possession of IIOC. Considering escalation first, the assumption of escalation underlies much criminal justice policy (Liu et al., 2010). Therefore, as Sullivan et al. (2006) note, investigations into whether offenders specialise in their criminal behaviour carry implications for both criminological theory and public policy. This thesis makes suggestions in terms of offence boundaries and pathways of offending. Whilst this is unlikely to inform public policy, it provides a new model of the potential pathways to add to current debates. There are several important definitional issues raised by this thesis relating to seriousness and escalation in any further research. By adopting a uniform definitional approach, meaningful comparison can be progressed. In terms of further research, there are several other areas for development. The first is broadening the dataset to include the full criminal careers of the offenders. At present only comments can be made on the offending already within a specialisation. Further data could assist to explore general offending with full criminal conviction data. This could then investigate generalist offending. The second area of future research would be the offence boundary hypothesis. Investigators viewing an offender as a 'serial rapist' could create a mindset where other offences may not be considered. For example, a serial rapist is actually likely to commit other offences within the hub of sexual offending; this needs further exploration. Finally, as discussed earlier in the thesis, one potential situational factor is the performance of the police and whether they apprehend the offender. As Stern (2010) suggests forces respond differently to sexual crimes. It can be questioned how much the individual decisions impact on the investigation. Therefore outcome focused research may have useful and pragmatic implications.

In terms of serial offending and contact offending with IIOC possession, a greater understanding is required of the order of offences and their chronology. In terms of IIOC, further understanding of the homology of IIOC and contact offending is needed. Consequently, are offenders possessing and using images while they are contact offending? Are they a blueprint for offending (Quayle & Taylor, 2001)? If so, how, and why? Offenders could be interviewed to ascertain this. There is also a

need to describe the normal distribution of movies and images to allow interpretation against the norm. To strengthen the results of Chapter Eight's approach further work should be undertaken with a larger sample exploring the pathways in offending, concentrating on the potential effect of this third group of offenders (groomers/inciters) who are displaying more risky behaviour than those viewing IIOC (Sullivan et al., 2011). Considering the thesis as a whole, this then presents an exciting opportunity. Further research could build on the likelihood factors from IIOC possession and the pathways of offending from serial offenders to create a prioritisation tool for the management of IIOC cases and ultimately the protection of children. By understanding temporality, further individual differences then the associated risk can be understood, managed, and mitigated.

*Conclusion*

This thesis focused on two aspects of sexual offending. First, which offender behaviours related to more serious offending was investigated. Second, which factors affected investigator decision-making was explored. For both perspectives, the question has been considered as to what an individual's behaviour tells us in terms of a likely outcome and associated risk. Police decisions should be justified and accountable based on reliable information (evidence) with thorough analysis therefore creating accountability (Smith & Flanagan, 2000). The 'evidence' from this thesis is the information contained within Chapters Three, Four, and Eight which provides information that practitioners can use to form a basis for their decisions. Furthermore, Chapter Five gives an overview of what to consider when investigating sexual offences and what best practice looks like, with Chapter Seven giving a tactical menu of options for a rape investigation. Whilst those chapters provide evidence, the data within this thesis also explore the significant theoretical questions such the existence of escalation, specialisation and the relationship between possession of IIOC and contact sexual offending. The second aspect of this thesis provides insight into investigator decision-making under time pressure and the associated risks of decision omission. It describes the mitigating effects of experience and intelligence.

The common theme was how can policing be assisted to create a more "balanced view of risk...building confidence to respond in a proportionate and professional manner" (Home Office, 2009, p. 73). By defining the likelihood factors in Chapter Eight, best practice in Chapters Four and Seven, and the contribution to psychological theory, there are now two opportunities. The first is for this evidence to be used in the real world to protect the public from harm in risk management and risk mitigation. The second is to use the likelihood factors to develop prioritisation models of resources. By prioritising police resources, with an evidence-based approach, to those proposing the greatest risk, there is the opportunity of protecting children.

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ViClas variables:

| Variable | Sub-categories |
|---|---|
| Age of offender | |
| Age of the victim | |
| | |
| Offence type | Indecent assault |
| | Rape |
| | Attempted rape |
| | Indecent exposure |
| | Murder |
| | Burglary |
| | Abduction |
| | Assault |
| | Breach of the Peace |
| | Attempted murder |
| | Gross Bodily Harm (GBH) |
| | Public Nuisance |
| | |
| Living circumstances | Parents |
| | Spouse |
| | Girl/boyfriend |
| | Minor Child |
| | Adult child |
| | Relatives |
| | Room-mate |
| | Alone |
| | Other |
| | Unknown |
| | |
| Relationship status | Single |
| | Married |

|                                                      |                                                  |
|------------------------------------------------------|--------------------------------------------------|
|                                                      | Same sex relationship                            |
|                                                      | Separated                                        |
|                                                      | Divorced                                         |
|                                                      | Widowed                                          |
|                                                      | Other                                            |
|                                                      | Unknown                                          |
| Approach type                                        | Surprise                                         |
|                                                      | Confidence                                       |
|                                                      | Blitz                                            |
| Weapon use                                           | Weapon used                                      |
|                                                      | Weapon displayed but not used                    |
|                                                      | Weapon not displayed but threatened              |
|                                                      | Weapon use unknown                               |
| Substance abuse                                      | General substance abuse                          |
|                                                      | Drugs                                            |
|                                                      | Alcohol                                          |
| Injury to victim                                     | General injury                                   |
|                                                      | Minimal injury                                   |
|                                                      | Moderate injury                                  |
|                                                      | Severe injury                                    |
|                                                      | Extreme injury                                   |
|                                                      | Injuries unknown                                 |
| Previous prison experience                           | Previous prison experience                       |
|                                                      | Unknown                                          |
| Sexual behaviours performed by offender during offence | Fondles                                        |
|                                                      | Vaginal penetration penile                       |
|                                                      | Kisses face                                      |

Vaginal penetration digital

Masturbates self

Anal penetration penile

Oral

Other

Exposes

Kisses chest

Vaginal penetration rear

Hugs

Ejaculation body

Anal penetration digital

Masturbates other

Simulated sex

Kisses other

Vaginal penetration foreign

Urination defecation

Sexual behaviours performed by the victim

Oral

Masturbates other

Fondles

Masturbates self

Kisses face

Anal penetration penile

Other

Urination defecation

Vaginal penetration penile

Kisses chest

Vaginal penetration digital

Anal penetration digital

Exposes

Vaginal penetration foreign

| Precautions taken by offender | None |
| --- | --- |
| | Covered mouth |
| | Covered eyes |
| | Told not to look |
| | Disguise |
| | Bound victim |
| | Gloves |
| | Destroyed forensics |
| | Blindfold |
| | Other |
| | Condom |
| | False name |
| | Blocked entry/exit |
| | Unknown |
| | Gagged |
| | Administered drug |
| | Bathe/douche |
| | Lighting |
| | Mask |
| | Lookout |
| | Disable phone |
| | Disguise vehicle |
| | |
| Offender lifestyle characteristics | Unknown |
| | Frequent criminal act |
| | Drug user |
| | Other |
| | Socialise |
| | Transient |
| | Drug dealer |
| | Alcoholic |
| | Mental disability |
| | Reclusive |

|  | Pimp |
|  | Physical disability |
|  | Street person |
| Victim lifestyle characteristics | Unknown |
|  | Prostitute |
|  | Drug user |
|  | Likes to party |
|  | Other |
|  | Frequent criminal act |
|  | Physical disability |
|  | Mental disability |
|  | Transient |
|  | Alcoholic |
|  | Homeless |
| Relationship to victim | Stranger |
|  | Known associate (friend/associate) |
|  | Client of prostitute |
|  | Unknown associate (peripheral contact) |
|  | Known – partner |
|  | Known – family |
|  | Known - ex-partner |
|  | Relationship not known |
| Assault site | Residential |
|  | Retail business |
|  | Park / recreation |
|  | Unknown |
|  | Rural |
|  | Uninhabited |
|  | Other |

# APPENDIX 1

| | Industrial |
| --- | --- |
| | Farm |
| | Red light |

# KENT POLICE

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## Consent

This research involves working on an investigative scenario as well as filling out questionnaires related to decision making. This research is carried out under the supervision of Professor Laurence Alison at the University of Liverpool and typically takes 90 minutes. Before taking part, please read the statements below and click on the "I Agree" button if you understand the statements and freely consent to participate.

- The general purpose of this study is to identify the processes used in investigative decision-making.

- There are no known expected discomforts or risks involved in the participation in this study. This judgment is based upon a relatively large body of research with people solving problems of a similar nature.

- Participation in this study is completely voluntary and you are free to withdraw at any time without penalty of any kind.

- All data recorded will be anonymous. All information will be treated confidentially and will only be used for research. We are looking for general trends, NOT analysing individuals' responses.

If you have any questions, please let us know now.

If you wish to take part, click on the "I Agree" button, to begin.

| I Agree | I Do Not Agree |

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# Instructions

We have written some instructions just so that you know what is going to happen during this study. Please feel free to follow these instructions and work at your own pace. If you have any questions at all please ask Berni, Kate or Michael.

Please complete each part of the study in the following order:

1. Decision Making Questionnaire (paper questionnaire)

This asks questions about your personality. Your answers to these questions may help us to understand your decision making. Please fill this questionnaire out; it should be in front of you.

2. Time Paradigm (on the lap top – already open for use)

'Time paradigm' can be found on the laptop screen. This part of the study asks you to estimate how long you think a minute is. The program will ask you to do this five times in total. When you are ready to start this program, please press continue. When you are ready to start estimating a minute please click one of the mouse buttons (it does not matter which). When you do think the minute is up click one of the mouse buttons again. After this, keep clicking the mouse button until the message 'You have completed your session' appears, please click 'End' (please do not click retry) and the program will disappear off your screen.

The next stage is the scenario.

3. Scenario

**If you are in the blood pressure group you need to speak to one of the researchers now, if not, please continue.**

Now it's time for the scenario (please be aware you may all have slightly different scenarios), please put on the headphones which are in front of you. The volume can be adjusted on these using the sliding control on the wires. The scenario can be found on the laptop as a powerpoint slide show. On the main screen double click on 'Scenario'. To start the scenario please press 'Shift' and 'F5' simultaneously and it will begin. The first slide will explain what to do. You will be asked to write notes in your daybook; this should be in front

of you. When the scenario is over click the 'X' in the upper right-hand corner to remove the scenario from the screen.

On the main screen double click on "Scenario questions"

4. Scenario Questions (on the lap top)

Now it's time to answer questions regarding the scenario. The 'Scenario Questions' can found on the desktop; double click to open. When you are finished this document; please ask of one of the researchers to come and save it.

And finally....

5. Clear Thinking and Observation Questionnaire (paper questionnaire)

This is the final part of the study. This measures your ability to think clearly along with your ability to store and reproduce information. You will find this questionnaire on the desk in front of you.

When you have completed this please hand in all your paperwork to the researchers.

It would really help if you did not discuss the scenarios with anyone who is planning to take part and please remember some of you had different scenarios.

Thank you.

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# SCENARIO QUESTIONS

This questionnaire consists of 2 sections:
1. Awareness
2. Scenario Questions

We would like to remind you that your answers will be linked only to your number; this is so that you personally will not be identified.

## SECTION ONE: AWARENESS

Please read each statement and then indicate with an **'x'** how <u>you felt during the scenario</u>.

*There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe your feelings during the scenario best.*

| | Not at all | Somewhat | Moderately So | Very Much So |
|---|---|---|---|---|
| 1. I felt secure | | | | |
| 2. I was tense | | | | |
| 3. I felt strained | | | | |
| 4. I worried over possible misfortunes | | | | |
| 5. I felt frightened | | | | |
| 6. I felt comfortable | | | | |
| 7. I felt relaxed | | | | |
| 8. I felt content | | | | |
| 9. I felt confused | | | | |
| 10. I felt pleasant | | | | |

# Appendix 4

Please read each statement below and then indicate with an **'x'** how **you generally feel.**

*There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe how you generally feel.*

| | Almost Never | Sometimes | Often | Almost Always |
|---|---|---|---|---|
| 1. I feel nervous and restless | | | | |
| 2. I feel satisfied with myself | | | | |
| 3. I worry too much over something that doesn't really matter | | | | |
| 4. I am happy | | | | |
| 5. I feel secure | | | | |
| 6. I make decisions easily | | | | |
| 7. I am content | | | | |
| 8. Some unimportant thought runs through my head and bothers me | | | | |
| 9. I take disappointments so keenly that I can't put them out of my mind | | | | |
| 10. I am a steady person | | | | |

How much time pressure did you feel during the scenario? (Please mark on the line with an **'x'** between None and A lot).

None   ------------------------------------------------------------------------   A lot

# SECTION TWO: SCENARIO QUESTIONS

You will now be asked about the decisions you made at various points in the scenario. What we are trying to capture is what you thought **at that time and *not* what you think *now.*** Please answer the questions as you would have if they were asked at the time.

The four times are:

## 1. After 1.15am

At this point you had received:

- A Call from Force Control Room – notifying of rape.
- A Call from PC Paulson – first account of offence.
- Had a missed call and a message from PC Stonebridge – night duty attending scene.

## 2. After 1.18am

At this point you had received:

- Call from PC Simmons – stopped male.

## 3. After 1.22am

At this point you had received:

- Call from SC Gardiner – BBC at scene.

## 4. After 1.34am

At this point you had received:

- Call from PC Calderwood – report of drunk female call.

You will now be asked questions about each of the four times
Also, please leave your daybooks behind; we will collect them at the end of the session.

Before we start, did you make an arrest at any point?     Yes ☐     No ☐

# Appendix 4

## 1. After 1.15am

At this point you had received:

- A Call from Force Control Room – notifying of rape.
- A Call from PC Paulson – first account of offence.
- Had a missed call and a message from PC Stonebridge – night duty attending scene.

What did you think had happened?

```
┌────────────────────────────────────────────────────────┐
│                                                        │
│                                                        │
│                                                        │
└────────────────────────────────────────────────────────┘
```

Did you have alternative explanations? If so, what were they?

```
┌────────────────────────────────────────────────────────┐
│                                                        │
│                                                        │
│                                                        │
└────────────────────────────────────────────────────────┘
```

How confident were you that you had an accurate understanding of the incident at this point? (Please mark on the line with an '**x**' where you think you were between Not Confident and Confident).

Not Confident   ------------------------------------------------------------------------------   Confident

What were your fast track actions?

```
┌────────────────────────────────────────────────────────┐
│                                                        │
│                                                        │
│                                                        │
│                                                        │
│                                                        │
└────────────────────────────────────────────────────────┘
```

Did you prioritise these actions at the time?    Yes ☐    No ☐

If Yes, how were they prioritised?
If No, please move onto the next question.

```
┌────────────────────────────────────────────────────────┐
│                                                        │
│                                                        │
│                                                        │
│                                                        │
└────────────────────────────────────────────────────────┘
```

What decisions did you make and what were the reasons behind them? Please number these and put your reasons beside each decision.

Were there any other actions you were considering at the time?

With reflection, are there any other actions you would consider now? If yes, please detail them below, if not, please move onto the next question.

# Appendix 4

## 2. <u>After 1.18am</u>

At this point you had received:

- Call from PC Simmons – stopped male.

What did you think had happened?

```



```

Did you have alternative explanations? If so, what were they?

```



```

How confident were you that you had an accurate understanding of the incident at this point? (Please mark on the line with an **'x'** where you think you were between Not Confident and Confident).

Not Confident   ---------------------------------------------------------------------------   Confident

What were your fast track actions?

```



```

Did you prioritise these actions at the time?   Yes ☐   No ☐

If Yes, how were they prioritised?
If No, please move onto the next question.

```



```

# Appendix 4

What decisions did you make and what were the reasons behind them? Please number these and put your reasons beside each decision.

```

```

Were there any other actions you were considering at the time?

```

```

With reflection, are there any other actions you would consider now? If yes, please detail them below, if not, please move onto the next question.

```

```

# Appendix 4

## 3. **After 1.22am**

At this point you had received:

- Call from Superintendent Burton (in some scenarios)

If you had the call from Superintendent Burton, what effect did it have?

```
[blank box]
```

- Call from SC Gardiner – BBC at scene.

What did you think had happened?

```
[blank box]
```

Did you have alternative explanations? If so, what were they?

```
[blank box]
```

How confident were you that you had an accurate understanding of the incident at this point? (Please mark on the line with an **'X'** where you think you were between Not Confident and Confident).

Not Confident   ------------------------------------------------------------------------   Confident

What were your fast track actions?

```
[blank box]
```

# Appendix 4

Did you prioritise these actions at the time?     Yes ☐  No ☐

If Yes, how were they prioritised?
If No, please move onto the next question.

What decisions did you make and what were the reasons behind them? Please number these and put your reasons beside each decision.

Were there any other actions you were considering at the time?

With reflection, are there any other actions you would consider now? If yes, please detail them below, if not, please move onto the next question.

Appendix 4

- 10 -

# Appendix 4

## 4. **After 1.34am**

At this point you had received:

- Call from PC Calderwood – report of drunk female call.

What did you think had happened?

```
┌─────────────────────────────────────────────────────────────────────┐
│                                                                       │
│                                                                       │
│                                                                       │
└─────────────────────────────────────────────────────────────────────┘
```

Did you have alternative explanations? If so, what were they?

```
┌─────────────────────────────────────────────────────────────────────┐
│                                                                       │
│                                                                       │
│                                                                       │
└─────────────────────────────────────────────────────────────────────┘
```

How confident were you that you had an accurate understanding of the incident at this point? (Please mark on the line with an **'x'** where you think you were between Not Confident and Confident).

Not Confident    ------------------------------------------------------------------------    Confident

What were your fast track actions?

```
┌─────────────────────────────────────────────────────────────────────┐
│                                                                       │
│                                                                       │
│                                                                       │
│                                                                       │
│                                                                       │
└─────────────────────────────────────────────────────────────────────┘
```

Did you prioritise these actions? Yes ☐    No ☐

If Yes, what were they?
If No, please move onto the question.

```
┌─────────────────────────────────────────────────────────────────────┐
│                                                                       │
│                                                                       │
│                                                                       │
│                                                                       │
└─────────────────────────────────────────────────────────────────────┘
```

# Appendix 4

What decisions did you make, and what were the reasons behind them? Please number these and put your reasons beside each decision.

Were there any other actions you were considering at the time?

With reflection, what other actions would you consider now?

There are no further questions about the scenario unless you would like to add any general comments in the box below.

Please let a researcher know that you have finished and we will come round and save it.

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## Investigative Scenario- Expert Consensus

Firstly, we would like to thank you for your help with the Investigative Scenario, your input is appreciated. This is the final stage of developing the decisions that will be used as a benchmark for scoring the investigators who took part in the scenario. This stage now asks you to rate all of the decisions in the scenario. We have attached clips from the scenario for you just to jog your memory. To play these, please just double click on the speaker icons using the mouse.

### 1. After 1.15am

At this point you had received:

- A Call from Force Control Room – notifying of rape.

- A Call from PC Paulson – first account of offence.

- Had a missed call and a message from PC Stonebridge – night duty attending scene.

Here are all the decisions in the scenario. On a scale of 1 to 6 (where 1 is extremely unimportant and 6 is extremely important), please rate the following decisions in terms of how important they are.

| Extremely Unimportant | Very Unimportant | Unimportant | Important | Very Important | Extremely Important |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
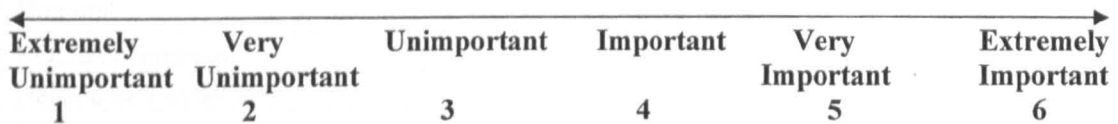
For example, if you think decision 1 is extremely important, record 6 the box next to it.

Please also rate each decision for how urgently they should be carried out.

**Time urgency**

| Extremely Low | Very Low | Low | High | Very High | Extremely High |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
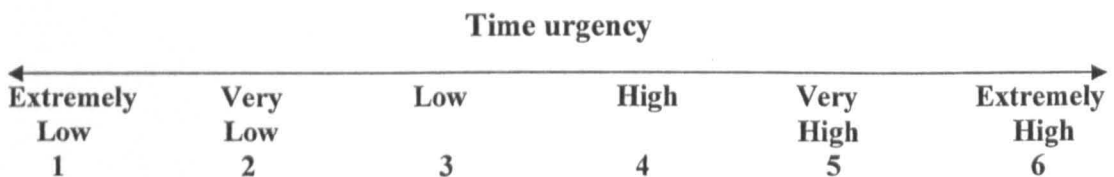
For example, if you think decision 1 has extremely high time urgency, record 6 the box next to it.

# APPENDIX 5

| | | | Important | Time Urgent |
|---|---|---|---|---|
| 1. | | Safety of victim/ preservation of life | | |
| 2. | | Secure/ preserve forensic opportunities from victim | | |
| 3. | | Do not let victim drink/eat/smoke/go to toilet/ wash | | |
| 4. | | Early evidence samples to be taken prior to clothes being taken off | | |
| 5. | | Clothing to be seized | | |
| 6. | | Seize/preserve evidence from victims phone | | |
| 7. | | Gain consent/take victim's blood for alcohol/drug levels | | |
| 8 | V | Medical examination by FME | | |
| 9. | I | Victim's injuries to be photographed initially | | |
| 10 | C | Victim's injuries to be photographed in a week's time to allow any further injuries to appear | | |
| 11 | T I | First account/ Verbal statement (including proper description and details of offenders' movements) to be obtained | | |
| 12. | M | Statement to be recorded and fed to investigator e.g PNB | | |
| 13. | | ABE interview | | |
| 14 | | Police officer to go with victim to hospital to receive medical attention for continuity | | |
| 15 | | Initial Response Officer (IRO) to be deployed | | |
| 16. | | Consider Specially Trained Officer (STO) call-out for victim welfare | | |
| 17. | | Get fresh set of clothing for victim to change into | | |
| 18. | | FLO | | |
| 19. | | Checks on IP e.g Genesis, PNC | | |
| 20 | | Search area for potential offender | | |
| 21 | | Offender description circulated to patrols | | |
| 22. | O | Default availiable patrols to area | | |
| 23. | F | Use CCTV to assist in tracking suspect | | |
| 24. | F | Dog unit | | |
| 25. | E | POLSA searching | | |
| 26. | N | Helicopter if available | | |
| 27. | D | E-fit | | |
| 28. | E | ID parade | | |
| 29. | R | Once there is more information about the offender conduct intelligence checks.inform intell officer HOLMES | | |
| 30. | | Once there is more information about the offender check for similar offences in area e.g HOLMES, VISOR | | |
| 31. | | Once there is more information about the offender check for similar offenders living within vicinity. VISOR | | |

| | | | Important | Time Urgent |
|---|---|---|---|---|
| 32. | **W** | Identify potential witnesses | | |
| 33. | | Officers to conduct H2H enquiries nearby (with consideration to time of night) | | |
| 34. | **I** | Officers to consider potential CCTV evidence for scene and surrounding area | | |
| 35. | | Obtain details of all vehicles parked near to scene/ get CSI to video record plates | | |
| 36. | **T** **N** | Undertake enquiries at the Coopers Arms, for background information on victim, identify if there was anyone hanging around area, the pub, or victim. | | |
| 37. | **E** | Enquiries with family/friends - history movements | | |
| 38. | **S** | Treat witness needs | | |
| 39. | **S** | Consider use of media strategy to gain further witnesses | | |
| 40. | **E** | Media officer alerted | | |
| 41. | **S** | PACE stop checks for witnesses/offender | | |
| 42. | | ANPR | | |
| 43. | | Enquiries with taxi firms and other transport | | |
| 44. | | Identify scene/s e.g collapse point | | |
| 45. | | Secure scene includes cordon | | |
| 46. | | Commence scene log | | |
| 47. | | Common approach path | | |
| 48. | | Brief cordon staff/ officers on roles and responsibilities | | |
| 49. | | Scene to be attended by CSI | | |
| 50. | | CSI not to be called out as scene being preserved | | |
| 51. | **S** **C** | Forensic strategy agreed including submissions | | |
| 52. | **E** | Meet with CSI following completion of forensic examination to discuss findings, compliance with instructions, potential further opportunities and priority submissions | | |
| 53. | **N** | Forensic evidence to be recorded and fed to investigator | | |
| 54. | **E** | Scene search for potential forensic evidence | | |
| 55. | | Ensure that the route from the pub to the scene is idenified and secured if practical | | |
| 56. | | Consider public house The Coopers Arms as another scene | | |
| 57. | | Ensure that the Coopers Arms is secure | | |
| 58. | | Consider seizing any persons footwear if been into the scene | | |
| 59. | | Obtain possible coverage if bad weather, or if needs be walk scene and secure potential evidence if raining heavily | | |
| 60. | | Treat as genuine rape until proved otherwise | | |
| 61. | | Inform/notify duty DI / DS or other supervisor | | |
| 62. | **L** | Attend scene | | |
| 63. | **O** | Consider/ request resources | | |
| 64. | **E'** | Ensure no cross-contamination issues | | |
| 65. | **S** | Hear the 999 call made, may help identify what went on | | |
| 66. | | Request pocket book of attending officers | | |
| 67. | | Establish nature of injuries | | |
| 68. | | Keep an action log | | |

## 2. After 1.18am

At this point you had received:

- Call from PC Simmons – stopped male.

| | | | Important | Time Urgent |
|---|---|---|---|---|
| 1. | V I C | Forensics from victim | | |
| 2. | | Check welfare of victim | | |
| 3. | | Obtain name, address, date of birth, telephones numbers | | |
| 4. | | Get initial account from the male. i.e alibi | | |
| 5. | | Full background/Intel. checks regarding suspect | | |
| 6. | | Check facts from account e.g the whereabouts of where the male stated he had come from and what he was doing prior to offence | | |
| 7. | | Checking local CCTV if possible to support males account of route to where he was | | |
| 8 | | Ensure officers record conversations with suspect | | |
| 9. | | Stop and search | | |
| 10 | O F F E N D E R | Search of suspects home address | | |
| 11 | | Check/ Seize suspects phone | | |
| 12. | | Examine stopped male for evidence of struggle/ injuries | | |
| 13. | | Check if he has cigarettes on him | | |
| 14 | | Street ID | | |
| 15 | | Obtain better description of suspect from victim (including clothing) and check with stopped male | | |
| 16. | | Arrest potential suspect | | |
| 17. | | Detain/ keep suspect | | |
| 18. | | Treat him as a possible witness | | |
| 19. | | Preserve forensic opportunities from suspect e.g. prevent washing | | |
| 20 | | Forensic exam | | |
| 21 | | Take non-intimate samples | | |
| 22. | | Ensure professional capture of clothing | | |
| 23. | | If possible leave clothing on and put in a paper suit | | |
| 24. | | Medical examination by FME (including intimate samples) | | |
| 25. | | Obtain alcohol levels of suspect. | | |
| 26. | S C E N E | Check CCTV as it may show direction of travel of suspect possibly from attack site | | |
| 27. | | Preserve location of stop check as scene | | |
| 28. | | CSI to prioritise whether anything at scenes connects the suspect to the victim | | |
| 29. | | Search area for discarded items used in offence. E.g clothing, contraceptives | | |
| 30. | | Interview to be carried out | | |
| 31. | | Consider welfare (of suspect) | | |
| 32. | | Previous reports of similar incidents on Storm, Revelations and Genesis | | |
| 33. | | Continue area search of male (despite having arrested male suspect) | | |
| 34. | | Determine distance from rape scene to point suspect stopped | | |
| 35. | | Update FCC | | |

| | | | Important | Time Urgent |
|---|---|---|---|---|
| 36. | L | Contact FCC regarding any reported burglarys | | |
| 37. | O | Deploy a detective officer to custody to carry out the arrest strategy | | |
| 38. | E' | Interviewing officer will now be deployed regarding an interview strategy | | |
| 39. | S | Ensure no cross-contamination issues | | |
| 40. | | Details obtained and 5x5x5 submitted | | |
| 41. | | Extra resources | | |

## 3. After 1.22am

At this point you had received:

- Call from SC Gardiner – BBC at scene.

| | | | Important | Time Urgent |
|---|---|---|---|---|
| 1. | | Ensure that all requests for information are diverted to the SIO /media (press) officer | | |
| 2. | | No comments made to press | | |
| 3. | M | Tell film crew limited information e.g. brief details of alleged assault | | |
| 4. | E | Press release (initial or later) | | |
| 5. | D | Undertake personal interviews with the media | | |
| 6. | I | Consider the press's assistance with media appeal | | |
| 7. | A | Get the contact details of the film crew | | |
| 8 | | Ensure press' credentials are checked to satisfaction | | |
| 9. | | Explore what evidence/ information they may have e.g sieze tape | | |
| 10 | S | Do not allow press into potential scene | | |
| 11 | C | Brief cordon staff on roles and responsibilities | | |
| 12. | E | Make sure scene is secured | | |
| 13. | N | Commence scene log | | |
| 14. | E | Dependent on how far the crew have been into the scene, seize footwear and clothing from them | | |
| 15. | V | Ensure victim confidentiality | | |
| 16. | I C | Put in a call for an update on the victim | | |
| 17. | | Establish H2H and CCTV parameters | | |
| 18. | L | Alert the FCC Inspector regarding any possible phone calls from media | | |
| 19. | O | Alert the hospital of possible media interest | | |
| 20 | E' | Inform/ seek advice from DI/DS/Supervisor | | |
| 21 | S | Ask SC Gardiner to give me regular updates | | |
| 22. | | Send further resources/ support to lone special constable. (e.g patrol Sargeant /Inspector) | | |

## 4. After 1.34am

At this point you had received:

- Call from PC Calderwood – report of drunk female call.

| | | | Important | Time Urgent |
|---|---|---|---|---|
| 1. | V I C T I M | Safety of victim/ preservation of life | | |
| 2. | | Police officer to go with victim to hospital to receive medical attention for continuity | | |
| 3. | | Identify victim | | |
| 4. | | Carry out intell checks e.g Storm, Missing Persons | | |
| 5. | | Consider Specially Trained Officer (STO) call-out for victim welfare | | |
| 6. | | Initial Response Officer (IRO) to be deployed | | |
| 7. | | FLO | | |
| 8 | | Secure/ preserve forensic opportunities from victim | | |
| 9. | | Do not let victim drink/eat/smoke/go to toilet/ wash | | |
| 10 | | Forensic capture | | |
| 11 | | Early evidence samples to be taken prior to clothes being taken off | | |
| 12. | | Consider Force Medical Examiner (FME, doctor) call-out for forensic capture from victim | | |
| 13. | | Seize bedding from ambulance stretcher for possible forensic evidence | | |
| 14 | | Gain consent/ take victim's blood for alcohol/drug levels | | |
| 15 | | Verbal statement/ account to be obtained | | |
| 16. | | Account to be recorded and fed to investigator, once victim is conscious | | |
| 17. | | Ascertain if the victim could ID offender | | |
| 18. | | Record any detail or signs of struggle | | |
| 19. | | Deal with as victim of crime until proved otherwise | | |
| 20 | | Clothing to be seized | | |
| 21 | O F F E N D E R | Identify offender | | |
| 22. | | Search area for potential offender | | |
| 23. | | Offender description circulated to patrols | | |
| 24. | | Dog unit | | |
| 25. | | Genesis check for MO, for offenders in area | | |
| 26. | | Male spoken to and re-trace his steps for that evening | | |
| 27. | W I T N E S S E S | Identify potential witnesses | | |
| 28. | | Officers to consider potential CCTV evidence for scene and surrounding area | | |
| 29. | | Officers to conduct H2H enquiries nearby and record where done | | |
| 30. | | Obtain details of all vehicles parked near to scene/ get CSI to video record plates | | |
| 31. | | Call taxis, any calls made to local taxis (link to previous victim) | | |
| 32. | | Trace and interview friends to determine what the female was doing earlier. This may be through her family or boyfriend if known | | |
| 33. | | Press release for witnesses | | |
| 34. | | Other potential scene/s to be identified | | |
| 35. | | Secure/ preserve place victim was found as a scene with no unauthorised access. (To include cordon) | | |

| | | | Important | Time Urgent |
|---|---|---|---|---|
| 36. | S C E N E | Commence scene log | | |
| 37. | | Common approach path | | |
| 38. | | Brief cordon staff/ officers on roles and responsibilities | | |
| 39. | | Scene to be attended by CSI | | |
| 40. | | Scene search for potential forensic evidence | | |
| 41. | | Ensure continuity of exhibits | | |
| 42. | | EGT to attend possible large area to cover between the three incidents | | |
| 43. | L O E' S | Cross contamination issues e.g. between *victims, police staff, scenes* | | |
| 44. | | Explore possibility of connection between two offences | | |
| 45. | | Re-trace route taken by female | | |
| 46. | | Speak to officers at the scene | | |
| 47. | | Review CAD and identify who called it in | | |
| 48. | | Inform SMT regarding the media interest and the now required Community Impact Assessment | | |
| 49. | | Inform/ notify duty DI/DS or other supervisor | | |
| 50. | | Contact both Duty Manager and D/I as this is now a Critical Incident (series of stranger rapes?) | | |
| 51. | | Consider/ request resources | | |
| 52. | | Get female officer to attend scene | | |

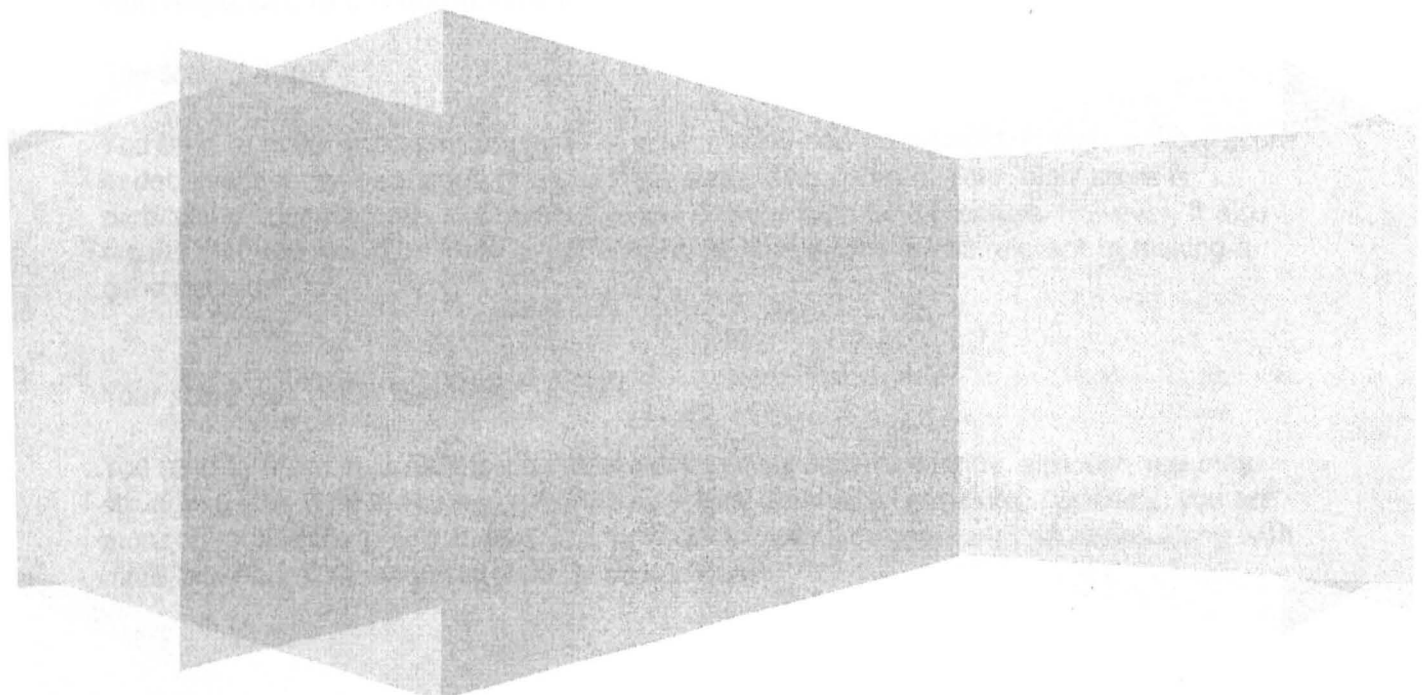Are there any other comments you would like to make?

UNIVERSITY OF
# LIVERPOOL

# Decision Making Personal Feedback Report

## Kent Police Investigative Sexual Assault Scenario

### Your Identifier Number - 001

CONFIDENTIAL

# Interpreting your report

This personal and confidential feedback report has been prepared to help you identify and maximise your key strengths and areas for development. The results are based solely on questionnaires you and your colleagues filled out whilst taking part in research for the University of Liverpool, and not, through any observations of your work behaviour. Consequently, this feedback should not be interpreted in isolation. In every feedback report, there are strengths and there are areas for development. Some of these you may already be aware of, and some you may not be aware of, whatever the case it is hoped that you find this feedback both useful and informative. In terms of the structure of this feedback, it will describe the test you did; what score you got and what this score means for your everyday decision making at work; and information on how to improve your score.

# 1. HOW DECISIVE ARE YOU?

## WHAT IT IS:

The decisiveness scale on the Need for Closure Questionnaire was used to give a measure of decisiveness. This scale measures if you are the sort of person who has a high need to make decisions quickly in addition to consistently having an urgent desire to gain a quick, nonspecific solutions to problems. You gave ratings on how much you agreed with certain statements such as, "even if I get a lot of time to make a decision I still feel compelled to decide quickly". Consequently, all of the ratings are based upon your own perceptions.

## YOUR SCORE AND WHAT IT MEANS:

To put your score into context, it is compared to the rest of your colleagues (292 officers) who responded to this questionnaire.

You scored **'high'** :

You tend to make important decisions at work quickly and confidently. A 'high' or 'low' score in decisiveness can be a good or a bad thing depending on time. Your 'high' score is particularly advantageous in situations where there is high time pressure. However, it also means that you would be likely to perform worse where time is less relevant to making a good decision.

Your score was in the **'average'** range:

You tend to make important decisions at work quickly and confidently, although you may struggle a little if forced to make extremely urgent immediate decisions. Positively, you are more adaptable than most in that you can work in both time pressured situations along with more 'slow-burn' situations to make good decisions.

You scored '**low**' :

You are more likely than most to take your time making important decisions, tending to think things through. A 'high' or 'low' score in decisiveness can be a good or a bad thing depending on time. Your 'low' score is particularly advantageous in a 'slow-burn' enquiry which affords time to do this. However, you would be likely to perform worse when a decision must be made rapidly. For example, indecisiveness can prevent you from organising your thoughts in a quick and consistent manner. In addition, you may also feel the need to keep collecting more information before committing to making a definitive decision.

# TO IMPROVE YOUR SCORE:

If you scored '**high**' :

The challenge is to make timely yet well-thought-out decisions. As you are high in decisiveness, when you are making a quick decision it may be worth asking yourself what might happen if you made a different decision. What are the outcomes likely to be? So you need to look at the long-term consequences of your immediate choices. In addition, when the time allows, such as in a 'slow-burn' enquiry you should consider whether you could take more time over making decisions.

If you scored '**average**' :

The challenge is to make timely yet well-thought-out decisions. As your score was in the average range you already have a good foundation for decision making as you are more adaptable than most to making decisions in situations which are time pressured but also those which are slower paced. Consequently, you should take advantage of this; you should strive to carry out roles which require decisions to be made in environments which are constantly changing in terms of time pressure as others find this difficult.

If you scored '**low**' :

The challenge is to make timely yet well-thought-out decisions. As you scored low in decisiveness you should be aware of running out of time and missing the decision opportunity whilst in high time pressure situations. A lot of indecision comes when individuals are afraid to make a decision because they have an overwhelming need to gather more information. We can only process so much, so there will come a time when you will have enough information to make a considered decision. You need to set yourself time limits on how long you will spend looking for information to make a decision and perhaps even set yourself a deadline to make decisions as well.

# 2. HOW GOOD ARE YOU AT TOLERATING AMBIGUITY?

## WHAT IT IS:

When a situation is ambiguous, it can be interpreted in two or more ways. For example, when initially faced with a crime scene, at first glance the evidence may be consistent with both a murder and a suicide. The ambiguity scale on the Need for Closure Questionnaire was used to give a measure of tolerance of ambiguity. People have been found to differ in their tolerance to cope with ambiguity and this scale measures your individual tolerance of situations that are ambiguous. You gave ratings on how much you agreed with certain statements such as 'I don't like situations that are uncertain' and 'I feel uncomfortable when I don't understand the reason why an event occurred in my life'. Again, this score is not based on any observations of your work but rather your own perceptions.

## YOUR SCORE AND WHAT IT MEANS:

To put your score into context, it is compared to the rest of your colleagues (292 officers) who responded to this questionnaire.

You scored **'high'** :

You do not feel any particular discomfort and frustration in situations that you find ambiguous and uncertain, in fact you may find them challenging and interesting. Positively, you are likely to generate multiple perspectives in trying to understand an event. This means that you are open-minded and construct multiple hypotheses to test your theories. However, this may mean that you delay or miss opportunities when it comes to actually making a decision because you are working through your many hypotheses to explain events.

If you scored **'average'** :

While you are less likely to react as negatively to ambiguity compared to individuals with a low tolerance for ambiguity you still have some difficulty in dealing with ambiguous situations. Positively, you are more adaptable than most in that you can work in situations which are clear cut along with those which are more uncertain. Even though you may find working in highly ambiguous challenging, positively you generate more than just one perspective in trying to understand an event and then proceed to making a decision.

If you scored **'low'** :

You may feel discomfort and frustration in situations that you find ambiguous and uncertain, perhaps even wanting to avoid such situations. Consequently, you are likely to want to see a picture of events emerge quickly. Positively, your ability to deal with ambiguity in fast paced scenarios may stand you in good stead to coming to a conclusion quickly if there is time pressure. However, even if have adequate time, you are less likely to generate multiple perspectives in trying to understand an event. You may stick with your existing knowledge

seeking out information which is consistent with theories you have, in addition to failing to seek out new information which may contradict your theories.

# TO IMPROVE YOUR SCORE:

If you scored **'high'** :

The challenge is to remain open-minded by generating more than one hypothesis for what has occurred and then make a timely decision. As you have a high tolerance for ambiguity you need to guard against constructing too many hypotheses for events which may lead to you feeling overwhelmed and delaying decision making. Others may make a decision before you which is right. Research has found that two or three hypotheses at most to be optimum for effective decision making. If you find you have more hypotheses it may be time to stop and make a decision in the required time frame. It is important to ask yourself, when do I have to make this decision by?

If you scored **'average'** :

The challenge is to remain open-minded by generating more than one hypothesis for what has occurred and then make a timely decision. Your score means that you are highly adaptable to situations which are clear cut and those which are confusing or unclear. However, there is research to suggest that tolerance for ambiguity is a skill that can be learnt, so improving your already good score is possible. One such way is to take part in simulation exercises such as HYDRA. Here cases are analysed and discussed including how problems might be approached, this permits learning in the same way that decision makers in the 'real-world' learn to cope with ambiguity.

If you scored **'low'** :

The challenge is to remain open-minded by generating more than one hypothesis for what has occurred and then make a timely decision. There is research to suggest that tolerance for ambiguity is a skill that can be learnt. As you have a tendency to not seek out information which may contradict your views, you should consider 'critical friends' and discussing ideas of other people even if it feels unnatural. Make sure you actively listen to what they say and be open to comments. Also, think about looking at the situation from the outside in. What other decisions could be made with this information? Finally, another way to feel more comfortable with ambiguous situations is through taking part in simulation exercises such as HYDRA. Here cases are analysed and discussed including how problems might be approached, this permits learning in the same way that decision makers in the 'real-world' learn to cope with ambiguity. This type of simulation based training which centres on detailed investigative cases is likely to be beneficial to you, particularly in comparison to lecture-based style training.

# 3. HOW ACCURATELY CAN YOU ESTIMATE THE PASSAGE OF TIME?

## WHAT IT IS:

Time Paradigm measures how accurately people estimate the passage of time. So you may remember being asked to give estimates on when you thought a minute had passed. Here your perception of the passage of time was being measured. People can overestimate the passage of time, thinking that 1 minute has passed when in actual fact 2 minutes have passed. Equally, people can also underestimate the passage the time, thinking that 1 minute has passed when in actual fact only 30 seconds have passed. Time perception is important with regards to decision making as it is this feeling of time passing that sets us up for occasionally feeling deadline pressures, or severe time pressure.

## YOUR SCORE AND WHAT IT MEANS:

Your average estimation of a minute was **40 seconds.**

Compared to your colleagues you **under-estimate** the passage of time.

Research has found that impulsive individuals sometimes do not have an accurate perception of time. Consequently, you may be impulsive at times, perhaps making decisions without fully considering their consequences or implications. However, positively, other research findings suggest that you may have a faster 'cognitive tempo' compared to those that over-estimate time. This means that whilst under actual time pressure you work to make your decisions quickly while others may have completely missed the boat. The final issue to be aware is that officers in this study, who like you under-estimated time, generated fewer alternative hypotheses. Fewer hypotheses can have a potentially negative impact on investigations, as fewer hypotheses may lead to lines of enquiry being limited to certain scenarios.

Your average estimation of a minute was **90 seconds.**

Compared to your colleagues you **over-estimate** the passage of time.

Research has found that individuals who over-estimate the passage of time exhibit a number of behaviours. They do not feel strong pressure to adhere to schedules; they may not use time efficiently; or check the time often. Consequently, you may find that you postpone and avoid making any decision. However, positively, research has also shown that you may not experience as much stress under time constraints as individuals who under-estimate time. Consequently, you may perform better under time constraints.

Your average estimation of a minute was **60 seconds.**

Compared to your colleagues you have an **accurate** perception of the passage of time.

You are spot on with your estimation of time; you therefore tend to make decisions on time, whilst having considered all consequences of decisions made. You may also feel a strong pressure to adhere to schedules; use time efficiently; and check the time often. You also tend to have accurate perception of how long tasks will take and plan your time accordingly.

# TO IMPROVE YOUR SCORE:

If you **under-estimate** the passage of time:

You may have more time than you think, so regularly check the actual amount of time you have where possible may aid you to stop rushing to make a decision.

If you **over-estimate** the passage of time:

You may have less time than you think which is important when a decision is needed in a particular time as you may miss important deadlines. One way to guard against this is to write down your estimates of how long work related tasks take, then record the actual time these tasks take. You may notice some differences between the two. Build in the actual times into your daily planning. Also, where possible regular check how much time you have left and maybe build a time safety net into your plans.

If you have an **accurate** perception of time:

You are on the money – you are excellent at estimating the passage of time so you should concentrate on the other feedback in this report.

# 4. HOW GOOD ARE YOUR OBSERVATION AND CLEAR THINKING SKILLS?

## WHAT IT IS:

The Ravens Standard Progressive Matrices (SPM) was used to give a measure of your observation and clear thinking skills. Specifically, this test measures your ability to make meaning out of confusion, your ability to handle complexity, along your ability to recall and reproduce information. You filled out a questionnaire made up of a series of diagrams or designs with a part missing. You worked to select the correct part to complete the designs from a number of options printed beneath. When interpreting this feedback the following points should be considered. Psychometric tests are only one source of information about your abilities and the test you have taken looks at a very specific type of ability. In addition, high scores are easier to interpret than low scores. If people score highly, they are likely to have the ability being measured. People can, however, get low scores for many reasons – misunderstanding, lack of familiarity with the test, anxiety, or simply not having enough time to fill out a lengthy questionnaire.

## YOUR SCORE AND WHAT IT MEANS:

Your result is shown graphically below. The Raven's SPM produces two scores - a single score, this is the score you got out of a possible 60 points. You will also get a score which indicates where your score lies compared to the average population.

You obtained a score of **X** out of **60** possible points on the Raven's Standard Progressive Matrices (SPM). This score is better than or equal to **85%** of the average population.

0    10    20    30    40    50    60    70    80    90    100

**Your Percentage** : 85

It should be noted that time pressure can interfere with scores obtained in this test. Ideally this test should be completed at leisure; however it was observed that due to high work-loads not all officers had this luxury. When interpreting your score you will therefore need to take this into account.

Researchers have found a positive relationship between scores on the Ravens SPM and decision making performance. This ability is an important requirement for police work; as an officer you need to be able to process new situations continuously, along with retaining information whilst also processing new incoming information. In comparison with **85%** of other individuals from the 'average' population you are better at:

- Defining complex problems and situations clearly and objectively.
- Discerning subtle relationships among situations or events.
- Recognising the implications of decisions and actions, and anticipating their likely outcomes.
- Identifying non-obvious causes of problems.
- Consistently drawing accurate conclusions from information in any situation.

## TO IMPROVE YOUR SCORE:

The Ravens SPM is widely used, for example, the advanced version is used by a number of UK police forces to identify suitable candidates for the Higher Potential Development Scheme (HPDS). It is therefore beneficial to be aware of how the matrices work and how to improve your score. There are a number of 'rules' which can be used to assist.
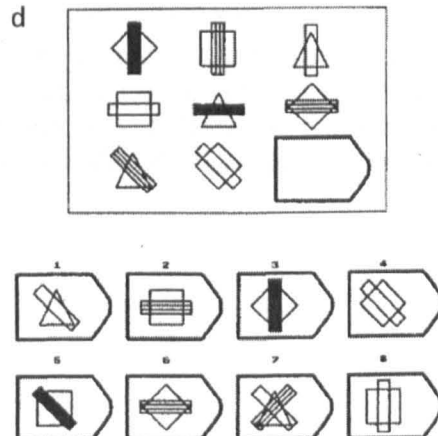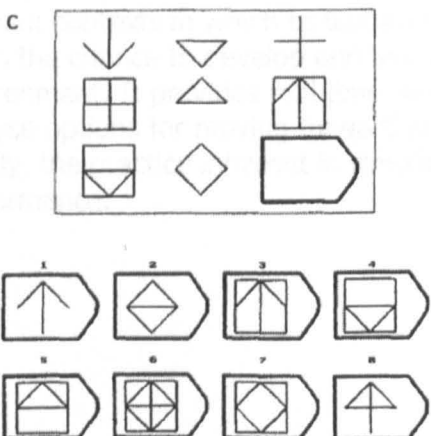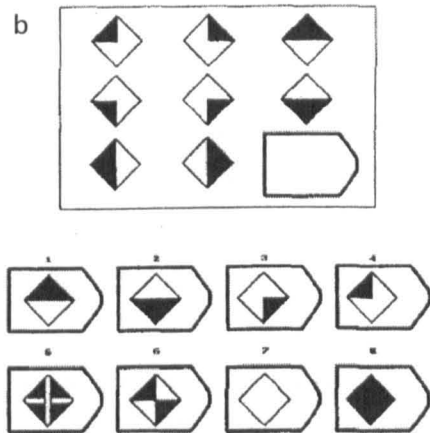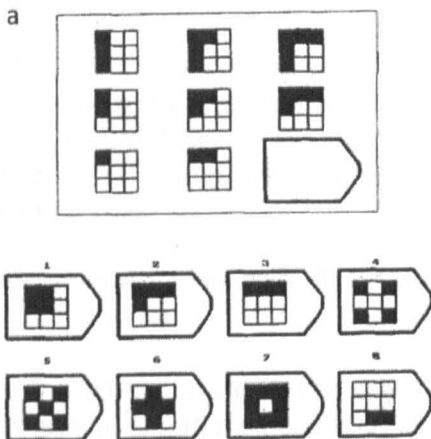
*Rule 1*
A numerical increase or decrease occurs between adjacent entries in an attribute such as size, position, or number. See Figure a, where the number of black squares in each entry increases along a row from 1 to 2 to 3.

*Rule 2*
The same value occurs throughout a row, but changes down a column. See Figure b, where the location of the dark component is constant within each row. In the top row, the location is the upper half of the diamond; in the middle row, it is the bottom half of the diamond; and in the bottom row, it is both halves.

*Rule 3*
A figure from one column is added to (whether it be placed next to or placed over) or subtracted from another figure to produce the third. See Figure b, where the figure element in column 1 when placed next to the element in column 2 produces the element in column 3.

*Rule 4*
Two values from a categorical attribute (or shapes) are distributed in the first two rows; however it disappears in the third. See Figure c, where the various figural elements, such as the vertical line, the horizontal line, and the V in the first row, follow a distribution of two values.

*Rule 5*
Three values from a categorical attribute (such as a figure type) are distributed through a row. See Figure d, where the three geometric forms—diamond, square, and triangle—follow a distribution rule and the three line textures—black, striped, and clear—also follow a distribution rule.

(Correct answers : Figure a, 3. Figure b, 8. Figure c, 5. Figure d, 5.)


Improving scores on this test is one issue, but how do we get better at complex thinking and assessing situations accurately the rest of the time, for example on-the-job? Immersive learning or taking part in training which involves simulations such as HYDRA is one such way. There are a number of ways in which this type of learning encourages the development of complex thinking skills. Such learning provides you with realistic and relevant contexts in which to test and develop your understanding and knowledge. You are given the chance to develop and internalise knowledge by applying new skills in a risk-free environment. It provides real time feedback allowing you to assess your current situation, analyse options for moving forward and measure results of past decisions and actions. Finally, the practice inherent in simulations enhances transfer of knowledge to on-the-job performance.

# AND FINALLY...

We would like to take this opportunity to outline some of the main findings of this research. In summary, experience counts. Out of all the different measures we took, experience repeatedly came up time and time again. It was found that the more experience an officer had, the better their decision making. However, this relationship was most notable when officers were under time pressure. So, whilst you may experience pressures on the job such as stress, uncertainty, and time pressure, experience will help protect against wrong decisions being made. There was no magic number of years experience, basically the more the better, however, there was a specific type of experience found to be the most effective. Specifically, rather than years in service, domain-specific experience in crime investigation helped officers maintain decision making performance whilst under pressure. Another interesting observation from this study is that no actual 'bad' decisions were found, all officers made quality decisions.

*Finally, we would like to thank you for taking the time to fill out the questionnaires. We can assure you that your personal report is confidential and has not been passed on to anyone else. Currently, analyses are still continuing on this work so the time you put into helping with this study is continual helping us to further our understanding into how officers, despite having to cope under severe pressures, continue to make first class decisions.*

| | Code | Decision/Fast Track Action | Description |
|---|---|---|---|
| **1.15am-Victim** | A1 | **Safety** of victim/ preservation of life | Safety of victim/ preservation of life. Victim to go to hospital. Hospital. KAT. Victims' medical condition. Victims' health. Welfare of the victim. First aid to victim. Ascertain level of medical aid. Victim care. Welfare of the victim. |
| | A2 | Secure/ preserve **forensic** opportunities from victim | Preserve forensic opportunity of victim / capture. Secure the IP. Make ambulance aware of rape to preserve evidence e.g. clothes, samples at later stage. Preserve clothing/items removed by KAT. Putting forensic suit over victim to preserve evidence on clothing. Medical staff to be made aware of offence investigated and their duty to assist with forensic capture. If possible bags over victims hands to preserve DNA of suspect. Forensic issues. Forensics. |
| | A3 | Do not let victim **drink/eat/smoke/go to toilet/ wash** | Do not let victim smoke or go to toilet. Do not let victim drink/eat/smoke/go to toilet/ wash or to have any more contact with any other persons. |
| | A4 | **Early evidence samples** to be taken prior to clothes being taken off | Early evidence samples to be taken prior to clothes being taken off. Swaps from IP. Non-intimate samples- e.g. sample of hair other than pubic, sample taken from under nails, swab taken from mouth, saliva. Fast track evidence gathering from victim. Mouthwash/ mouth swap. Oral swabs. |
| | A5 | **Clothing** to be seized | Clothing to be seized. (inc any officers that had come into contact with her). |
| | A6 | Seize/preserve evidence from victims **phone** | Secure victims phone. |
| | A7 | Gain consent/take victim's **blood** for **alcohol/drug** levels | Gain consent of victim for blood alcohol levels. Detect levels of alcohol, traces of drugs e.g. Rohypnol. Samples for toxicology from IP. Pre-blood transfusion. |
| | A8 | Medical **examination** by **FME** | Medical examination by FME. (includes intimate samples- e.g. blood, semen, fluid, urine, pubic hair, dental impression, swab taken from orifice other than mouth). Get Doctor to rape suite. SIU. Inform on duty doctor. Victim suite. Set up rape suite. Swabs at hospital. Taken to vulnerable victim suite so that she can be forensically examined. |
| | A9 | Victim's injuries to be **photographed** initially | Victim's injuries to be photographed initially. Further to be taken in a week's time to allow any further injuries to appear. Log injuries. Injuries of IP logged. Ensure officers at scene have recorded initial injuries. |
| | A10 | Victim's injuries to be **photographed** in a week's time to allow any further injuries to appear | Victim's injuries to be photographed in a week's time to allow any further injuries to appear. |

| | | | |
|---|---|---|---|
| | A11 | **First account/ Verbal statement** (including proper description and details of offenders' movements) to be obtained | First account/ Verbal statement (including proper description and details of offenders' movements) to be obtained (from victim/officer). Harvest any further information on the offence and offender which can be passed on. Extra information. Talk to victim. Record any details about the male. |
| | A12 | **Statement** to be **recorded** and **fed** to investigator e.g PNB | Statement to be recorded and fed to investigator. e.g. PNB |
| | A13 | ABE **interview** | ABE interview. |
| | A14 | Police officer to go with victim to hospital to receive medical attention for **continuity** | Police officer to go with victim to hospital for medical treatment to head wound. For continuity. Ensure patrol stay with victim. Continuity from scene. Officer to stay with victim. At victim suite. |
| | A15 | Initial Response Officer **(IRO)** to be deployed | IRO to deal with victim either at Hospital/SARC. (includes prep SARC). SIU. Renton Clinic. Rape suite. SIU call. |
| | A16 | Consider Specially Trained Officer **(STO)** call-out for victim welfare | Consider calling out STO to provide support and welfare needs to the victim e.g. practical help, informing parents. Counselling. Rape counsellor. Establish if rape trained officer on duty. Call out on call SIU. Contacting victims' relatives. |
| | A17 | Get fresh set of **clothing** for victim to change into | Get fresh set of clothing for her to change into. |
| | A18 | **FLO** | FLO |
| | A19 | **Checks on IP** e.g Genesis, PNC | Checks on IP, Genesis, PNC. Made previous allegations of similar nature before? Intell checks on associates, (this could give details on potential suspect). Check age of victim as she could be a juvenile. Confirm ID. Research to be conducted around victim to check on her background etc. |
| | | | |
| **1.15am- Offender** | A20 | **Search** area for potential **offender** | Search area for potential offender. |
| | A21 | Offender **description** circulated to patrols | Offender description circulated to patrols/ FCC. Send out suspects details. |
| | A22 | Default available **patrols** to area | Default available patrols to area. |
| | A23 | Use **CCTV** to assist in tracking **suspect** | Use CCTV to assist in tracking suspect, or locate any possible offender (mentioning CCTV). |

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| | A24 | **Dog** unit | Use dog unit. Dog handler. |
| | A25 | **POLSA** searching | POLSA searching. |
| | A26 | **Helicopter** if available | Helicopter if available. |
| | A27 | **E-fit** | E-fit. |
| | A28 | **ID** parade | ID parade at later date. |
| | A29 | Once there is more information about the **offender** conduct **intelligence checks**.inform intell officer HOLMES | Once there is more information about the offender conduct intelligence checks. Inform intell officer. HOLMES. Description to intell unit. Intell checks. |
| | A30 | Once there is more information about the offender check for **similar offences** in area e.g. HOLMES, VISOR | Once there is more information about the offender check for similar offences in area. E.g. HOLMES, ViSOR. Consider intelligence checks to establish any persons with comparative case analysis. Comparing crimes of a similar nature. |
| | A31 | Once there is more information about the offender check for **similar offenders** living within vicinity. VISOR | Once there is more information about the offender check for similar offenders living within vicinity. VISOR. Search of local systems for possible offenders. Research needs to be done to flag up possible offenders. |
| | | | |
| **1.15am-Witnesses** | A32 | Identify potential **witnesses** | Identify potential witnesses. (e.g. taking contact and personal details of everyone present at the scene). Gather information from them including their demeanours to corroborate what the victim is saying. All persons on the premises are fully identified. Ensure that all witnesses remain in place until further crime support staff arrive. Identify staff/customers etc. Locate possible witnesses. |
| | A33 | Officers to conduct **H2H** enquiries nearby (with consideration to time of night) | Officers to conduct H2H enquiries nearby (with consideration to time of night). |
| | A34 | Officers to consider potential **CCTV** evidence for scene and surrounding area | Officers to consider potential CCTV evidence for scene and surrounding area. |
| | A35 | Obtain details of all **vehicles** parked | Obtain details of all vehicles parked near to scene / get SOCO to video record plates/ |

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| | | near to scene/ get CSI to video record plates | |
| | A36 | Undertake **enquiries** at the Coopers Arms, for background information on victim, identify if there was anyone hanging around area, the pub, or victim. | Undertake enquiries at the Coopers Arms, for background information on victim, identify if there was anyone hanging around area, the pub, or victim. Enquiries to be made at places where victim had frequented that evening. Establish timeline from pub. Places they went to. CCTV Cooper Arms Pub. Checks at Cooper Arms. Contact pub landlord. Witnesses- any available at the locations the IP had previously visited. |
| | A37 | **Enquiries** with family/friends - history movements | Enquiries with family and friends who had been to pub with victim. Contact IP's family and friends to get history of where she was confirmed. Family liaison. Background info on IP- boyfriends, grudges, enemies. Enquiries at the H/A. Background. |
| | A38 | Treat **witness** needs | Treat witness needs. |
| | A39 | Consider use of **media** strategy to gain further witnesses | Consider use of media strategy to gain further witnesses. Media appeal. Possible use of media- local radio etc. Media release. |
| | A40 | **Media** officer alerted | Media officer alerted. Force press office to be notified to give media release. |
| | A41 | PACE **stop checks** for witnesses/offender | PACE stop checks for witnesses/offender. Stop check any suspicious males within the area. Research any stop checks with FCC to establish if there have been any stop checks of males in the area. PDF any white male over age of 12 stopped in the area. |
| | A42 | **ANPR** | ANPR. |
| | A43 | Enquiries with **taxi** firms and other transport | Enquiries with taxi officer. Enquires at local bus, train stations and taxi firms. |
| | | | |
| 1.15am- Scene | A44 | Identify **scene**/s e.g. collapse point | Identify scene/s (e.g. collapse point). Establish if any further scenes. Alley. Establish the scene. Assess other areas (e.g. Tunral flats). |
| | A45 | Secure **scene** includes cordon | Secure / preserve scene. Includes cordon. Inner and outer cordon. Preserve evidence. Control the scene. Scene preservation. Scene control. Secure scene. |
| | A46 | Commence **scene** log | Scene log commenced/ opened. |
| | A47 | **Common approach path** | Scene- common approach path. CAP. |
| | A48 | Brief **cordon** staff/ officers on roles | Brief cordon staff / officers on roles and responsibilities. Establish contact number of officer on |

|  |  | and responsibilities | route in order to co-ordinate the scene parameters and further fast track actions. |
|---|---|---|---|
|  | A49 | Scene to be attended by **CSI** | Scene to be attended by CSI / SOCO. Forensic examination. Contacting CSI re. rape suit. Scene forensic examination. Forensic capture from scene. |
|  | A50 | **CSI** not to be called out as scene being preserved | CSI not to be called out as scene being preserved. |
|  | A51 | **Forensic** strategy agreed including submissions | Forensic strategy agreed including submissions. Fast track forensic evidence to forensic labs, can get DNA evidence turned around in under 2 hours. Identify forensic plans. |
|  | A52 | Meet with **CSI** following completion of forensic examination to discuss findings, compliance with instructions, potential further opportunities and priority submissions | Meet with CSI following completion of forensic examination to discuss findings, compliance with instructions, potential further opportunities and priority submissions. |
|  | A53 | **Forensic** evidence to be recorded and fed to investigator | Forensic evidence to be recorded and fed to investigator. Take photography of scene. Photography /video of scene |
|  | A54 | **Scene search** for potential forensic evidence | Search area for potential forensic evidence e.g. possible discarded cigarette, condom. Forensic capture from scene. Any forensic items at scene. Ensure glasses not washed/ collected. |
|  | A55 | Ensure that the route from the pub to the **scene** is identified and secured if practical | Ensure that the route from the pub to the scene is identified and secured if practical. Identify possible route from pub to scene. Identify routes. |
|  | A56 | Consider public house The Coopers Arms as another **scene** | Consider public house The Coopers Arms as another scene. |
|  | A57 | Ensure that the **Coopers Arms** is secure | Ensure that the Coopers Arms is secure. Secure scene at PH. |
|  | A58 | Consider seizing any persons **footwear** if been into the scene | Consider seizing any persons footwear if been into the scene. |
|  | A59 | Obtain possible coverage if bad weather, or if needs be walk scene and secure potential evidence if raining | Obtain possible coverage if bad weather, or if needs be walk scene and secure potential evidence if raining heavily. |

|  |  | heavily |  |
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| **1.15am- LOE's** | **A60** | Treat as **genuine rape** until proved otherwise | Treated as a genuine stranger rape incident. Treat as genuine [rape] until proved otherwise. Offence- to identify the offences we are dealing with. |
|  | **A61** | **Inform/notify** duty DI / DS or other supervisor | Inform/ notify duty DI/ DS or other supervisor / supervisor giving direction. Need to contact night duty officer re missed call could have further info from the scene. Update PC Stonebridge, speak to patrol. Call out so full hand over can be given. Contact duty manager. Informing major crime. Liaise with control. |
|  | **A62** | **Attend scene** | Attend scene. |
|  | **A63** | Consider/ request **resources** | Consider / request resources available. (Including backup). Staff restraints. Officer at each end of the alleyway. Patrol capability. Further patrols to assist with scene preservation. |
|  | **A64** | Ensure no cross-**contamination** issues | Ensure no cross-contamination issues. Make sure that the officers do not come into contact with any possible suspects. |
|  | **A65** | Hear the **999 call** made, may help identify what went on | Hear the 999 call made, may help identify what went on. Obtain copy of CAD for reference. Call patrol and obtain further info. Speak to patrol. Obtain copy of 999 call. More detailed account from the patrol run through it again. |
|  | **A66** | Request **pocket book** of attending officers | Request pocket book of attending officers. PNB statements from all officers. |
|  | **A67** | Establish nature of **injuries** | Establish nature of injuries. Updates on condition. Assess females' condition. Health of victim update. Also to relay the condition of the victim to myself/supervisor should it improve/worsen. Find out her current condition. |
|  | **A68** | Keep an **action log** | Keep an action log. |
|  | **A69** | Retrace **route** of female | Try to establish route taken by IP. The females' true movements need to be established. Tie down the route taken by the victim. What were victims movements after leaving the pub. |
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| **1.18am- Victim** | **B1** | **Forensics** from victim | Forensics from victim. DNA. |

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| | **B2** | Check **welfare** of victim | Check welfare of victim. | |
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| **1.18am-Offender** | **B3** | Obtain **name, address**, date of birth, telephones numbers | Obtain name, address, date of birth, telephones numbers. Get contact details of male. Obtain details. Record all his details. Take mobile number. | |
| | **B4** | Get **initial account** from the male. i.e. **alibi** | Get initial account from the male. i.e. alibi, questions. Obtain a full story of his movements and where he has been and who with. ID route. Question male. Question male under caution. Questioning. Ask male for his route form where he was to being stopped. Need to establish where the male had come from and what route he had taken. Further questioning of possible suspect. Patrols to speak to male, ascertain his actions, reasons for whereabouts etc. | |
| | | | | |
| **1.18am-Scene** | **B5** | Full **background/Intel. checks** regarding suspect | Full background/Intel. checks regarding suspect./Verify his address and name details on force computers and votors. Verify suspect ID and residence in order to locate again. Distance from home to check if he is local or not. Verify address (go to suspects house and confirm he lives there). PNC/Genesis. Known to police. Checks made on his police history. Historic checks. What previous has he got. Is he known to us. Confirm ID. Confirm through wallet identity of male. Sex offenders register. Check if has ID with him. | |
| | **B6** | **Check facts** from account e.g. the whereabouts of where the male stated he had come from and what he was doing prior to offence | Check facts from account e.g. the whereabouts of where the male stated he had come from and what he was doing prior to offence. Ensure details supplied are correct. Alibis from friends who could vouch for his presence. Support/ disprove account. Alibi could be tested. Check his story out. Do patrol with him, think his story is possible. | |
| | **B7** | Checking local **CCTV** if possible to support males account of route to where he was | Checking local CCTV if possible to support males' account of route to where he was. Ask route CCTV can then be checked, he may have gone through crime scene. He may have seen offence and/or offender of it were not him. | |
| | **B8** | Ensure officers **record** conversations with suspect (inc. demeanour/ appearance | Ensure officers record conversations with suspect e.g. in PNB. Statements to include words said, demeanour, along with full description of clothing. Full description including accent, tattoos, anything distinctive about his manner/appearance. Obtain detailed description of suspect including all clothing and footwear. | |
| | **B9** | **Stop and search** | Stop and search (for burglary). Ascertain details of search made of male. Section 1 search. Result of S.1 search | |

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| | B10 | **Search** of suspects home address | Search of his home address. Section 18 premises search. |
| | B11 | Check/ Seize suspects **phone** | Check suspects phone. Seize suspects' phone. Check to see who owns the wallet and phone may be IP's property. Seize his mobile phone. |
| | B12 | Examine stopped male for evidence of **struggle/ injuries** | Examine stopped male for evidence of struggle or any injuries (i.e. clothing). Check for blood staining on suspects clothing. What footwear had he on, was it soiled did it match anything in the alley. Are there any physical signs that he could be the offender. Semen stains, blood. |
| | B13 | Check if he has **cigarettes/condoms** on him | Cigarettes on him. Does he smoke? Offender asked for a light. Has he any condoms on him. |
| | B14 | **Street ID** | Street ID /drive past. ID procedure. |
| | B15 | Obtain **better description** of suspect from victim (including **clothing**) and check with stopped male | Obtain better description of suspect from victim and check. Including clothing. Full description. Full description of clothing. Try to get description of offender from IP, from CCTV. |
| | B16 | **Arrest** potential suspect | Arrest potential suspect. |
| | B17 | **Detain/ keep** suspect | Detain /keep suspect. Hold male with police until for immediate update. Make sure officer stayed with person. |
| | B18 | Treat him as a possible **witness** | Treat him as a possible witness. |
| | B19 | Preserve **forensic** opportunities from suspect e.g. prevent washing | Treat him [suspect] as a scene. Keep Mr Morrison [suspect] sterile. Prevent suspect from washing hands or other parts of body. Secure evidence. I would give precise forensic awareness instructions to the officers detaining him. Preservation of forensic evidence. |
| | B20 | **Forensic** exam | Forensic exam. Forensic capture. Ensure a forensic strategy is in place. Consideration of forensic issues. Treat with forensics in mind. Gather forensic opps. |
| | B21 | Take **non-intimate** samples | Take non-intimate samples. Early evidence kit (EEK) To custody for swabs. Mouth swaps. DNA. Forensic evidence to be obtained from suspect immediately. Secure early forensic evidence. |
| | B22 | Ensure professional capture of **clothing** | Ensure professional capture/seizure of clothing. Check clothing for trace evidence. |
| | B23 | If possible leave **clothing** on and put in a paper suit | If possible leave clothing on and put in a paper suit. |
| | B24 | Medical examination by **FME** | Medical examination by FME. Intimate samples such as blood, urine, penile, hair. CSI for forensic |

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| | | (including intimate samples) | swaps. |
| | B25 | Obtain **alcohol** levels of suspect. | Obtain alcohol levels of suspect. |
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| **1.18am-Witnesses** | B26 | Check **CCTV** as it may show direction of travel of suspect possibly from attack site | CCTV may show direction of travel of suspects possibly from attack site. CCTV of area. CCTV in area where he was stopped. Establish whether a person of his description had been seen in or near Coopers Arms or on route to scene. H2H. |
| | B27 | Preserve location of stop check as **scene** | Preserve location of stop check as scene. Scene management. |
| | B28 | **CSI** to prioritise whether anything at scenes connects the suspect to the victim | CSI to prioritise whether anything at scenes connects the suspect to them [victim]. CSI notified. |
| | B29 | **Search area** for discarded items used in offence. e.g. clothing, contraceptives | Search area. Discarded items used in offence/ clothing etc. Contraceptive. Obtain from suspect route which he had taken to be retraced for forensic evidence- condom. |
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| **1.18am-LOE's** | B30 | **Interview** to be carried out | Interview to be carried out. |
| | B31 | Consider **welfare** (of suspect) | Consider welfare (of suspect). |
| | B32 | Previous reports of similar **incidents** on Storm, Revelations and Genesis | Previous reports of similar incidents on Storm, revelations and Genesis. |
| | B33 | Continue **area search** of male (despite having arrested male suspect) | Continue area search of male (despite having arrested male suspect). To maintain the initial investigation route of area search. Consider other potential suspects. Any other persons in area. Continue with other enquiries due male being arrested on vague description only may not be offender. |
| | B34 | Determine **distance** from rape scene to point suspect stopped | Determine distance from scene to point stopped. Research the area suspect is running from. Distance from the rape scene. Retrace route suspect took. If his current location was near to crime scene. Wanted a clearer picture of locations and where they were in relation to each other. To keep male with police to see his route and see if he was near the scene of either incident. |

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| | B35 | Update **FCC/ duty DI** | Update FCC. Contacting on call DI. Advising duty DS. For all units to be aware of the stopped person. |
| | B36 | Contact **FCC** regarding any reported burglaries | Contact FCC re reports of any reported burglary's. Check if any CAD 's had been reported, consider whether a burglary has been committed. |
| | B37 | Deploy a detective officer to custody to carry out the **arrest strategy** | Inform custody suspect on way. Deploy a detective officer to custody to carry out the arrest strategy. |
| | B38 | Interviewing officer will now be deployed regarding an **interview strategy** | Interviewing officer will now be deployed regarding an interview strategy. Interview teams. |
| | B39 | Ensure no cross-**contamination** issues | Ensure no cross-contamination issues. |
| | B40 | Details obtained and **5x5x5** submitted | Details obtained and 5x5x5 submitted. Details of stopped male to be recorded on an Intelligence Report for the attention of the investigating officer. |
| | B41 | Extra **resources** | Extra resources. |
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| **1.22am- Victim** | C1 | Ensure victim **confidentiality** | Victim confidentiality. Disclosure of information may harm victim. Protection of the victim. Unfair on IP. No victim details to be released. Do not release details of victim. Anonymity of victim is essential. Victim consent. |
| | C2 | Put in a call for an update on the **victim** | Put in a call to see what update vis-à-vis IP. Victim care. Welfare checks on victim. |
| | | | |
| **1.22am- Scene** | C3 | Do not allow **press** into potential scene | Keep area clear. Do not allow press into potential scene inc. stop filming. No one to enter scene until arrival of DI/ DCI (SIO). To get rid of them [media]. To keep BBC away from the cordoned off area. Keep media/public out of scene and out of cordon. Media to leave. Make sure they did not contaminate crime scene. Move them on. Under no circumstances are the news time to contaminate the scene. |
| | C4 | Brief **cordon staff** on roles and | Brief cordon /patrol. Staff on roles and responsibilities. (Inc. cross-contamination and scene issues). |

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| | | responsibilities | Powers. Information to/not release to media. Immediately advised SC Gardiner. SC Gardiner told/ informed. Tell SC Gardiner. To ensure that the officer at the scene could confidently address the press and their requests. |
| | C5 | Make sure **scene** is secured | Make sure scene is secured. Keep scene sterile. Maintain cordon for scene preservation. Preserve the integrity of the scene. Control the scene. Maintain control of the scene. Not allow contamination of the scene. Set cordon. Not to let them into the cordon. Keep the cordon running. Expand the cordon. Protect the scene. Preserve the scene. |
| | C6 | Commence **scene log** | Commence scene log. |
| | C7 | Dependent on how far the crew have been into the scene, seize **footwear** and clothing from them | Dependent on how far the crew have been into the scene, seize footwear and clothing from them. |
| 1.22am-LOE's | C8 | Establish **H2H** and **CCTV** parameters | Establish H2H and CCTV parameters. |
| | C9 | Alert the **FCC** Inspector regarding any possible phone calls from media | Alert the FCC Inspector re any possible phone calls from media. Inform control of BBC interest. |
| | C10 | Alert the **hospital** of possible media interest | Alert the hospital of possible media interest. Inform staff with the victim of the news time. |
| | C11 | **Inform/ seek advice** from DI/DS/Supervisor | Informing or seeking advice from DI /DS / supervisor. Updating duty DS of decisions. Patrol, informed control centre. Inform DS of media interest. |
| | C12 | Ask **SC Gardiner** to give me regular updates | Ask SC Gardiner to give me regular updates. |
| | C13 | Send further **resources/** support to lone special constable. (e.g. patrol Sergeant /Inspector) | Send further resources / support to lone special constable. (e.g. patrol sergeant /Inspector) Find out how many people were at scene. Extra personnel. Further patrols. |
| | | | |
| 1.22am-Media | C14 | Ensure that all **requests for information are diverted** to the SIO /media (press) officer | Ensure that all requests for information are diverted to the SIO /media (press) officer or other responsible person /HQ. Email media officer to do press release in the morning. Direct press to single point of contact. Set up media control point. Set up a media incident desk. Get media officer to the scene. Media officer to attend. Contact media officer. Assure them of an update when ready |

| | | | from press office. |
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| | **C15** | **No comments** made to press | No comments made to press. Not speaking to the press. No information to be given. Do not tell them anything. Officers not to mention the incident. |
| | **C16** | Tell film crew **limited information** e.g. brief details of alleged assault | Tell film crew scene is part of an ongoing police operation. Tell press of alleged incident. Limited information. Give some details of the allegation. Assault. Statement from officer at scene to press. Speak with film crew. Do not give away too much information. Not revealing too much information to press. SC to remain brief to the media until we have a clearer understanding of the incident. No media statement other than police are dealing with an incident. Serious assault. State it was suspected that a female had been attacked of some sort. Serious incident. |
| | **C17** | **Press release** (initial or later) | Press release (initial or later). Bland press statement. Briefed by officer. BBC advised that the press will be advised in due course. |
| | **C18** | Undertake **personal interviews** with the media | Undertake personal interviews with the media (to include giving information on rape). Giving them my contact details for a quote. Attend scene. Either way my telephone number is to be given to them as explanations could be given to them. |
| | **C19** | Consider the press's assistance with **media appeal** | Consider the press's assistance with media appeal (e.g. appeal for witnesses). BBC may be useful later on in broadcasting description of offender. Use them to broadcast possible description. |
| | **C20** | Get the **contact details** of the film crew | Get [contact] details off film crew. Take full details of all press officers whom had been in the scene including physical descriptions. |
| | **C21** | Ensure press' **credentials** are checked to satisfaction | Ensure press's credentials are checked to satisfaction. |
| | **C22** | Explore what **evidence/ information** they may have e.g. seize tape | Explore what evidence/information they may have e.g. seize tape/ view tape. Conduct further enquiries with the film crew. Ask camera crew if they had seen anything suspicious. Interview the BBC as witnesses. Question film crew- have they seen anything- any evidence captured by film crew. The media can be useful in relation to significant witnesses particularly in this case as they had been out filming. |
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| **1.34am-Victim** | **D1** | **Safety** of victim/ preservation of life | Safety of victim/ preservation of life i.e. hospital ambulance first aid. KAT. IP's injuries. Victim care. Victim welfare. Victim care- ambulance. |
| | **D2** | Police officer to go with victim to hospital to receive medical attention for **continuity** | Police officer to go with victim to hospital to receive medical attention for continuity. Officer to wait with victim until ambulance attended. Officers to remain with female for continuity of evidence [note did not mention hospital/ambulance]. One officer to remain with female. |
| | **D3** | Identify **victim** | ID victim name/ age/ home address. Search bag. Area check for personal items to identify victim. |
| | **D4** | Carry out **intell checks** e.g. Storm, Missing Persons **PNC Genesis** | Carry out intell checks e.g. Storm, missing persons. Calls of drunk female in the area by public, abandoned 999 calls. Domestic abuse records. Contact FCC – reports of missing females. Background checks on victim. |
| | **D5** | Consider Specially Trained Officer **(STO)** call-out for victim welfare | Consider STO call-out for victim welfare. Contact family, friends. [N.B Welfare purposes not evidential purposes]. Identify next of kin and home address of IP. Suitable trained officer. |
| | **D6** | Initial Response Officer **(IRO)** to be deployed | IRO to be deployed. Rape response officer for rape. |
| | **D7** | **FLO** | FLO |
| | **D8** | Secure/ preserve **forensic** opportunities from victim | Preserve victim as a possible crime scene. Inform the A&E re possible evidential issues. Secure forensic evidence (from victim). Keep her clothing on. Best evidence can be maintained. Preserve physical evidence on victim. Ensure no loss of potential forensic capture. Her as a scene. Ambulance/ para's are mindful of forensic opportunities clothing etc. |
| | **D9** | Do not let victim **drink/eat/smoke/go to toilet/ wash** | Do not let victim drink/eat/smoke/go to toilet/ wash or to have any more contact with any other persons. |
| | **D10** | **Forensic** capture | Forensic capture. Forensics. |
| | **D11** | **Early evidence samples** to be taken prior to clothes being taken off | Early evidence samples to be taken prior to clothes being taken off e.g. hair, swab blood. Non-intimate samples. Rape kit. |
| | **D12** | Consider Force Medical Examiner **(FME,** doctor) call-out for forensic capture from victim | Consider FME (doctor) call-out for forensic capture from victim. Intimate samples. Rape suite. Medical officers to examine victim as soon as practicable. Victim taken to different VSS. On call SIU. |
| | **D13** | Seize **bedding from ambulance** stretcher for possible forensic evidence | Bedding form ambulance stretcher also needs to be seized for possible forensic evidence. |
| | **D14** | Gain consent/ take victim's blood for | Gain consent of victim for blood alcohol levels. Inform the hospital of possible date rape drug so |

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| | | alcohol/drug levels | samples could be taken. Urine sample to be obtained. Alcohol and drugs blood test. Pre- blood transfusion if required. |
| | D15 | Verbal statement/ account to be obtained | Verbal statements / account to be obtained. Further info re. what had occurred. Establish facts. Establish if any allegations are being made. Find out what happened inc. description if she knew them. Wait to speak to her when she wakes up. |
| | D16 | Account to be recorded and fed to investigator, once victim is conscious | Account to be recorded and fed to investigator, once victim is conscious. |
| | D17 | Ascertain if the victim could ID offender | Ascertain if she could ID offender. |
| | D18 | Record any detail or signs of struggle | Record any detail or signs of struggle / injuries. Record state of female. Photos. Record how victim was found clothing. |
| | D19 | Deal with as victim of crime until proved otherwise | Deal with as victim of crime until proved otherwise. This would have to have been treated as a rape scene until the victim could say otherwise. Treat as possible rape. A rape should be assumed. |
| | D20 | Clothing to be seized | Seize clothing at hospital. Preserve victims clothing. |
| | | | |
| 1.34am- Offender | D21 | Identify offender | Identify offender. |
| | D22 | Search area for potential offender | Search for offender. Area search using patrols. |
| | D23 | Offender description circulated to patrols | Available officers in area assist in looking for males matching first description given by first victim and stop all males looking suspicious in the area. Offender description circulated to patrols. |
| | D24 | Dog unit | Dog unit. Dog to track from IP. |
| | D25 | Genesis check for MO, for offenders in area | Genesis check for MO, for offenders in area. Liaise with SIU (public protection) to trawl sex offender database. |
| | D26 | Male spoken to and re-trace his steps for that evening | Male spoken to and re-trace his steps for that evening. Was it on the suspects' route home? Has Morrison got blood on him as if he attacked this woman also he may have. Asking the arrested male about this second incident in an interview. |
| | | | |
| 1.34am- | D27 | Identify potential witnesses | Identify potential witnesses e.g. taking contact and personal details of everyone present at the scene) |

| Witnesses | | | Ensure that all witnesses remain in place until further Crime support staff arrive. If there are people she knows nearby could they help. Go into pub she is outside of and see if anyone knows her. Enquiries to be made at the scene. |
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| | D28 | Officers to consider potential **CCTV** evidence for scene and surrounding area | Officers to consider potential CCTV evidence e.g. victim route, scene, escape route and surrounding area. CCTV from council. |
| | D29 | Officers to conduct **H2H** enquiries nearby and record where done | Officers to conduct H2H enquiries nearby and record where done. |
| | D30 | Obtain details of all **vehicles** parked near to scene/ get CSI to video record plates | Obtain details of all vehicles parked near to scene/ get CSI to video record plates. |
| | D31 | Call **taxis**, any calls made to local taxis (link to previous victim) | Call taxis, any calls made to local taxis (link to previous victim) |
| | D32 | Trace and interview **friends** to determine what the female was doing earlier. This may be through her **family or boyfriend** if known | Trace and interview friends to determine what the female was doing earlier. This may be through her parents or boyfriend if known. Notify next of kin and confirm whereabouts prior to being found [N.B evidential purposes not welfare]. Locations of IP during evening. Locate who if anyone she was out with. Movements at pubs/clubs. |
| | D33 | **Press release** for witnesses | Press release for witnesses. |
| | | | |
| 1.34am- Scene | D34 | Other potential **scene/s** to be identified | Other potential scene/s to be identified. Find out if incident has occurred, where it occurred. Further potential scene. Set parameters for scene. |
| | D35 | Secure/ preserve place victim was found as a **scene** with no unauthorised access. (To include cordon) | Secure / preserve scene place victim was found as a scene with no unauthorised access. (To include cordon) Set parameters for scene. Secure/preserve evidence e.g. wear gloves. Scene preservation. Protect the scene. Treat area as a scene. Consider the weather and the need for covering lighting of the scene. |
| | D36 | Commence **scene log** | Commence scene log. |
| | D37 | **Common approach path** | Common approach path. |
| | D38 | Brief **cordon staff**/ officers on roles and responsibilities | Brief cordon staff on roles and responsibilities. |

| | | | |
|---|---|---|---|
| | **D39** | Scene to be attended by **CSI** | Call out CSI to scene. SOCO. Call out different CSI. Update CSI of developments. |
| | **D40** | **Scene search** for potential forensic evidence | Scene search (e.g. bag). Offence, weapons. Find her bag and ID. Seize any items out of place. Forensic capture from scene. |
| | **D41** | Ensure **continuity** of exhibits | Ensure continuity of exhibits. |
| | **D42** | **EGT** to attend possible large area to cover between the three incidents | Evidence gathering team (EGT) to attend possible large area to cover between the three incidents. Contact senior to coordinate this aspect (difference CSI to scene). |
| | | | |
| **1.34am-LOE's** | **D43** | Cross **contamination** issues e.g. between victims, police staff, scenes | Cross contamination issues (to include victims at hospital and CSI). Ensure that when at the hospital she is kept as far away as possible from Michelle should she arrive. Wear gloves. |
| | **D44** | Explore possibility of **connection** between two offences | Explore possibility of connection between two offences. (e.g. comparison of victims injuries) (along with connection to the stopped male e.g. muddy clothes) Attend Coopers Arms to see if both females at the pub this evening and to see if any strange men, or anyone matching description of suspect. Establish location of Flint Street - distance from first offence to second female? Includes re-tracing both females routes and comparing. Any evidence that this is connected to first incident, location compared with first incident and man stopped. |
| | **D45** | Re-trace **route** taken by female | Try to establish routes taken by both females. Re-trace route of female, any clubs /restaurants/ shops nearby visited by IP. Obtain direction of travel. Identify route. Establish movements of IP. |
| | **D46** | **Speak to officers** at the scene | Speak to officers at the scene. Officers at scene to keep me updated. Victim update as to injuries. Assessment on condition every half hour. Keep me updated as information unfolds. Speak with officer at length is there anymore info than he volunteered. Ensure full PNB entries are obtained from persons who are spoken to by officers and that I am updated immediately with relevant info. |
| | **D47** | Review **CAD** and identify who called it in | Review CAD and identify who called it in. |
| | **D48** | Inform SMT regarding the media interest and the now required **Community Impact Assessment** | Inform SMT regarding the media interest and the now required Community Impact Assessment. |
| | **D49** | **Inform/ notify** duty DI/DS or other supervisor | DS/DI/higher rank to be notified. Update FCC / duty DI / DS / Critical Incident Inspector. |
| | **D50** | Contact both Duty Manager and DI as | Contact both Duty Manager and D/Insp as this is now a Critical Incident (series of stranger rapes?) |

| | | this is now a **Critical Incident** (series of stranger rapes?) | This could potentially be a serial rapist and the DS would have to be involved. Contacting major crime due to stranger rape and series. |
|---|---|---|---|
| | **D51** | Consider/ request **resources** | Consider/ request resources (e.g. patrols, man power, supervisor/ FCC). Incident command vehicle informed (they have equipment and supply advice and guidance if required). Officer to accompany. |
| | **D52** | Get **female officer** to attend scene | Get female officer to attend scene. |
| | **D53** | **Attend scene** | Attend hospital. |